



Department of Energy

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

FREEDOM OF INFORMATION ACT PROGRAM

July 28, 2023

In reply refer to: FOIA #BPA-2023-00786-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) first partial 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.

First Partial 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 first partial response includes 156 pages of records. The records accompany this communication, with the following redactions applied:

- 1 redaction applied under 5 U.S.C. § 552(b)(4) (Exemption 4)
- 33 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 4

Exemption 4 protects "trade secrets and commercial or financial information obtained from a person [that is] privileged or confidential." (5 U.S.C. § 552(b)(4)). This exemption is intended to protect the interests of both the agency and third party submitters of information. Information is considered commercial or financial in nature if it relates to business or trade. Here, compliant with the FOIA and established guidance provided by the U.S. Department of Justice, BPA relies on Exemption 4 to withhold NuScale's financial information. The FOIA does not permit discretionary release of information otherwise protected by Exemption 4.

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 and personal discussions relating to family and health status. 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.

Appeal

Note that the records release certified above is partial. An additional records release is forthcoming. Pursuant to 10 C.F.R. § 1004.8, you may appeal the adequacy of the records search, and the completeness of this partial 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 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.

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

Processing Update

BPA is currently processing the remainder of the responsive records collected.

Exemption 4

As communicated previously, prior to publicly releasing agency records, BPA is required by 5 U.S.C. § 552(b)(4) (Exemption 4) to solicit objections to the release of any third party confidential commercial information contained in the responsive records. BPA has communicated with those third parties and provided them with an opportunity to review the records and object to release. The upcoming due date for these third parties is August 4, 2023.

Final Release Target Date

In light of the above conditions and determinations BPA currently estimates the completion of a response to your FOIA request by August 25, 2023. BPA invites you to contact us to narrow the scope of your request, if desirable, or to discuss this estimated completion date.

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

Sincerely,

Candice D. Palen
Freedom of Information/Privacy Act Officer

[Responsive agency information accompanies this communication.](#)

From: Doug Hunter

Sent: Wed Jun 13 09:19:51 2018

To: Cook,Joel D (BPA) - P-6

Cc: Jackie Coombs

Subject: [EXTERNAL] Fwd: UAMPS Member Conference - Speaking Request

Importance: Normal

Joel, thank you for considering speaking at our summer meeting.

Begin forwarded message:

From: Jackie Coombs <jackie@uamps.com>
Date: June 12, 2018 at 11:28:28 AM MDT
To: Doug Hunter <doug@uamps.com>
Cc: Mason Baker <mason@uamps.com>
Subject: FW: UAMPS Member Conference - Speaking Request

Here is the original speaking request that went to Mr. Mainzer. Steve Johnson will be representing WAPA and not Gabriel.

Thank you.

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
Cell: (b)(6)
jackie@uamps.com

From: Jackie Coombs
Sent: Friday, May 11, 2018 3:43 PM
To: 'eemainzer@bpa.gov' & 'eemainzer@bpa.gov'
Subject: UAMPS Member Conference - Speaking Request

Mr. Mainzer,

UAMPS would like to invite you to speak on a panel ***"The Future of Water and Electricity in the West and Perspective on River System"*** at its upcoming Member Conference on August 14th. We have also invited Mark Gabriel, WAPA, to provide his perspective. Each speaker will have 20 minutes to make their individual presentations with a question and answer period at the conclusion of the presentations.

The conference will be held at the Riverwoods Conference Center in Logan, Utah from August 12-15. The conference is designed to bring together the UAMPS members' mayors, city council members, board of directors and other utility representatives to discuss the challenges and changes in the electric utility industry. The conference will begin with an opening reception on Sunday evening and wrap-up on Wednesday with the UAMPS board of directors meeting. You are invited to attend as many of the conference events as your schedule will allow. Final invitations detailing all conference events will be sent out in mid-June.

Please let me know if you are available to speak at your earliest convenience. Contact me if you have any questions or need additional information.

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

Cell: (b)(6)
jackie@uamps.com



NUSCALE™
Power for all humankind

NuScale Power Update

Energy Northwest Board Meeting

March 28, 2019

Dale Atkinson

Chief Operating Officer/Chief Nuclear Officer

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Innovation and ingenuity for a new day of energy



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NuScale's Mission

NuScale Power provides scalable advanced nuclear technology for the production of electricity, heat, and clean water to **improve the quality of life for people around the world.**



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A bold, new energy source

- **Smarter energy** – flexible design can support multiple applications, integrate with renewables resources, provide highly reliable power to mission critical facilities, and serve as clean baseload power.
- **Cleaner Energy** – 100% carbon-free energy – as clean as wind or solar – with a small land footprint.
- **Safer Energy** – should it become necessary, NuScale's SMR shuts itself down and self-cools for an indefinite period of time, with no operator action required, no additional water, and no AC or DC power needed.
- **Cost Competitive** – the NuScale SMR is far less complex than other designs. Off-site fabrication and assembly reduce cost. Components are delivered to the site in ready-to-install form. All of this results in construction occurring in a shorter, more predictable period of time.



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Who is NuScale Power?

- NuScale Power was formed in 2007 for the sole purpose of completing the design and commercializing a small modular reactor (SMR) – the NuScale Power Module™.
- Initial concept had been in development and testing since the 2000 U.S. Department of Energy (DOE) MASLWR program.
- Fluor, global engineering and construction company, became lead investor in 2011.
- In 2013, NuScale won a \$226M competitive U.S. DOE Funding Opportunity for matching funds.
- >400 patents granted or pending in nearly 20 countries.
- >350 employees in 6 offices in the U.S. and 1 office in the U.K.
- Making substantial progress with a rigorous design review by the U.S. Nuclear Regulatory Commission (NRC).
 - Phase 4 of NRC Review is on schedule for completion December 2019.
- Total investment in NuScale to date ~US\$800M.
- On track for first plant operation in 2026 in the U.S.



NuScale Engineering Offices Corvallis



One-third scale NIST-1 Test Facility



NuScale Control Room Simulator

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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 **up to 60 MWe**
 - small enough to be factory built for easy transport and installation
 - dedicated power conversion system for flexible, independent operation
 - incrementally added to match load growth
 - up to **12 modules for 720 MWe gross** (684 MWe net) total output

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[2] Containment Vessel

[1] Reactor Pressure Vessel

[4] Hot Leg Riser

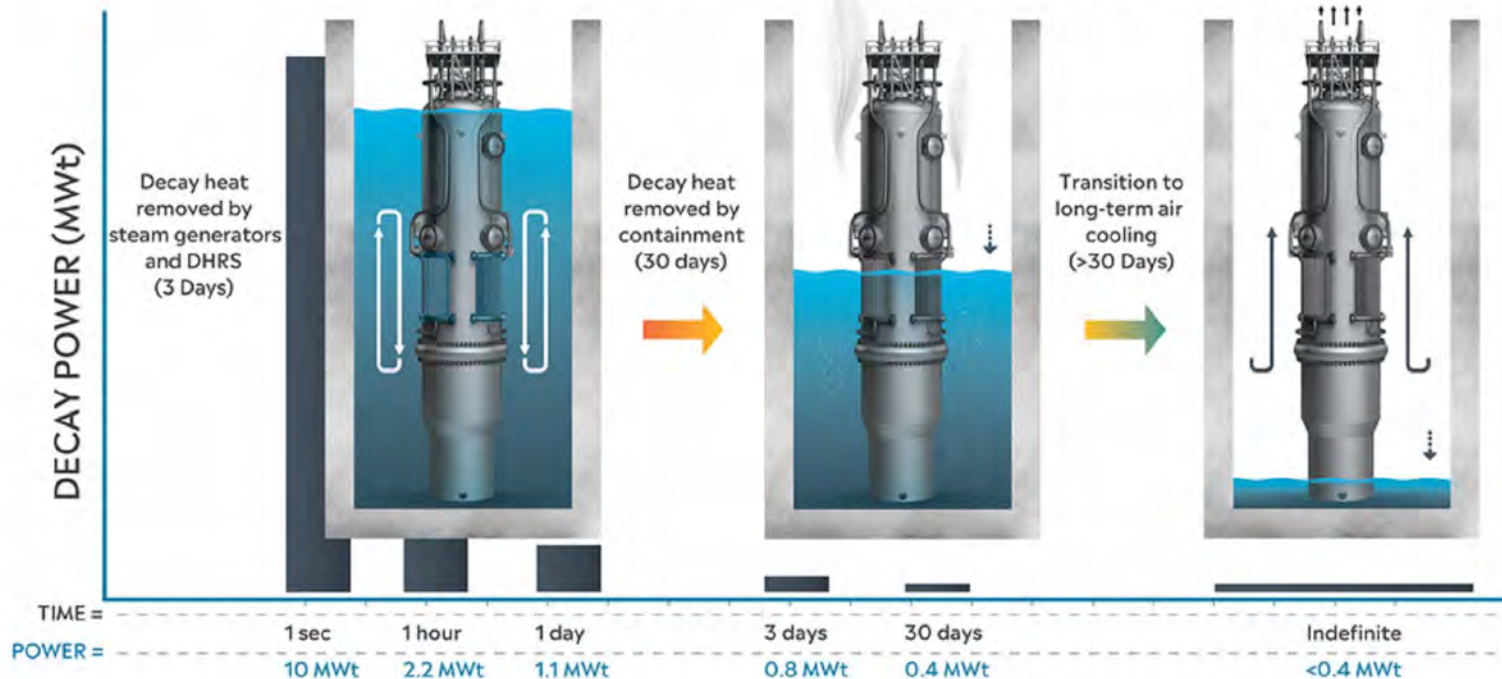
[3] Nuclear Core

Innovative Advancements to Reactor Safety

*Nuclear fuel cooled indefinitely without AC or DC power**



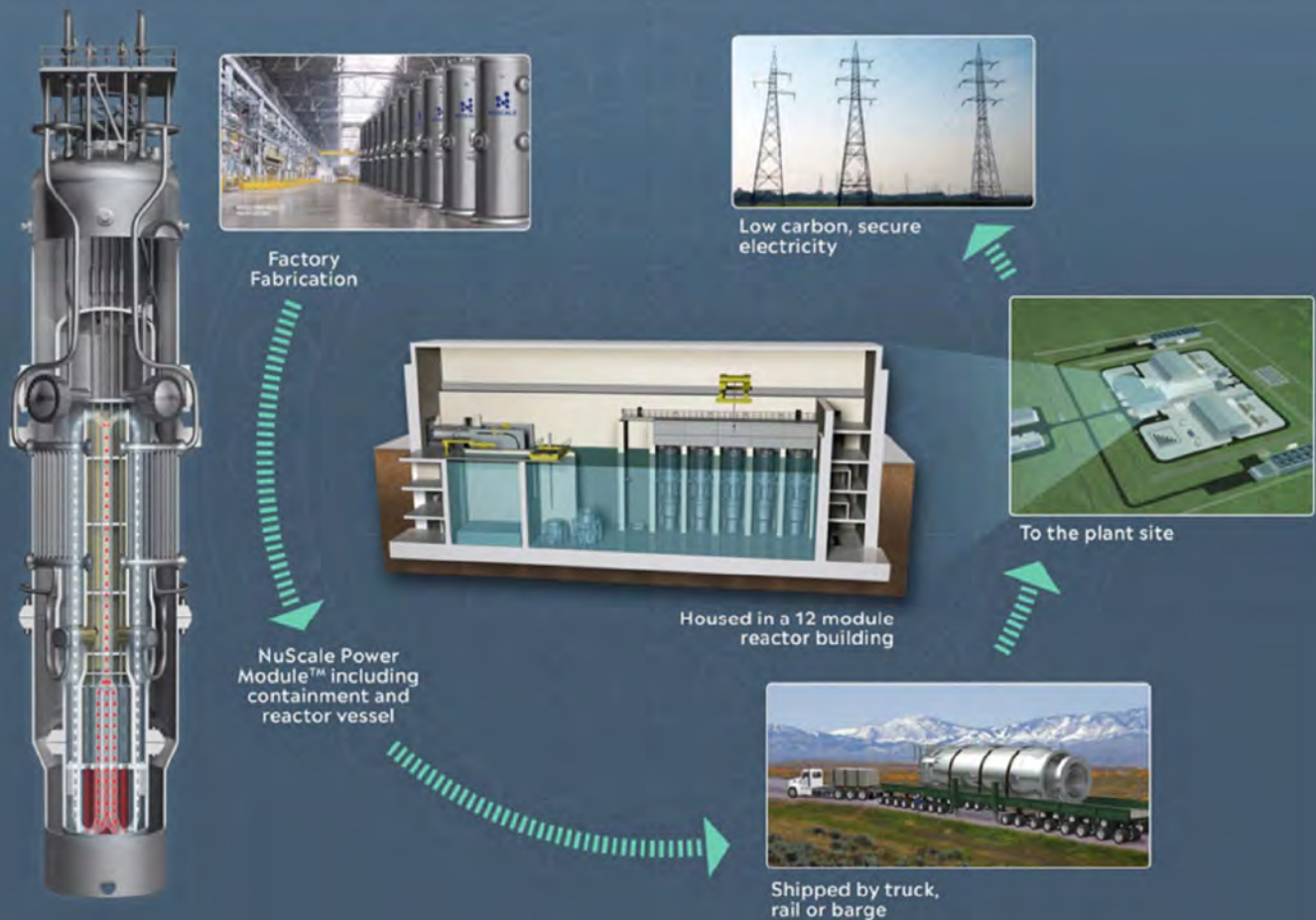
• No Pumps • No External Power • No External Water



*Alternate 1E power system design eliminates the need for 1E qualified batteries to perform ESFAS protective functions – Patent Pending
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A New Approach to Construction and Operation





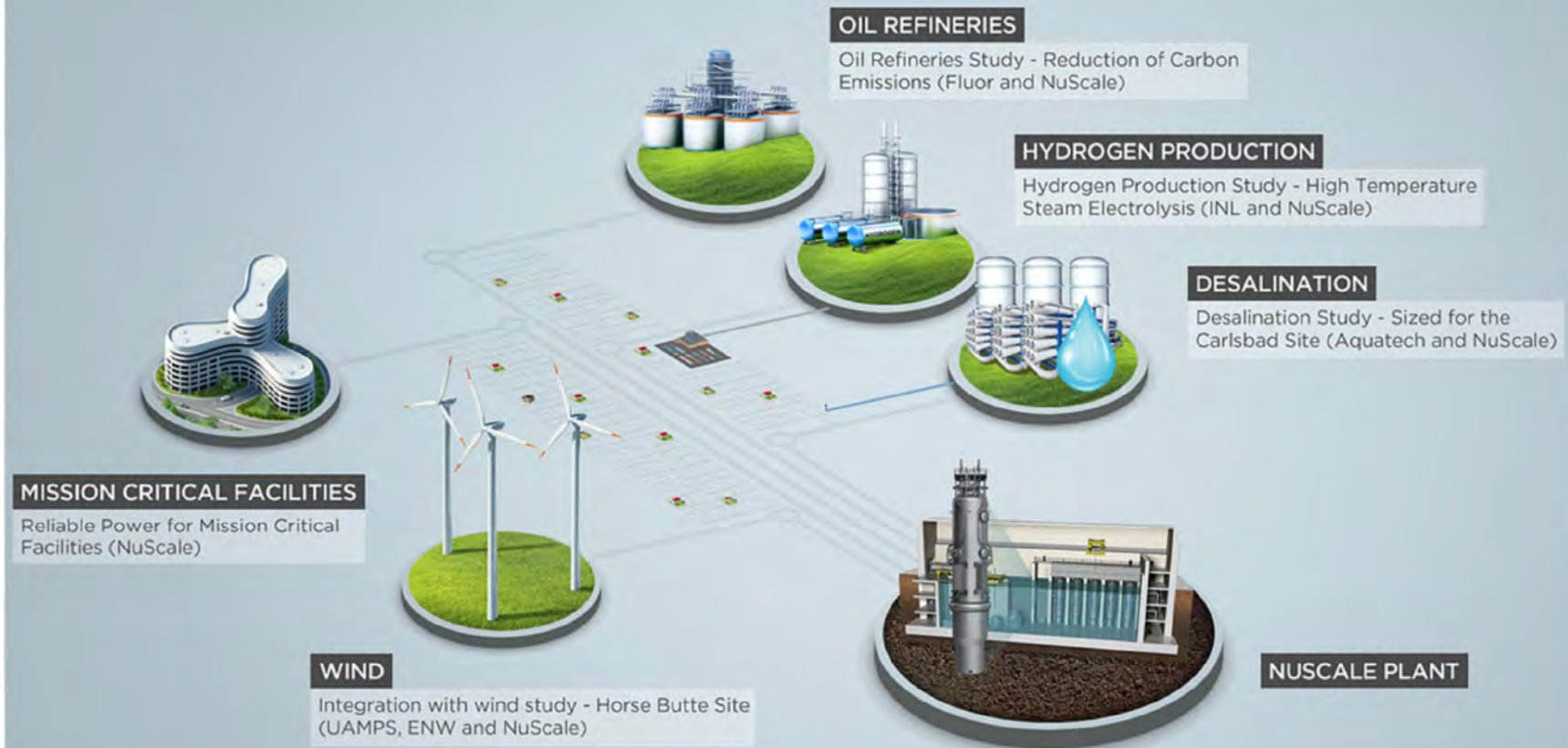
Technology Validation

- **NuScale Integral System Test (NIST-1)** facility located at Oregon State University in Corvallis, Oregon
- **Critical Heat Flux** testing at Stern Laboratories in Hamilton, Ontario Canada
- **Helical Coil Steam Generator** testing at SIET SpA in Piacenza, Italy
- **Fuels testing** at AREVA's Richland Test Facility (RTF) in Richland, Washington
- **Critical Heat Flux** testing at AREVA's KATHY loop in Karlstein, Germany
- **Control Rod Assembly (CRA)** drop / shaft alignment testing at AREVA's KOPRA facility in Erlangen, Germany
- **Steam Generator** Flow Induced Vibration (FIV) testing at AREVA's PETER Loop in Erlangen, Germany
- **Control Rod Assembly Guide Tube (CRAGT)** FIV at AREVA's MAGALY facility in Le Creusot, France

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Beyond Baseload: NuScale Diverse Energy Platform

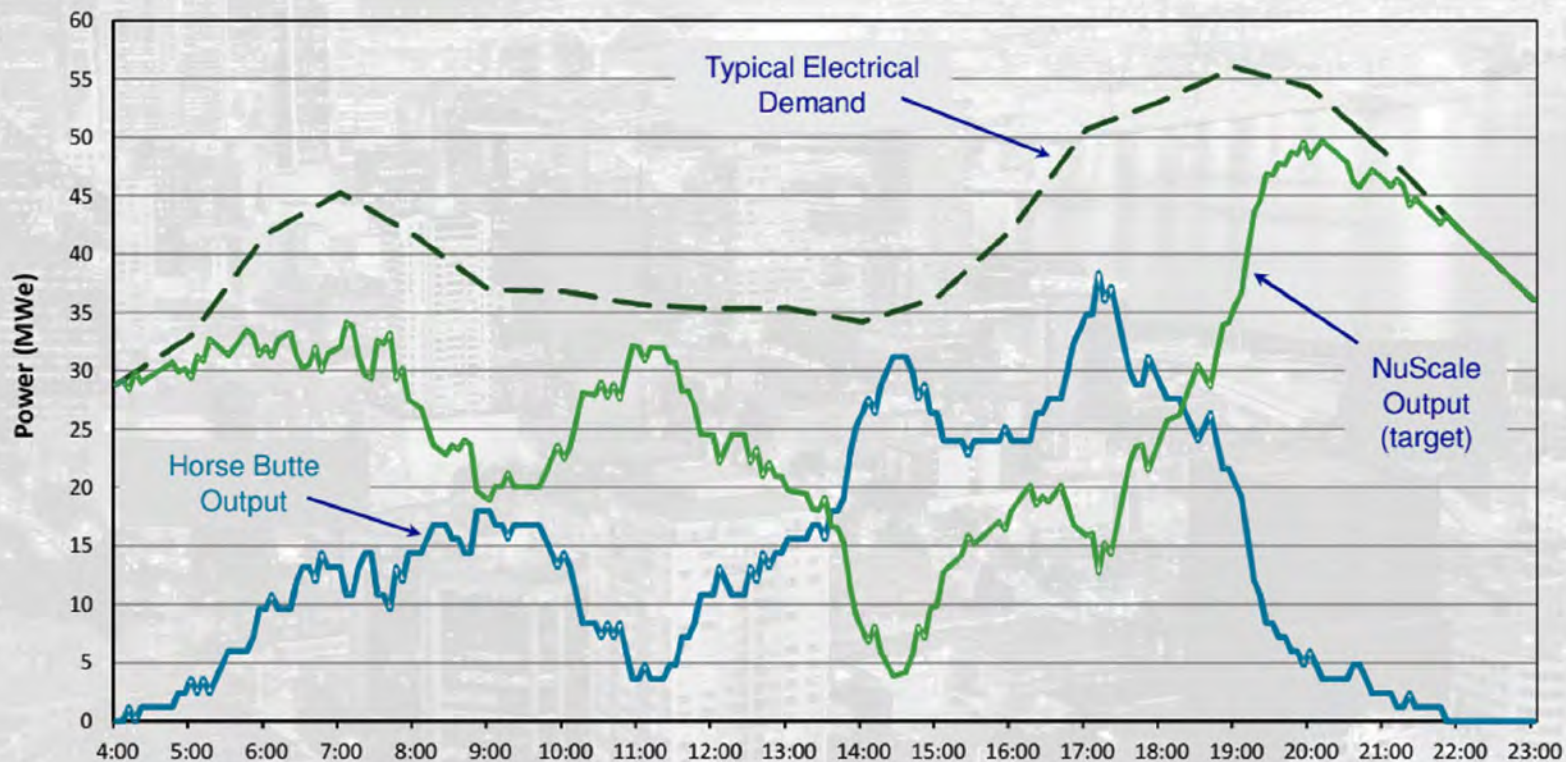


Reports for associated technical studies are available at: www.nuscalepower.com/technology/technical-publications

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Load-Following with Wind



NuScale design meets or exceeds EPRI Utility Requirements Document (URD), Rev. 13, load following and other ancillary service requirements.

NuScale Co-Generation Studies

Oil Refinery Study Reducing Carbon Emissions (Fluor and NuScale)

10-Module Plant coupled to a 250,000 barrels/d refinery, thus avoiding 190 MT/hr CO₂ emissions



Desalination Study for Clean Water and Electricity (Aquatech and NuScale)

8-Module Plant producing 50 Mgal per day of clean water plus 340 MWe to the grid



High-Temp Steam Electrolysis for Carbon- free Hydrogen Production (INL and NuScale)

6-Module Plant producing 200 tons per day carbon-free hydrogen for ammonia plant



NuScale Power for Sustainable Business

- Over 100 of the world's most influential companies have committed to **100% renewable power** in the RE100 initiative
- NuScale Plants can help companies meet their clean energy goals through **Power Purchase Agreements** or by producing their own electricity and heat on-site – helping truly decarbonize industrial facilities and supply chains.
- Need technology-neutral state and corporate clean energy policies

When energy sources are evaluated over their **entire life cycle**, from mining of materials and fuel, to construction, and eventual D&D and waste storage – nuclear energy has a carbon footprint lower than solar PV and about the same as wind.



Artistic concept of the NuScale Power Plant

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A New Level of Plant Resiliency



Island Mode/Loss of Offsite Power

A single module can power the entire plant in case of loss of the grid; no operator or computer actions, AC/DC power or additional water required to keep the reactors safe



First Responder Power

On loss of the offsite grid, through variable (0% to 100%) steam bypass, all 12 modules can remain at power and be available to provide electricity to the grid as soon as the grid is restored



Resilience to Natural Events

Reactor modules and fuel pool located below grade in a Seismic Category 1 Building

- Capable of withstanding a Fukushima type seismic event
- Capable of withstanding hurricanes, tornados, and floods



Resilience to Aircraft Impact

Reactor building is able to withstand aircraft impact as specified by the NRC aircraft impact rule



Cybersecurity

Module and plant protection systems are non-microprocessor based using field programmable gate arrays that do not use software and are therefore not vulnerable to internet cyber-attacks



Electromagnetic Pulse (EMP/GMD)

Resilience to solar-induced geomagnetic disturbances (GMDs) and electromagnetic pulse (EMP) events beyond current nuclear fleet.

Reliable Power for Mission Critical Facilities

UTILITY MACROGRID



684 MWe (net)
> 95% Capacity

NuScale 12-Module Plant



- Connection to a micro-grid, island mode capability, and the ability for 100% turbine bypass allows a 720 MWe (gross) NuScale plant to assure **120 MWe net power at 99.95% reliability over a 60 year lifetime**
 - 60 MWe at 99.98% availability
- Using highly robust power modules and a multi-module plant design can provide **clean, abundant, and highly reliable power** to customers
- Working with utilities and customers to achieve “Five 9s”

**DEDICATED
MICROGRID
120 MWe (net)
> 99.95%
Availability**

MISSION CRITICAL FACILITY





Image courtesy of Third Way Nuclear Reimagined

Next Generation Designs

16

10-50 MWe Next-Generation NPM

- **Builds on NuScale's existing technology, intended for:**
 - Supplying power to communities with small grids,
 - Remote and off-grid communities
 - Off-grid industrial facilities
 - Remote mining
 - Stationary and permanent military installations
- **Design imperatives include:**
 - Reduced construction time
 - Simplified operations
 - Increased fuel cycle length

1-10 MWe Heat Pipe Reactor

- **Simple and inherently safe compact heat pipe cooled reactor concepts** that require little site infrastructure, can be rapidly deployed, and are fully automated during power operation.
- **Applications include:**
 - Remote small off-grid communities with seasonal fuel transportation delivery limitations
 - Remote mining operations with a short lifespan
 - Temporary power for disaster relief
 - Power in space

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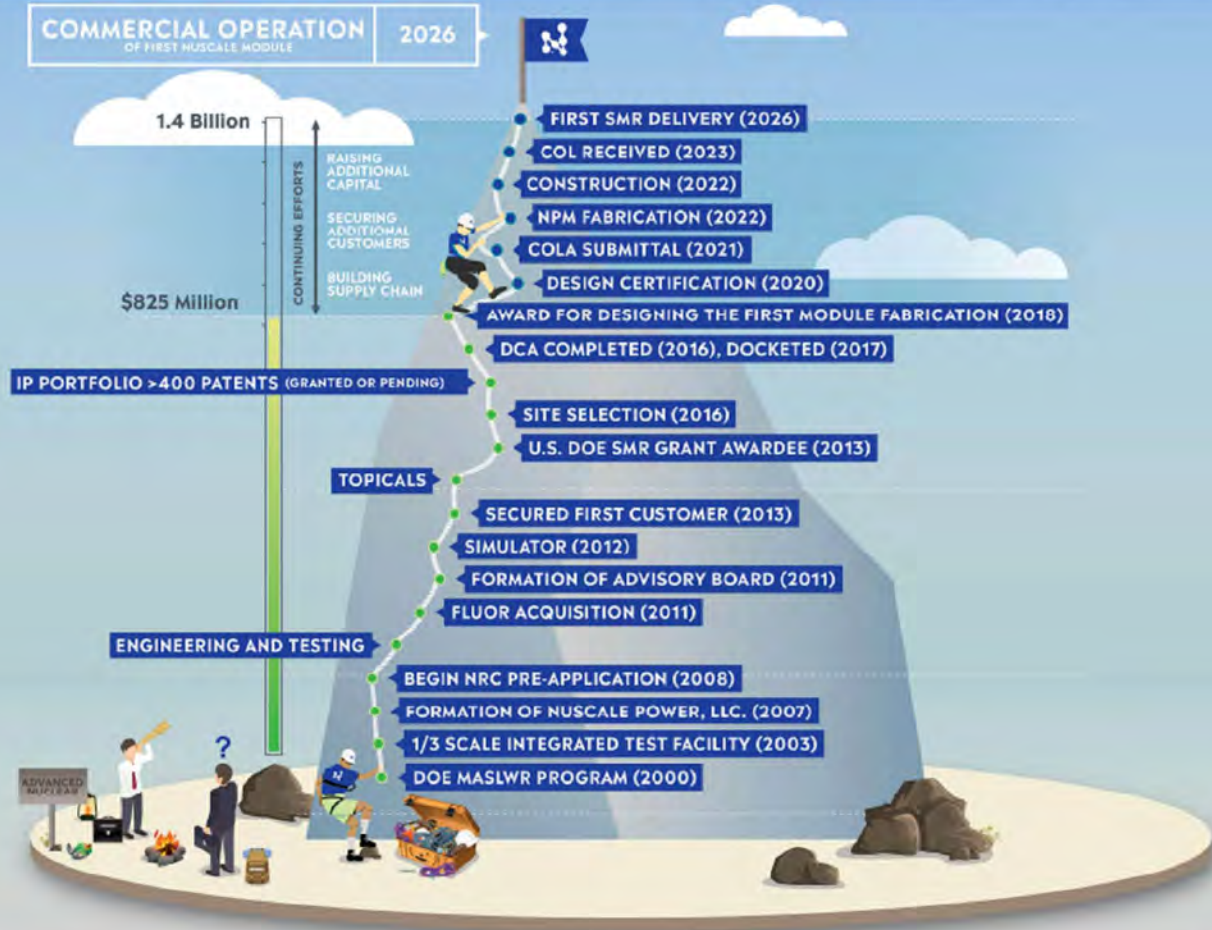


Current Progress in Commercialization: Licensing, Supply Chain, and Customers

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Blazing the Trail to Commercialization



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First SMR to Undergo Licensing in the U.S.

- Design Certification Application (DCA) completed in December 2016
- Docketed and review commenced by U.S. Nuclear Regulatory Commission (NRC) in March 2017
- Phase 4 of the NRC review on schedule for completion December 2019. Technical review would be completed.
- NRC has published its review and approval schedule; **to be approved in September 2020**



DCA Statistics

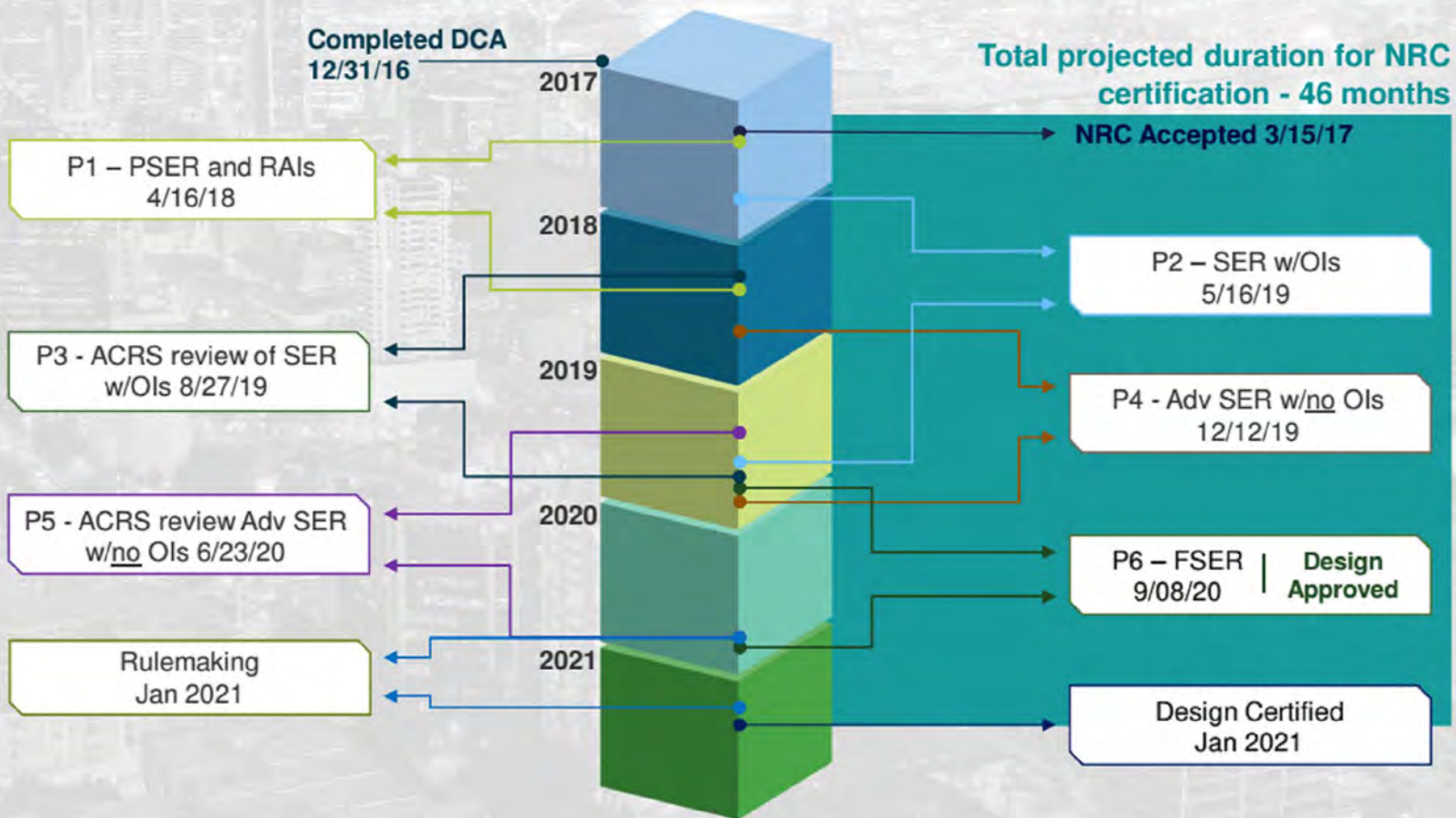
- 12,000+ pages
- 14 Topical Reports
- >2 million labor hours
- >800 people
- >50 supplier/partners
- Over \$500M

Design Certification Review Progress

- **Design certification is proceeding on schedule**
 - All chapters completed in Phase 1
 - NRC progressing into Phase 2, 3 and 4 of review
- **Request for Additional Information (RAI)**
 - Fewer questions than prior DCAs, demonstrating the simplicity of the design and quality of the application
 - Over 1,800 RAIs are responded.
 - 80% of the responses within 60 days
 - Continuous tracking of internal and NRC progress
- **Improved management by NRC of review**
 - Management Plans for “key issue” resolution
 - Obtain alignment with NRC at least monthly
- **Expect on-time design approval of September 2020**



NuScale Baseline DC Review



Integrated System Validation Completed

Integrated System Validation (ISV) – verifies the integrated system that supports safe operation (NUREG-0711)

- Performance based evaluation of hardware, software, and personnel
- Three crews of six licensed operators
- Operators trained similar to a license class
 - 56 classroom lectures over 9 weeks
 - 36 simulator sessions for each crew over 10 weeks
- 12 full-scope, evaluated scenarios over 11 weeks



Right-sizing the Emergency Planning Zone (EPZ)

- NuScale's small core size and exceptional safety, defense-in-depth make the case for a **reduced EPZ to the site boundary**.
 - NuScale plants could be sited closer to population and industrial centers – where energy is needed most
- **Tennessee Valley Authority (TVA) demonstrating that site boundary EPZ possible for SMRs**
 - TVA analysis included information on Clinch River early site permit application using NuScale Plant design
 - Shows any accident radiological impact would be limited to within site boundary
 - Analysis provides basis for exemption from 10-mile EPZ
 - NRC preliminary findings agree with TVA analysis that reduced-size EPZs for SMRs are feasible

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Image courtesy of Third Way Nuclear Reimagined



Factory Fabrication

- NuScale Power Modules™ are produced in a factory and then shipped onsite to be installed in the reactor building
- In 2018, **BWX Technologies, Inc. (BWXT)** was selected to provide manufacturing input leading to fabricating the first NuScale Power Modules™
 - The decision follows a rigorous 18-month selection process, with expressed interest from 83 companies based in 10 countries
- In 2019, BWXT and NuScale are collaborating to update the design optimizing for manufacturing and transportation and reducing overall costs of the NuScale Power Modules
- Manufacturing trials are planned for 2020

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Industry Interest and Support

- Positive attributes of a flexible, carbon-free baseload generating technology scaled for customer needs bringing significant market enthusiasm
- NuScale has engaged with multiple utilities and other end users to potentially deploy NuScale SMR technology domestically and internationally
- To support engagement with the domestic utility market, NuScale created the NuScale Advisory Board (“NuAB”) in 2008, which initially had 8 members
 - Over 29 companies have participated in NuAB since its inception
 - NuAB meets about two times a year to contribute to design discussions that will meet their operational needs



Economics

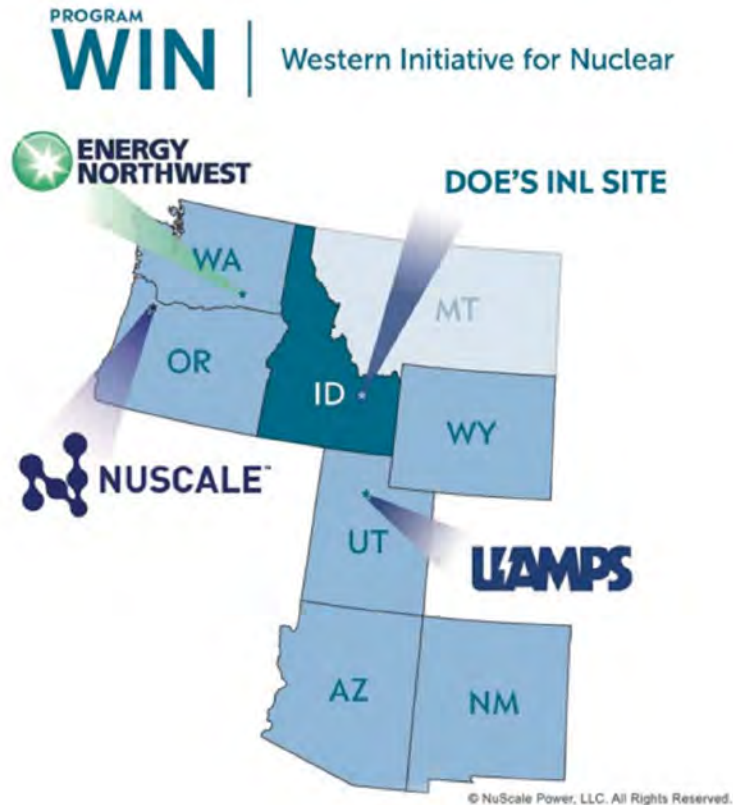
- **Simplicity of design provides competitive levelized cost of electricity (LCOE) compared to other low carbon options**
 - Lower up-front cost and lower operating cost as compared to large light-water nuclear reactors
 - Competitive overnight capital cost compared to large advanced nuclear
 - First plant target LCOE - \$65/MWh
- **Up to 12 modules can be added to a facility incrementally (e.g., in response to load growth), reducing initial capital costs**
- **First module in situ can generate power and bring in revenue immediately**
- **NuScale Power Modules fabricated in an off-site facility, bringing cost savings associated with repetitive manufacture**
 - Realize benefits of repetitive factory fabrication

Construction Cost Summary

Cost Component (\$000)	FOAK	NOAK
Power Modules (Transportation and Site Assembly)	(b)(4)	
Nuclear Island Building		
Nuclear Island Equipment		
Turbine Island		
Balance of Plant		
Indirects		
Home Office Engineering and Support		
Total		
<p>* Costs do not include fees, warranty, contingency, G&A</p> <p>* Costs shown in 2017\$'s</p> <p>* ACE Class 4 Estimate</p>		

**2017 first-of-a-kind cost estimate reflects building a 12-module plant at a generic site in the southeastern U.S. excluding contingency, warranty and G&A and Fees.*
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First Deployment: UAMPS Carbon Free Power Project

- **Utah Associated Municipal Power Systems (UAMPS)** provides energy services to community-owned power systems throughout the Intermountain West.
- First deployment will be a **12-module plant (720 MWe)** within the Idaho National Laboratory (INL) site, slated for **commercial operation in 2026**.
- DOE awarded \$16.5 million in matching funds to perform site selection, secure site and water, and prepare combined operating license application to NRC.
- **Joint Use Modular Plant (JUMP)** Program: INL-DOE will lease one of the modules in the 12-module plant, for research purposes, an additional module may be used in a Power Purchase Agreement (PPA) to provide power to INL.





Job Creation

- Each NuScale Plant will employ about **300 people full-time**, with an average U.S. nuclear industry salary of **\$85,000 per year**. Examples of types of jobs:
 - Plant Operators
 - Nuclear Maintenance Craftsmen
 - Radiation Protection Technicians
 - Training Staff
 - Non-nuclear Craftsmen
 - Security Officers
 - Department Managers
 - Technical Supervisors
 - Engineers
- The **domestic supply chain** for manufacturing 36 modules (3 plants) per year could **generate about 13,500 jobs**.

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International Opportunities

- NuScale has been actively involved in the **United Kingdom's** SMR Feasibility Study
- NuScale and Nuclearelectrica SA signed MOU in to explore SMRs for **Romania**
- NuScale signed MOU with Jordan Atomic Energy Commission (JAEC), to evaluate NuScale's SMR for use in **Jordan**
- Many international opportunities for NuScale SMR deployment, including **Japan** and **Australia**, and other countries in **Eastern Europe**, the **Middle East**, **Southeast Asia**, and **Sub-Saharan Africa**

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Pre-Licensing in Canada

- NuScale informed the Canadian Nuclear Safety Commission (CNSC) of its intention to **submit an application under the CNSC's pre-licensing vendor design review process**
- **Signed MOU with Ontario Power Generation Inc. (OPG)**, who has agreed to support NuScale in its vendor design review (VDR) with the CNSC
- NuScale is working with CNSC to develop scope and schedule of this review
- NuScale expects to make its **first submittal to the CNSC by the end of 2019**

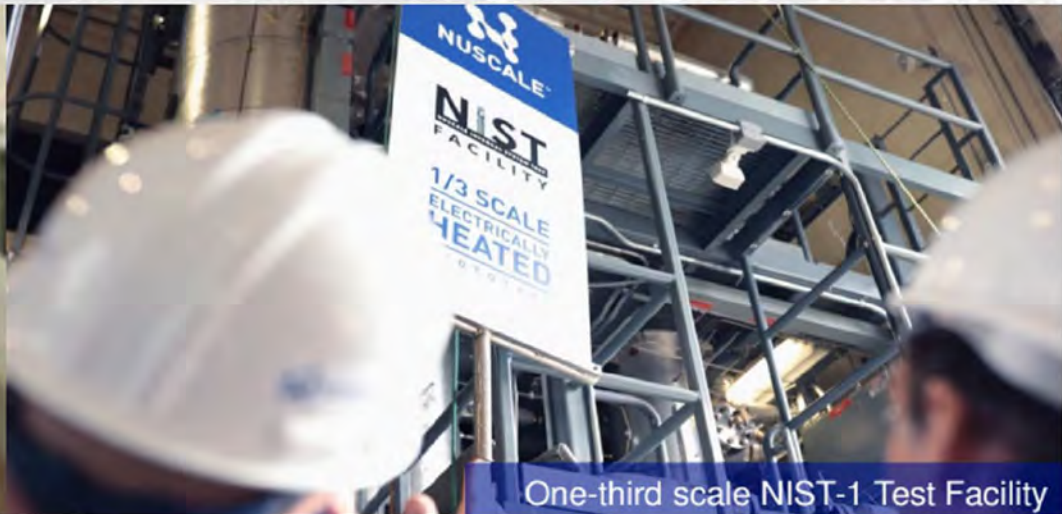
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The Future of Energy is Here



NuFuel HTP2 Testing



One-third scale NIST-1 Test Facility



NuScale Control Room Simulator

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Dale Atkinson
Chief Operating Officer/Chief Nuclear Officer
datkinson@nuscalepower.com



From: Mark Gendron

Sent: Fri Feb 07 11:03:56 2020

To: Sigo, Jacob L (BPA) - K-7

Subject: [EXTERNAL] RE: Pre-Executive Team Meeting with John Hairston

Importance: Normal

Got it. Thanks Jacob

From: Sigo, Jacob L (BPA) - K-7 <jlsigo@bpa.gov>

Sent: Friday, February 7, 2020 11:43 AM

To: Mark Gendron <MGendron@uamps.com>

Subject: RE: Pre-Executive Team Meeting with John Hairston

I moved up your discussion with John to February 14th, immediately following the industry panel discussion call (which is prep for the All Manager Meeting).

You should have received the updated calendar invite.

Thanks,

Jacob Sigo | Executive Associate Officer

Executive Associate to John Hairston, Chief Operating Officer

Office: (503) 230-3369 / Cell: (b)(6)

Bonneville Power Administration

bpa.gov

[Facebook-Icon 31x31](#) [v3Flickr-Icon 31x31](#) [Instagram-Icon 31x31](#) [LinkedIn-Icon 31x31](#) [Twitter 31x31](#) [YouTube 31x31](#)

From: Mark Gendron <MGendron@uamps.com>

Sent: Friday, February 7, 2020 10:24 AM

To: Sigo, Jacob L (BPA) - K-7 <jsigo@bpa.gov>

Cc: Conforti, Karen-Maria A (BPA) - K-7 <kmconforti@bpa.gov>

Subject: [EXTERNAL] RE: Pre-Executive Team Meeting with John Hairston

My bad Jacob. I have accepted the calendar invitation.

From: Sigo, Jacob L (BPA) - K-7 <jsigo@bpa.gov>

Sent: Friday, February 7, 2020 11:21 AM
To: Mark Gendron <MGendron@uamps.com>
Cc: Conforti, Karen-Maria A (BPA) - K-7 <kmconforti@bpa.gov>
Subject: RE: Pre-Executive Team Meeting with John Hairston

Sorry for the confusion Mark.

You will pre-brief teleconference John Hairston on Friday March 6 at 10:00am. I have scheduled an hour, though I understand it may not take that long.

April 8 is when the presentation will occur to the Executive Team.

Does that make sense? Again, my apologies for the confusion.

Thanks,

Jacob Sigo | Executive Associate Officer

Executive Associate to John Hairston, Chief Operating Officer

Office: (503) 230-3369 / Cell: (b)(6)

Bonneville Power Administration

bpa.gov

[Facebook-Icon 31x31 v3Flickr-Icon 31x31Instagram-Icon 31x31LinkedIn-Icon 31x31Twitter 31x31YouTube 31x31](#)

From: Mark Gendron <MGendron@uamps.com>
Sent: Friday, February 7, 2020 10:18 AM
To: Sigo, Jacob L (BPA) - K-7 <jsigo@bpa.gov>
Cc: Conforti, Karen-Maria A (BPA) - K-7 <kmconforti@bpa.gov>
Subject: [EXTERNAL] RE: Pre-Executive Team Meeting with John Hairston

April 8!

From: Sigo, Jacob L (BPA) - K-7 <jsigo@bpa.gov>
Sent: Friday, February 7, 2020 11:12 AM
To: Mark Gendron <MGendron@uamps.com>
Cc: Conforti, Karen-Maria A (BPA) - K-7 <kmconforti@bpa.gov>
Subject: RE: Pre-Executive Team Meeting with John Hairston

Hi Mark,

I scheduled 90 minutes for Friday, March 6, 2020. If you plan to have others attend this meeting, I too will need their names in advance, their company/organization affiliation, and whether or not they are US citizens (for the purposes of visitor access request).

Thanks,

Jacob Sigo | Executive Associate Officer

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Office: (503) 230-3369 / Cell: (b)(6)

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Karen-Maria Conforti

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P 503-230-4711 | C (b)(6)

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Karen

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Mark

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Hi Mark,

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Please let me know what you think would be best: (1) either a presentation to the smaller, tier one executives or (2) to the expanded, 47-member Executive Team.

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Thanks again.

Mark

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Subject: RE: Enterprise Board

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Thank you again, and see you in February!

Best,
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Cc: Conforti, Karen-Maria A (BPA) - K-7 <kmconforti@bpa.gov>
Subject: [EXTERNAL] Re: Enterprise Board

Hi Karen

Do you have an update on Enterprise Board meeting options?

Mark

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Subject: [EXTERNAL] Enterprise Board

Hi Ben

I hope your holidays were great and Happy New Year.

Do you know status of our meeting options with Enterprise Board?

Best

Mark

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From: Conforti,Karen-Maria A (BPA) - K-7

Sent: Fri Feb 07 11:07:14 2020

To: Mark Gendron

Subject: Executive Team Meeting | April 8

Importance: Normal

Attachments: image001.emz

Hi Mark,

Thanks for the information. I will set aside 90 minutes for your discussion with the Executive Team on April 8.

I removed Jacob from this string and updated the subject line of this email. I just asked Jacob to move your conversation with John to next Friday, February 14 after your telephone call with the All Managers' Meeting panel. I thought it would be best to have you and John speak earlier rather than later.

If John approves and we can move forward with your presentation, I will need some information for the pre-read packet to the Executive Team. I filled out the below briefing memo to the best of my ability; please review and let me know if I captured everything appropriately. Feel free to add any information. ***If you will be presenting slides, I will need them at least one week before the presentation on April 1, 2020.**

Thank you so much, and we'll be in touch.

Have a great weekend!
Karen

Expected Outcome: Discussion Topic: Utah Associated Municipal Power System (UAMPS) Carbon Free Power Project (CFPP) Date: April 8, 2020 Executive Sponsors: Elliot Mainzer, Administrator and CEO Presenter(s): Mark Gendron, Special Advisor to UAMPS and Doug Hunter, CEO, UAMPS Objective: To provide BPA executives a presentation on the UAMPS CFPP, a 720 MW project planned to be built in Idaho at the DOE'

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Expected Outcome: Discussion

Topic: Utah Associated Municipal Power System (UAMPS) Carbon Free Power Project (CFPP)

Date: April 8, 2020

Executive Sponsors: Elliot Mainzer, Administrator and CEO

Presenter(s): Mark Gendron, Special Advisor to UAMPS and Doug Hunter, CEO, UAMPS

Objective: To provide BPA executives a presentation on the UAMPS CFPP, a 720 MW project planned to be built in Idaho at the DOE's Idaho National Laboratory, which would be the first commercial deployment of the NuScale small modular reactor technology.

Supplemental Material: *[Include the name of any additional materials necessary for discussion. Please forward any additional materials when sending the Discussion Template.]*

Connection to BPA Strategy and/or Key Strategic Initiative KSI: Strategic Goals #2, Modernize assets and system operations and #3, Provide competitive Power services and rates.

Background & Current Issues: UAMPS is in the NRC licensing process at this time and have significant commitments from public power utilities to participate in development of the project, mostly in the Utah and Rocky mountain region. UAMPS is now engaged in efforts to introduce the project to the Northwest and to explore opportunities for participation by BPA customers.

From: Rasmussen, Scott

Sent: Thu Mar 12 13:43:20 2020

To: Cook, Jeffrey W (BPA) - TP-DITT-2; Hall, Lee J (BPA) - PES-6; Smith, Melanie R (BPA) - PES-6; Brim, Thomas E (CONTR) - PES-6; Dunn, Deborah A (CONTR) - TPCR-TPP-4

Bcc: jwcook@bpa.gov; dcalvert@bpa.gov; ljhall@bpa.gov

Subject: [EXTERNAL] Bonneville Power Administration / NuScale - Initial Discussion

Importance: Normal

Attachments: NuScale_BPA_Discussion_20200312.pdf

Jeff, Lee, Melanie, Thomas and Deborah,

I pulled together a brief presentation (attached) that we can use for our teleconference later today.

I hope this is helpful.

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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NUSCALE[™]
Power for all humankind

Bonneville Power Administration – Introductory Discussion

March 12, 2020

Scott Rasmussen
Director of Sales

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Commitment to People, Planet, Prosperity



NuScale Power provides scalable advanced nuclear technology for the production of electricity, heat, and clean water to **improve the quality of life for people around the world.**

Who is NuScale Power?

- NuScale Power was formed in 2007 for the sole purpose of completing the design and commercializing a small modular reactor (SMR) – the NuScale Power Module™.
- Initial concept had been in development and testing since the 2000 U.S. Department of Energy (DOE) MASLWR program.
- Fluor, global engineering and construction company, became lead investor in 2011.
- In 2013, NuScale won a competitive U.S. DOE Funding Opportunity for matching funds, and has been awarded over \$300M in DOE funding since then.
- >520 patents granted or pending in nearly 20 countries.
- >380 employees in 6 offices in the U.S. and 1 office in the U.K.
- Rigorous design review by the U.S. Nuclear Regulatory Commission (NRC) to be completed in 2020.
- Total investment in NuScale to date is greater than US\$900M.
- On track for first plant operation in 2026 in the U.S.



NuScale Engineering Offices Corvallis



One-third Scale NIST-2 Test Facility



NuScale Control Room Simulator



NuScale Power: A New Day of Energy



SMARTER

Ingenuity is
Powering the Future

- Flexible.
- Simple.
- Small & scalable.
- Reliable.



CLEANER

100% Carbon-Free
Clean Air

- As clean as renewables.
- Cleaner than fossil fuels.
- Enables growth in renewables.
- Smaller environmental footprint.



SAFER

Safety First, Second
to None

- Setting new standards.
- Tested and proven.
- Future-proofed design.
- Safe without power.



COST COMPETITIVE

Operational Sensibility
Meets Financial
Responsibility

- Scalable investment reduces capital demands.
- Competitive economics to natural gas.
- Long-term financial certainty unmatched by fossil fuels.



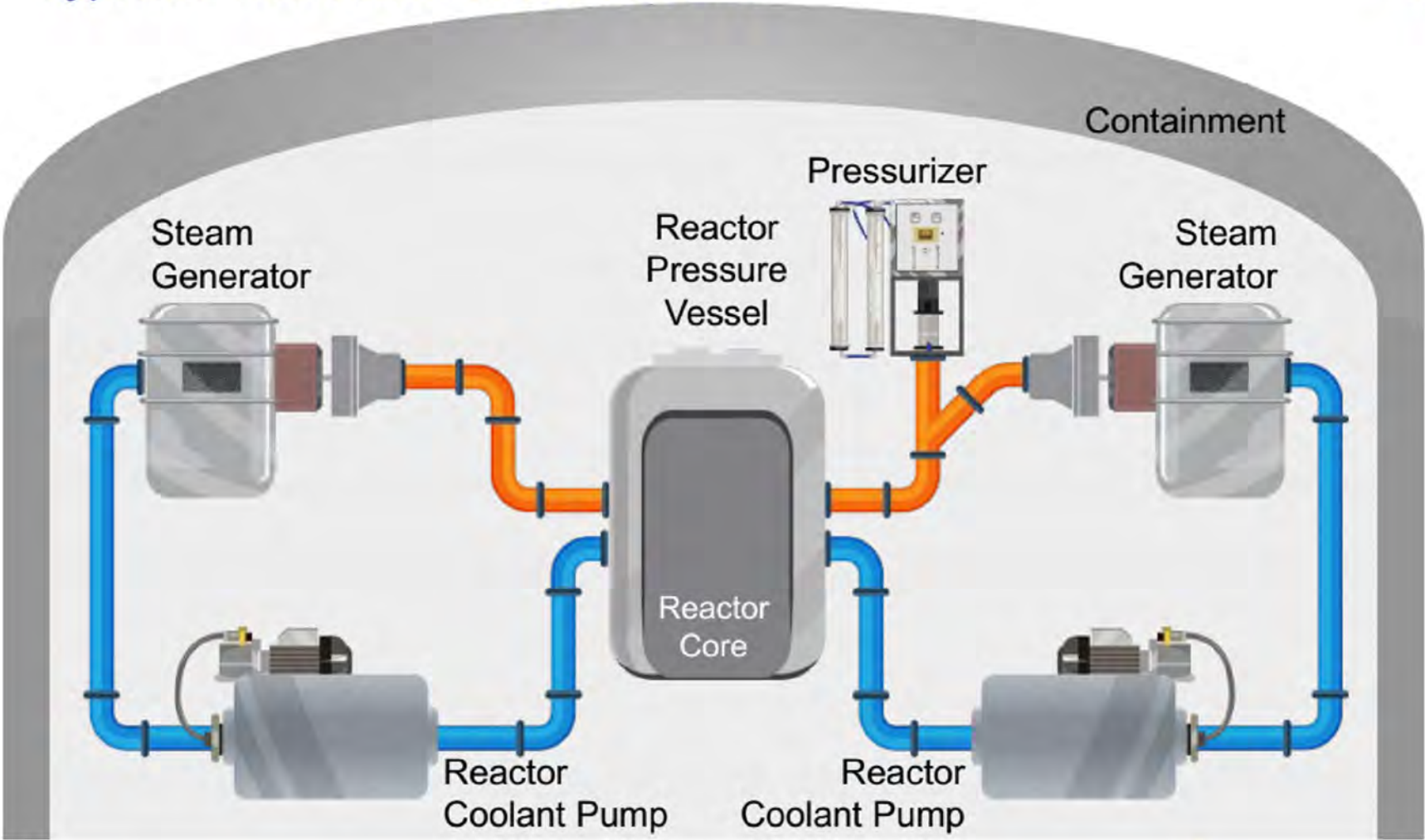
SMARTER

Ingenuity is Powering the Future

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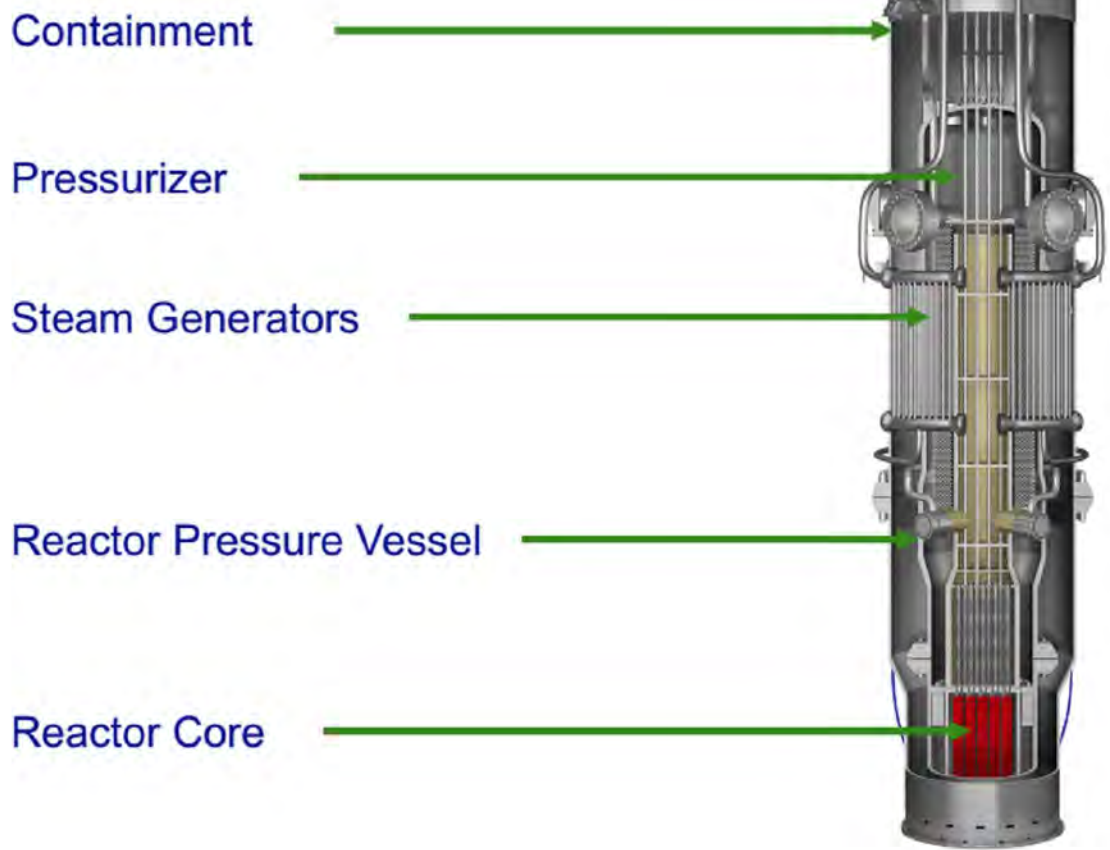
Typical Pressurized Water Reactor



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NuScale Small Modular Reactor



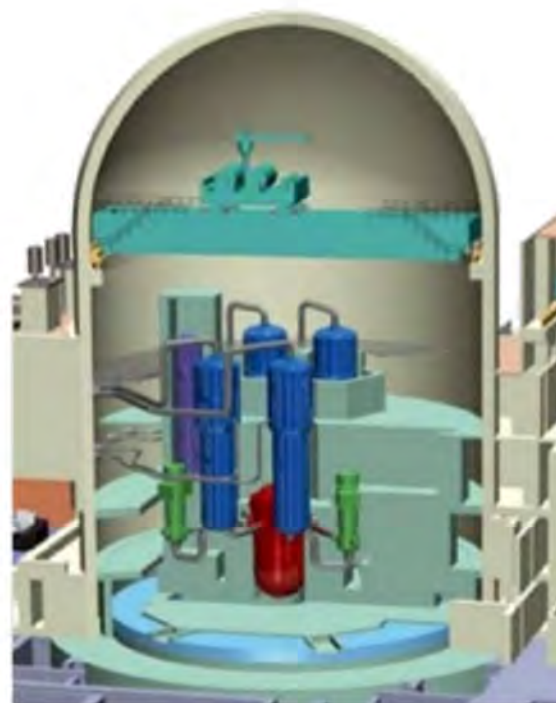
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Comparison to a Large Pressurized Water Reactor (PWR)



NuScale Power Module™



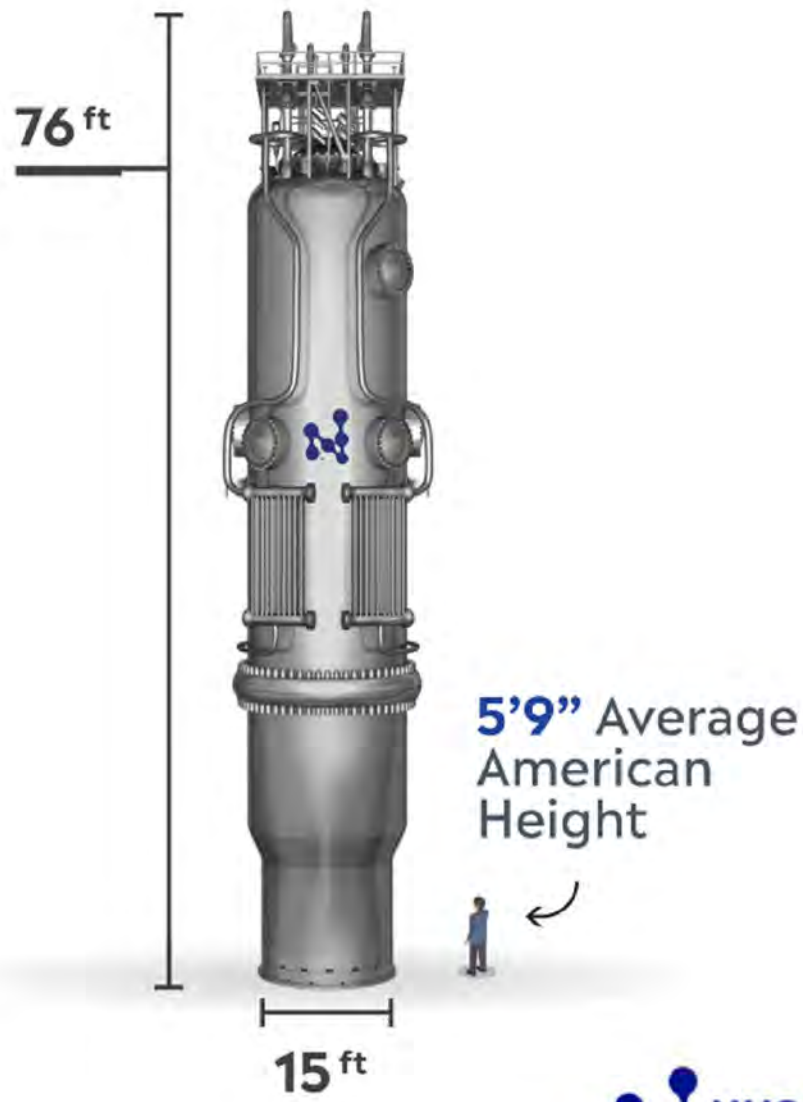
Typical Large PWR

Image: U.S. Nuclear Regulatory Commission

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Dimensions



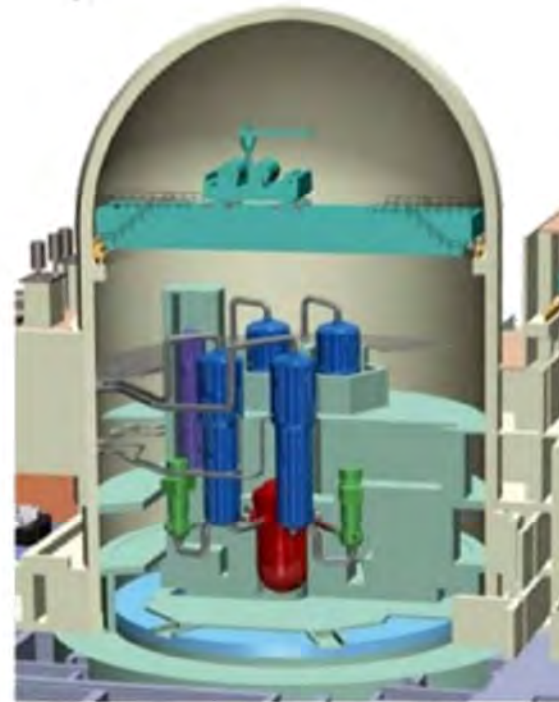
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Comparison to a Large Pressurized Water Reactor (PWR)



NuScale Power Module™



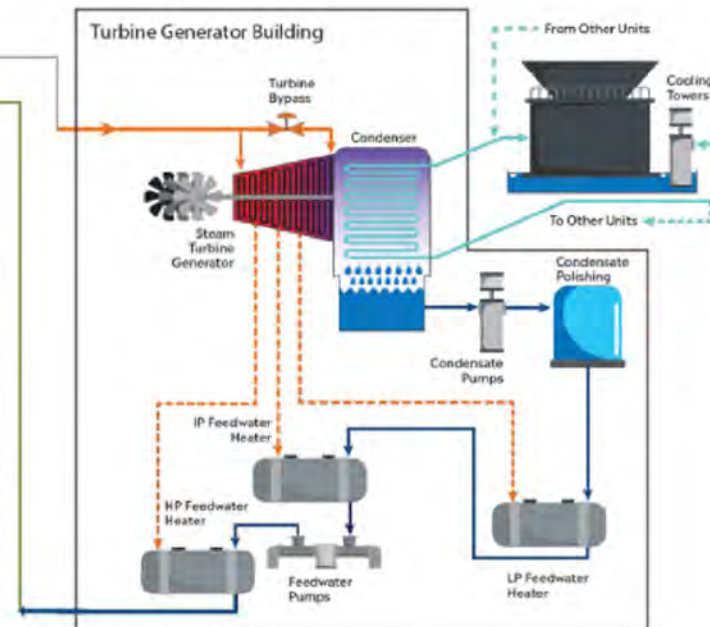
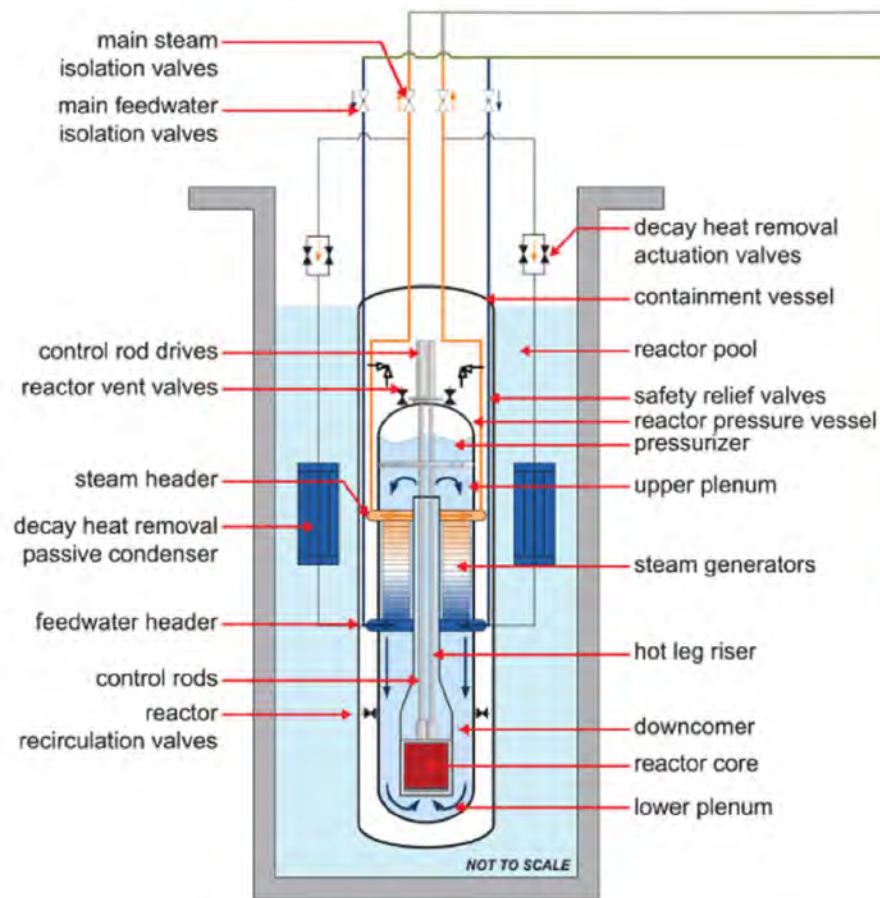
Typical Large PWR

Image: U.S. Nuclear Regulatory Commission

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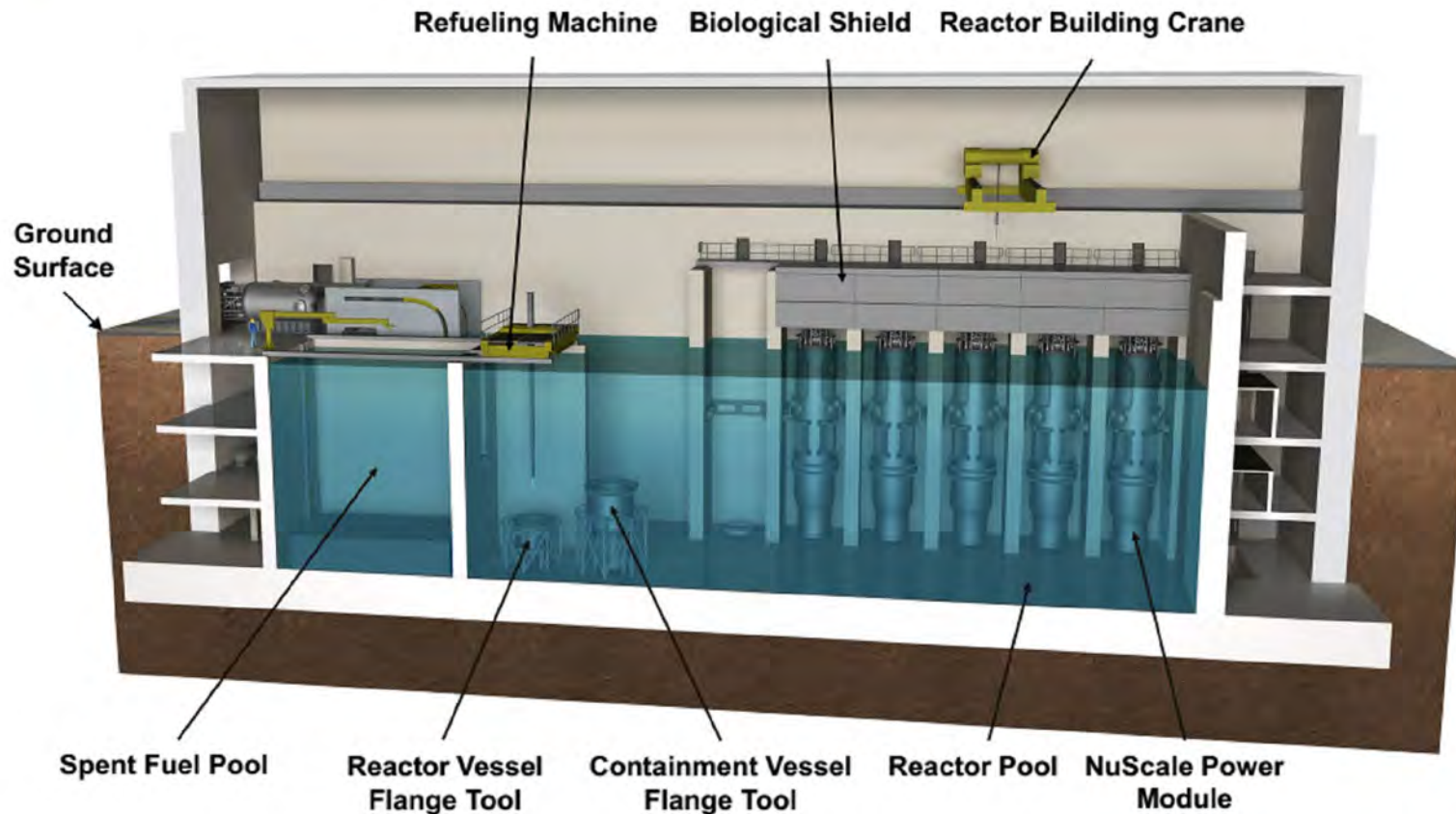


NuScale Power Train



- 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.

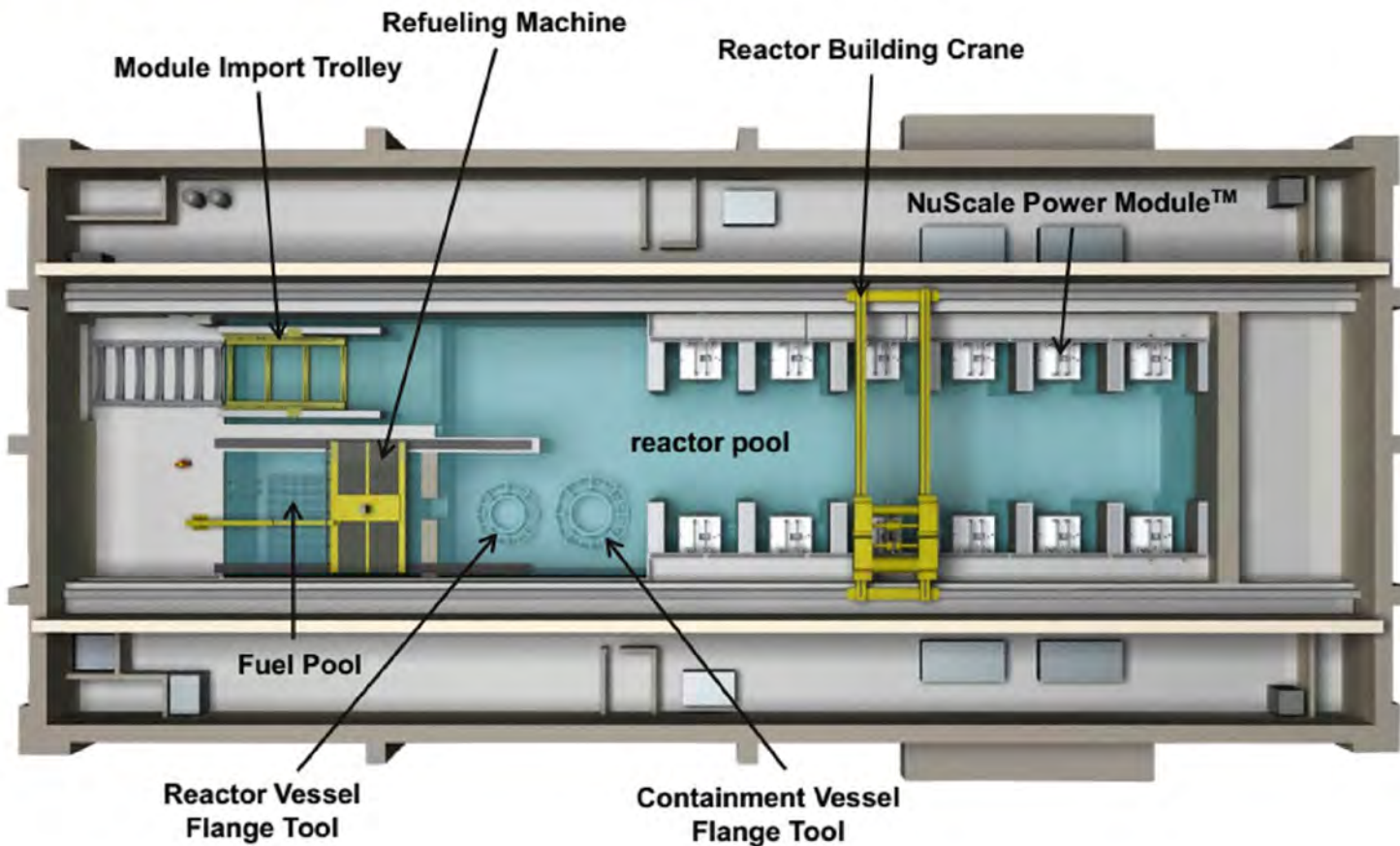
Reactor Building Houses NuScale Power Modules™, Spent Fuel Pool, and Reactor Pool



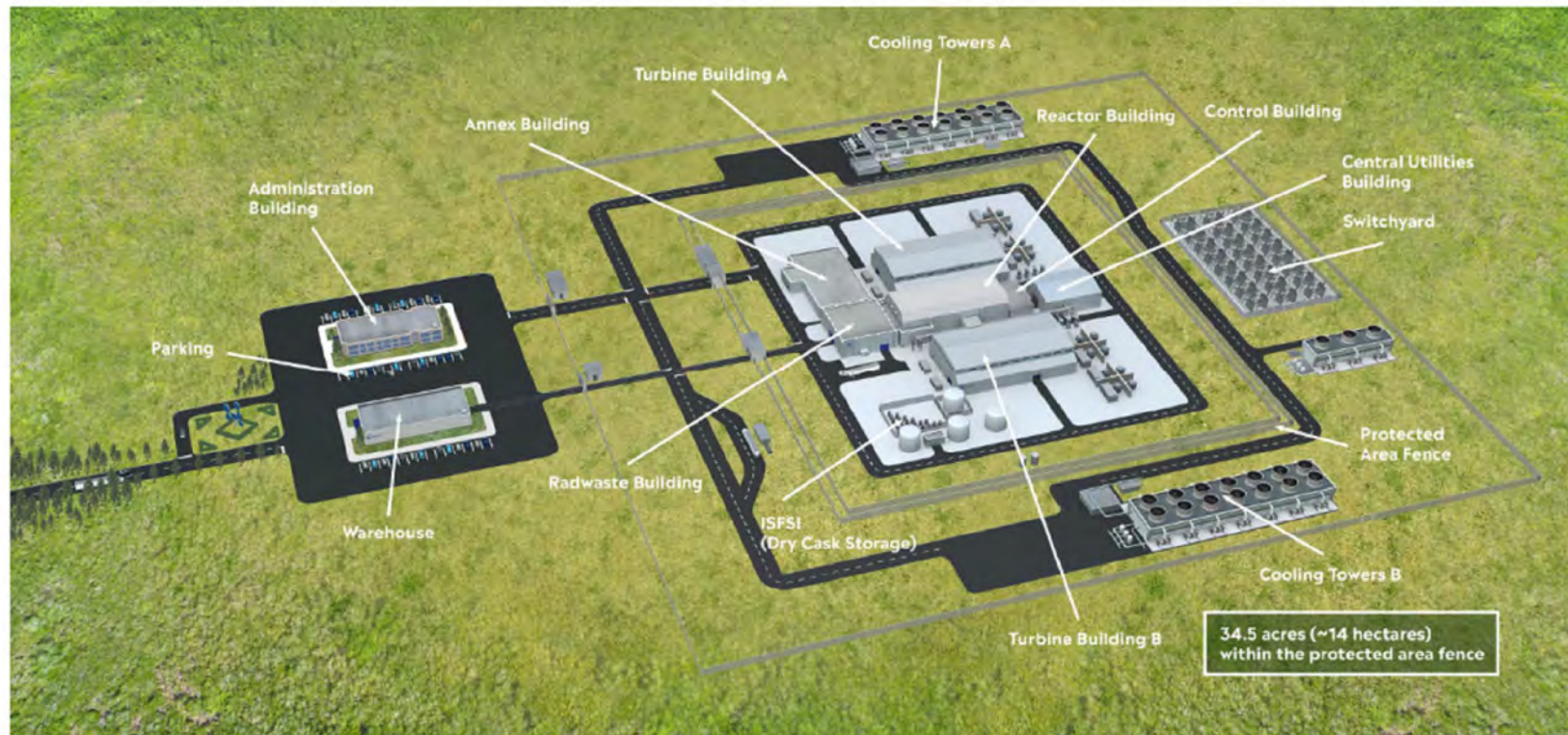
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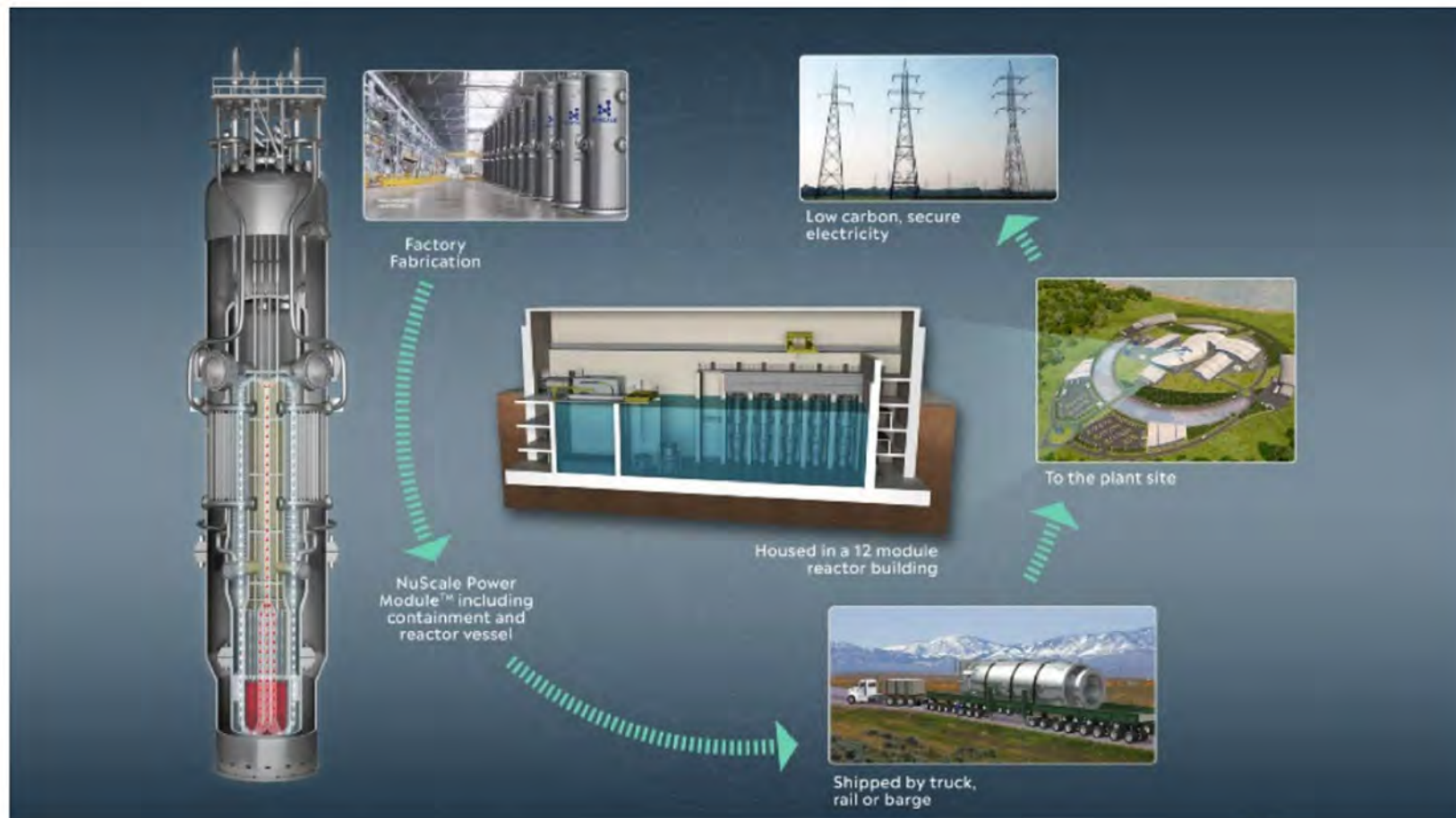
Reactor Building Overhead View



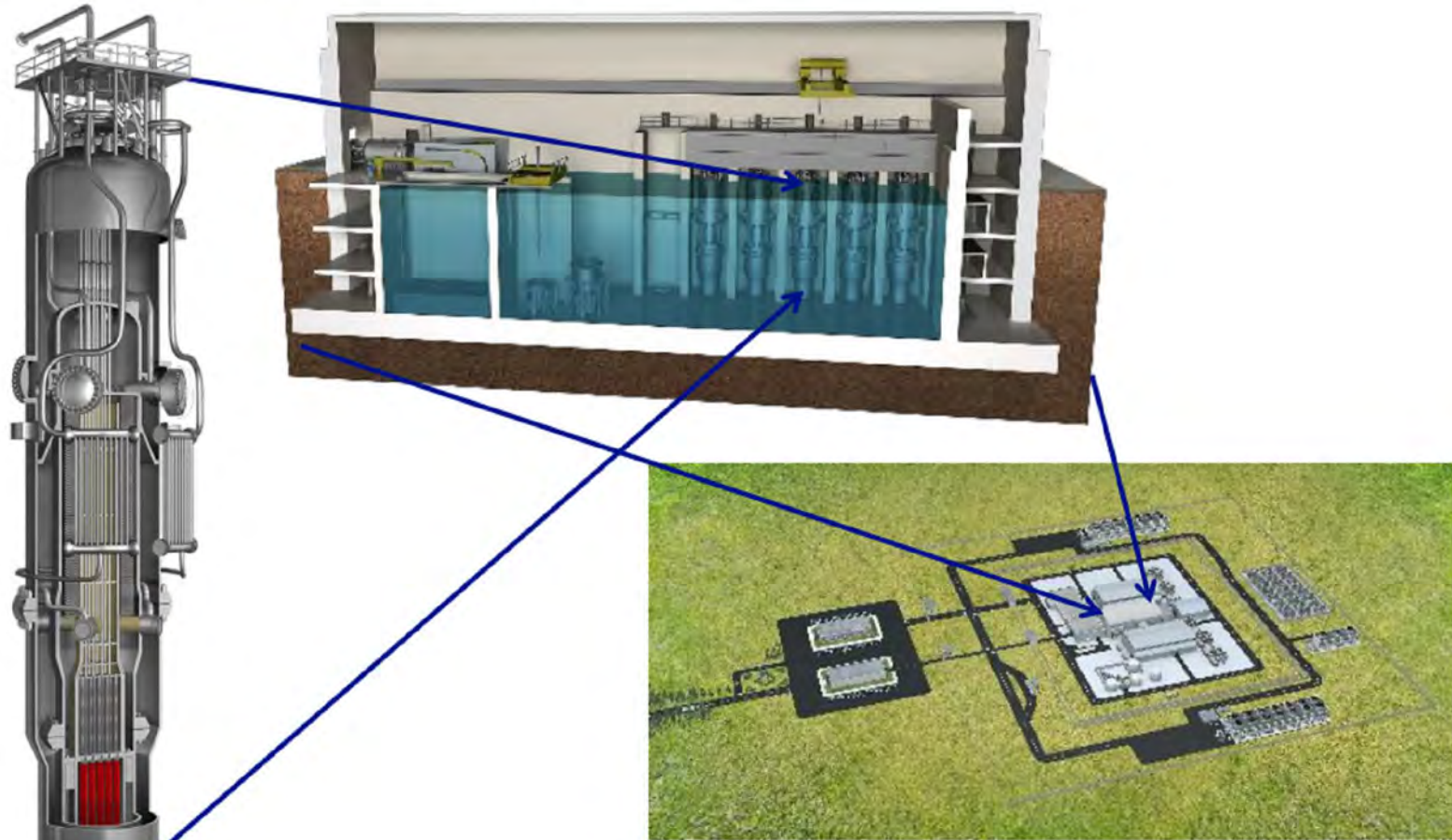
Detailed Plant Site Layout



A New Approach to Construction and Operation



NuScale Plant Site Overview



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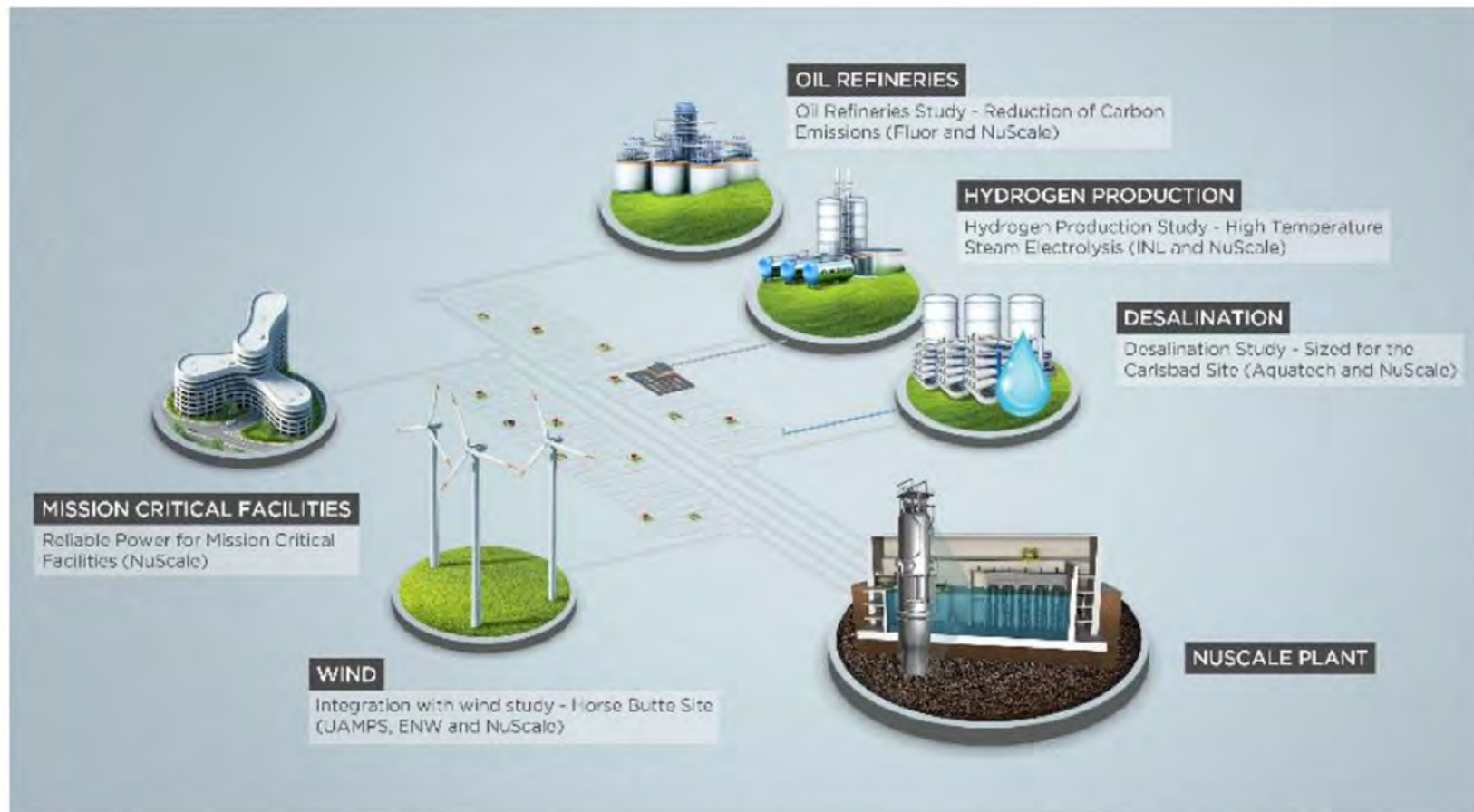
CLEANER

*100% Carbon-Free Energy
and Heat*

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Beyond Baseload: NuScale Diverse Energy Platform



Reports for associated technical studies are available at: www.nuscalepower.com/technology/technical-publications
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A New Level of Plant Resiliency

Climate Adaptation



Black-Start and Island Mode Following Loss of Offsite Power

A single module can be Black-Started and can power the entire plant in case of loss of the grid; no operator or computer actions, AC/DC power or additional water required to keep the reactors safe.



First Responder Power

On loss of the offsite grid, through variable (0% to 100%) steam bypass, all 12 modules can remain at power and be available to provide electricity to the grid as soon as the grid is restored.



Resilience to Natural Events

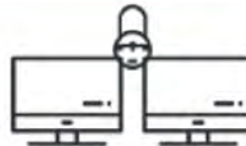
Reactor modules and fuel pool located below grade in a Seismic Category 1 Building

- Capable of withstanding a Fukushima type seismic event
- Capable of withstanding hurricanes, tornados, and floods.



Resilience to Aircraft Impact

Reactor building is able to withstand aircraft impact as specified by the NRC aircraft impact rule.



Cybersecurity

Module and plant protection systems are non-microprocessor based using field programmable gate arrays that do not use software and are therefore not vulnerable to internet cyber-attacks.



Electromagnetic Pulse (EMP/GMD)

Resilience to solar-induced geomagnetic disturbances (GMDs) and electromagnetic pulse (EMP) events beyond current nuclear fleet.

Manufacturing and Testing of Real Components





SAFER

Safety First, Second to None

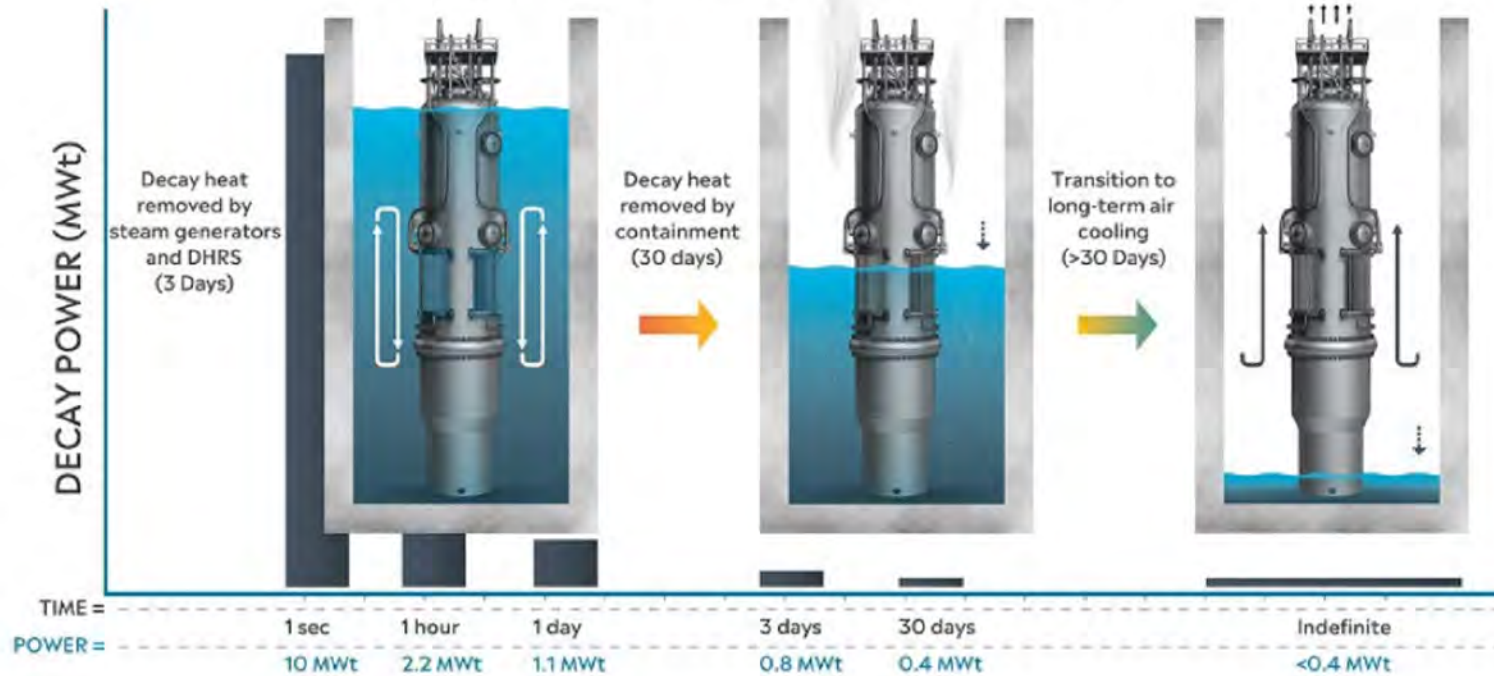


Innovative Advancements to Reactor Safety

*Nuclear fuel cooled indefinitely without AC or DC power**



• No Pumps • No External Power • No External Water



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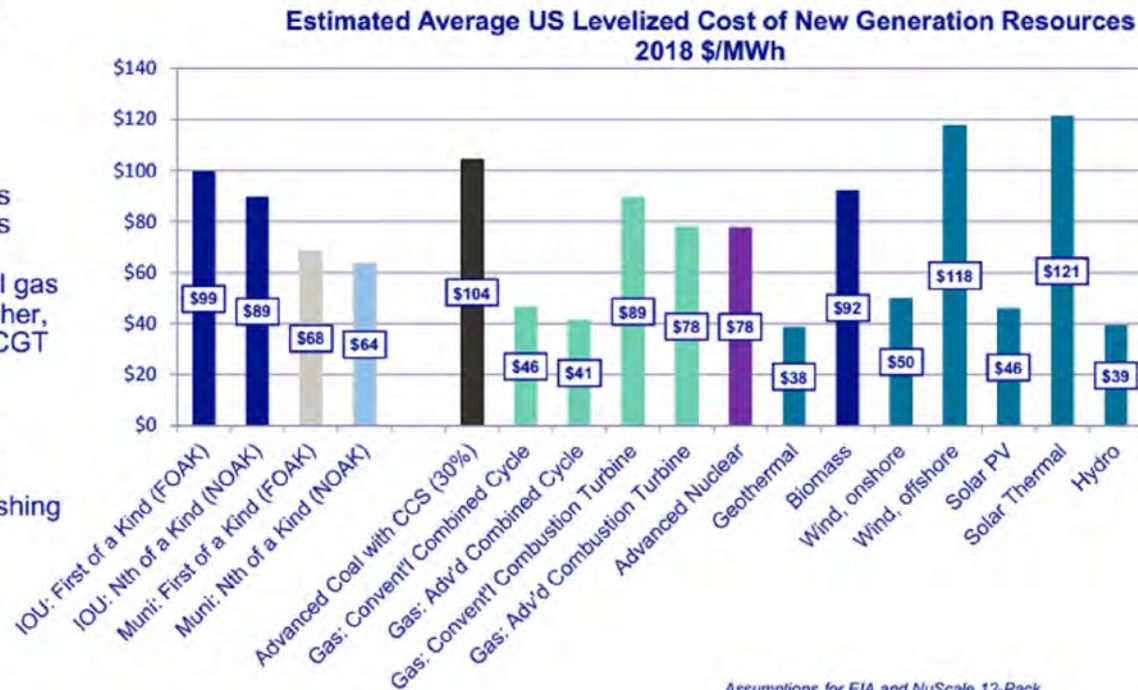
COST COMPETITIVE

*Operational sensibility meets
financial responsibility*



Competitive Economics with Financial Advantages

- Competitive economics with reduced production cost volatility.
- Competition is mainly other base load generation which have deployment barriers.
 - In US, with inexpensive natural gas pricing, combined cycle natural gas (CCGT) plants are a significant competitor. Globally, where natural gas pricing tends to be significantly higher, NuScale compares favorably to CCGT generation on a levelized cost of electricity (LCOE) basis.
 - As US LNG infrastructure buildout continues, expect gas pricing to equilibrate into a global market pushing up US natural gas pricing over time.
- Lower capital at risk in financeable bite sizes.
- High capacity factor, base load, non-carbon emitting power with load following capability.
- Flexible and safe design meets power needs at competitive cost.



*Assumptions for EIA and NuScale 12-Pack
WACC of 4.0% to 7.0%; 30 yr cost recovery; 4.0%
WACC only for NuScale Muni*

*NuScale 12-Pack FOAK and Nth LCOE include Owner's
Cost of \$5.82/MWh. EIA includes transmission
investment from \$1.00/MWh (Advanced Nuclear) to
\$4.10/MWh (Solar Thermal).
NuScale included \$1.00/MWh for transmission
investment in FOAK and Nth LCOE values.
2018: \$3.03/mmBTU.*

*Source: U.S. Energy Information Administration, Levelized
Cost and Levelized Avoided Cost of New Generation
Resources in the Annual Energy Outlook 2019, Feb
2019, except NuScale (12-Pack); NuScale Model.*



**Let's change the power that changes
the world**

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Scott Rasmussen
Director of Sales
srasmussen@nuscalepower.com

From: Mark Gendron

Sent: Mon Mar 30 10:01:29 2020

To: Garrett,Paul D (BPA) - PSS-6

Subject: [EXTERNAL] Re: SILS questions

Importance: Normal

1:30 should work fine. I will be on a call that is scheduled to end at 1. If it goes long I will let you know by email.

Get [Outlook for iOS](#)

From: Garrett,Paul D (BPA) - PSS-6 <pdgarrett@bpa.gov>;

Sent: Monday, March 30, 2020 9:49:43 AM

To: Mark Gendron <MGendron@uamps.com>;

Subject: RE: SILS questions

Hey Mark,

Good to hear from you! We're surviving, trying out an in-home nanny for the morning, mixed results so far. I least we have confirmation

(b)(6)

(b)(6)

(b)(6)

Will give you a ring (b)(6) maybe around 1:30 if that works ok?

Thanks,

-Paul

From: Mark Gendron <MGendron@uamps.com>;
Sent: Friday, March 27, 2020 2:00 PM
To: Garrett, Paul D (BPA) - PSS-6 <pdgarrett@bpa.gov>;
Subject: [EXTERNAL] SILS questions

Hey PG!

I hope all is well with you, (b)(6)

(b)(6)

As you know I am working for UAMPS on the NuScale project in Idaho. I would like to discuss the possibility of this resource being an alternative solution to the B2H project. If you are willing and able it would be great to chat. At your convenience of course, as I have all the time in the world here at home.

My best

Mark

(503) 679-3337

From: Cook,Joel D (BPA) - K-7

Sent: Mon Apr 13 06:59:57 2020

Required: Shaheen,Richard L (BPA) - T-DITT-2; Hairston,John L (BPA) - A-7; 'mgendron@uamps.com'; Cook,Jeffrey W (BPA) - TP-DITT-2

Optional: Garrett,Paul D (BPA) - PSS-6; Thompson,Kim T (BPA) - PS-6; 'Doug Hunter'

Subject: UAMPS Check-in w/Mark Gendron

Location: Bridge

Start time: Tue Apr 14 16:00:00 2020

End time: Tue Apr 14 17:00:00 2020

Importance: Normal

Attachments: UAMPS Carbon Free Power Project.docx

Bridge: 503-230-4000, 509-822-4485, or 866-340-4886

Passcode: (b)(6)

UAMPS Carbon Free Power Project (CFPP)

Presentation and Discussion with BPA, April 14, 2020

Participants: BPA; John Hairston, Joel Cook, Richard Shaheen, Jeff Cook, Kim Thompson, Paul Garrett. UAMPS; Doug Hunter, Mark Gendron

- Introductions
- CFPP status update
- Value of CFPP in PNW
- Opportunities for BPA
- Open discussion
- Next steps
- Wrap up

From: Cook,Joel D (BPA) - P-6

Sent: Tue Apr 14 15:54:12 2020

To: Shaheen,Richard L (BPA) - T-DITT-2; Hairston,John L (BPA) - K-7; 'mgendron@uamps.com'; Garrett,Paul D (BPA) - PSS-6; Thompson,Kim T (BPA) - PS-6; 'Doug Hunter'; Cook,Jeffrey W (BPA) - TP-DITT-2

Subject: FW: Agenda for 4/14 meeting

Importance: Normal

Attachments: UAMPS CFPP Project Overview for BPA, April 14.pptx

From: Mark Gendron <MGendron@uamps.com>

Sent: Tuesday, April 14, 2020 3:51 PM

To: Cook,Joel D (BPA) - P-6 <jdcook@bpa.gov>

Subject: [EXTERNAL] FW: Agenda for 4/14 meeting

From: Mark Gendron

Sent: Saturday, April 11, 2020 7:17 PM

To: Bas,JoAnn L (BPA) - P-6 <jlbas@bpa.gov>

Cc: Cook,Joel D (BPA) - P-6 <jdcook@bpa.gov>
Subject: RE: Agenda for 4/14 meeting

JoAnn

Attached is a Power Point presentation that will be used during the CFPP status update agenda item. Because we are meeting by teleconference, it would be appreciated if you can send this presentation to all BPA meeting participants ahead of the meeting (Monday would be great). Also, please forward this link to a short video to the group as well: <https://youtu.be/vU-llqiP4sU>

Thanks!

Mark<https://youtu.be/vU-llqiP4sU>

From: Bas,JoAnn L (BPA) - P-6 <jibas@bpa.gov>
Sent: Friday, April 10, 2020 6:24 AM
To: Mark Gendron <MGendron@uamps.com>
Subject: RE: Agenda for 4/14 meeting

Thank Mark. I've added Jeff to the invite.

JoAnn Bas

Executive Associate Officer to Joel D. Cook, Senior VP | Power Services

Executive Associate Officer to Kim Thompson (acting), VP | NW Requirements Marketing

Bonneville Power Administration

jlbas@bpa.gov | P 503.230.4983

[cid:image001.jpg@01D390F8.DFED0CE0cid:image002.jpg@01D390F8.DFED0CE0cid:image003.jpg@01D390F8.DFED0CE0cid:image004.jpg@01D390F8.DFED0CE0cid:image005.jpg@01D390F8.DFED0CE0cid:image006.jpg@01D390F8.DFED0CE0](#)

From: Mark Gendron <MGendron@uamps.com>

Sent: Thursday, April 9, 2020 7:14 PM

To: Bas,JoAnn L (BPA) - P-6 <jlbas@bpa.gov>

Cc: Cook,Joel D (BPA) - P-6 <jdcook@bpa.gov>

Subject: [EXTERNAL] Agenda for 4/14 meeting

JoAnn

Attached (and pasted below) is the agenda for meeting on 4/14. As you will see, I have included Jeff Cook as an attendee. Joel and I discussed adding Jeff, depending on his availability.

I will send you a presentation to forward to the BPA participants tomorrow, or first thing Monday morning.

My best!

Mark

UAMPS Carbon Free Power Project (CFPP)

Presentation and Discussion with BPA, April 14, 2020

Participants: BPA; John Hairston, Joel Cook, Richard Shaheen, Jeff Cook, Kim Thompson, Paul Garrett. UAMPS; Doug Hunter, Mark Gendron

- Introductions
- CFPP status update
- Value of CFPP in PNW
- Opportunities for BPA
- Open discussion
- Next steps
- Wrap up

UAMPS

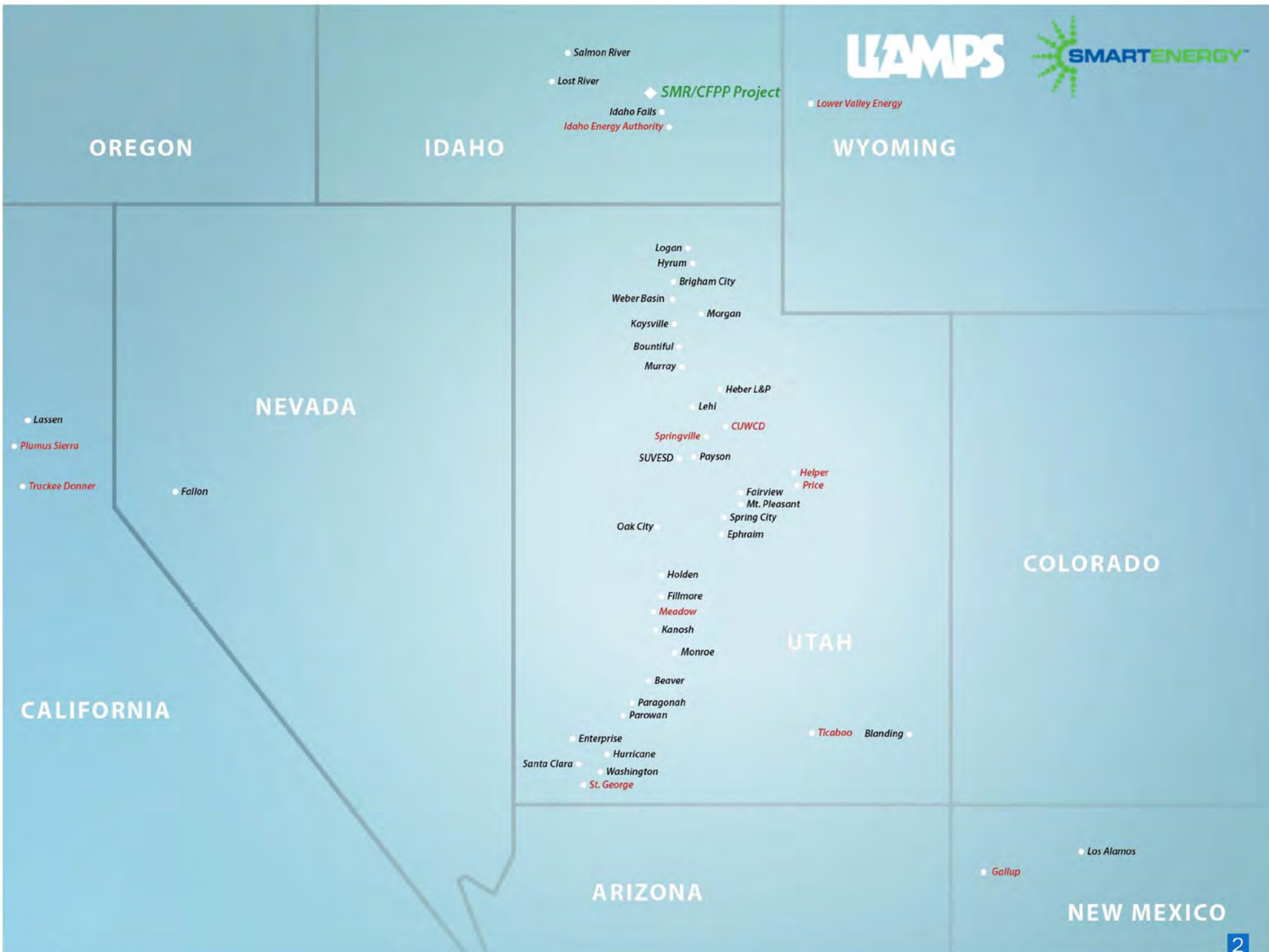
Utah Associated Municipal Power Systems



SMARTENERGY

Doug Hunter, Chief
Executive Officer
Mark Gendron, Special
Advisor

**BONNEVILLE POWER ADMINISTRATION
APRIL 14, 2020**



UAMPS RESOURCE PROJECTS

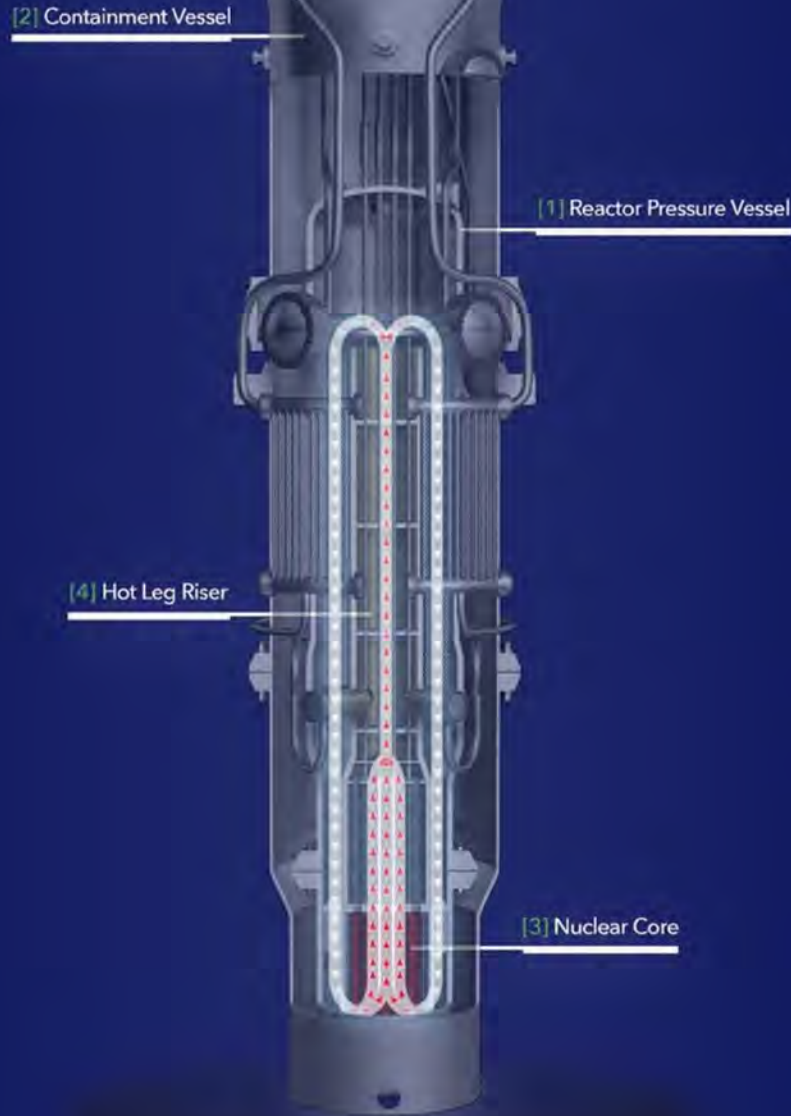
- **Carbon-based Resources**
 - Hunter Project – 23 Participants
 - San Juan Project – 16 Participants
 - IPP Project – 23 Participants
 - Payson Project – 16 Participant
 - Carbon Free Power Project – 35 Participants
- **Non-Carbon Resources**
 - CRSP Project – 31 Participants
 - Provo River – 4 Participants
 - Olmsted – 5 Participants
 - Horse Butte Wind Project – 23 Participants
 - Pleasant Valley Wind – 18 Participants
 - Patua Geothermal/Solar – 2 Participants
 - Veyo Heat Recovery Project – 7 Participants
 - Red Mesa Tapaha Solar Project – 15 Participants

CARBON FREE POWER PROJECT VALUE PROPOSITION

- 40-year LCOE, on to the grid, equal to or less than \$55/MWh
 - Cost shared among UAMPS, DOE & NuScale
- Flexible & resilient carbon free resource to integrate renewables
- Fleet managed operations
 - Approximately \$5/MWh savings
- Fits within the 100% clean power generation bills passed by California, Colorado, Nevada, New Mexico and Washington
- Market based response to GHG, tempers need for Federal Regulation
- Complements Electric Market Regulation
 - Resource Adequacy
 - Energy Imbalance Market
 - Resiliency on ramp rate
 - Reserves



CORE TECHNOLOGY: NUSCALE POWER MODULE



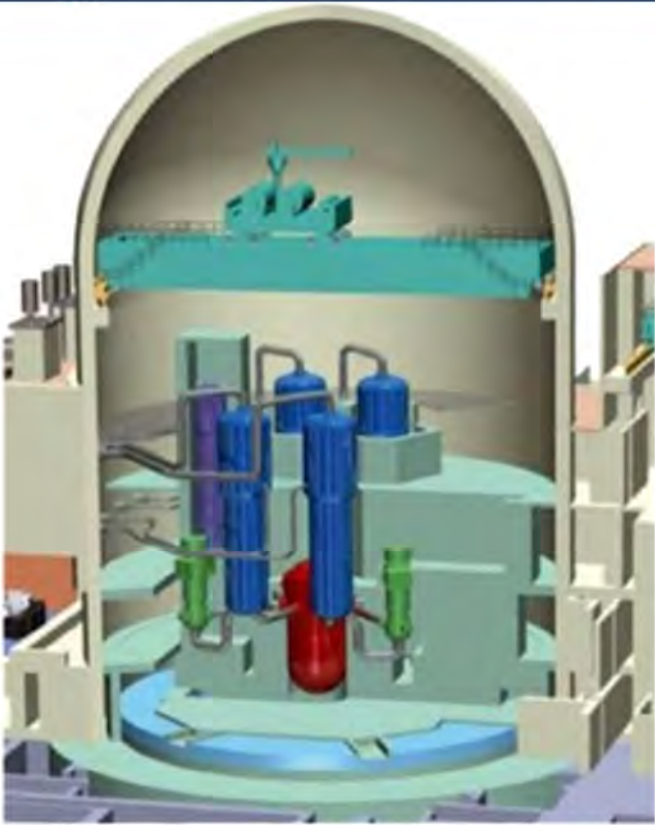
- A NuScale Power Module™ (NPM) includes the reactor vessel, steam generators, pressurizer, and containment in an integral package – simple design that eliminates reactor coolant pumps, large bore piping and other systems and components found in large conventional reactors.
- Each module produces up to 60 MWe
 - small enough to be factory built for easy transport and installation
 - dedicated power conversion system for flexible, independent operation
 - incrementally added to match load growth
 - up to **12 modules for 720 MWe** gross (684 MWe net) total output

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COMPARISON TO A LARGE PRESSURIZED WATER REACTOR



NuScale Power Module

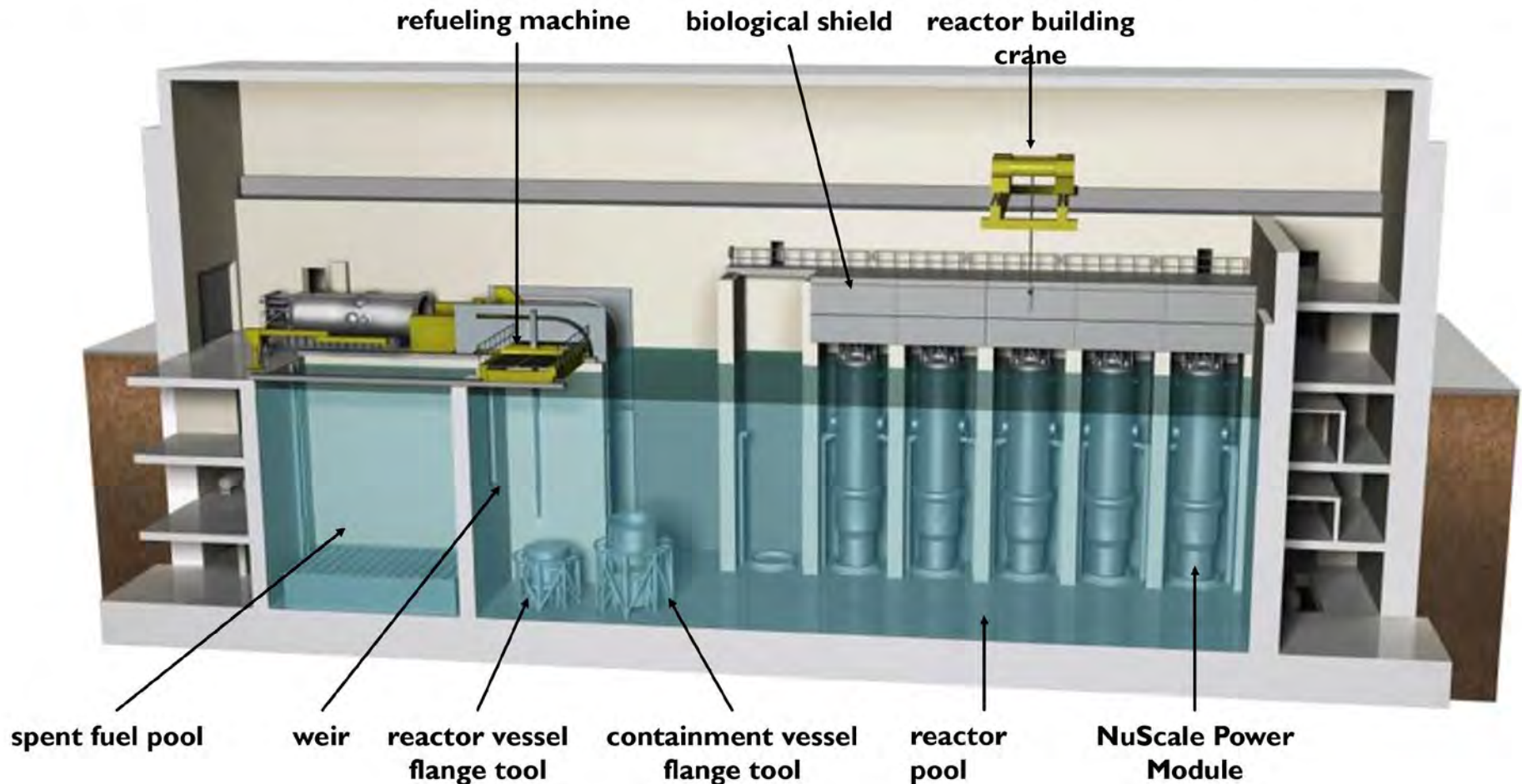


Typical Large PWR

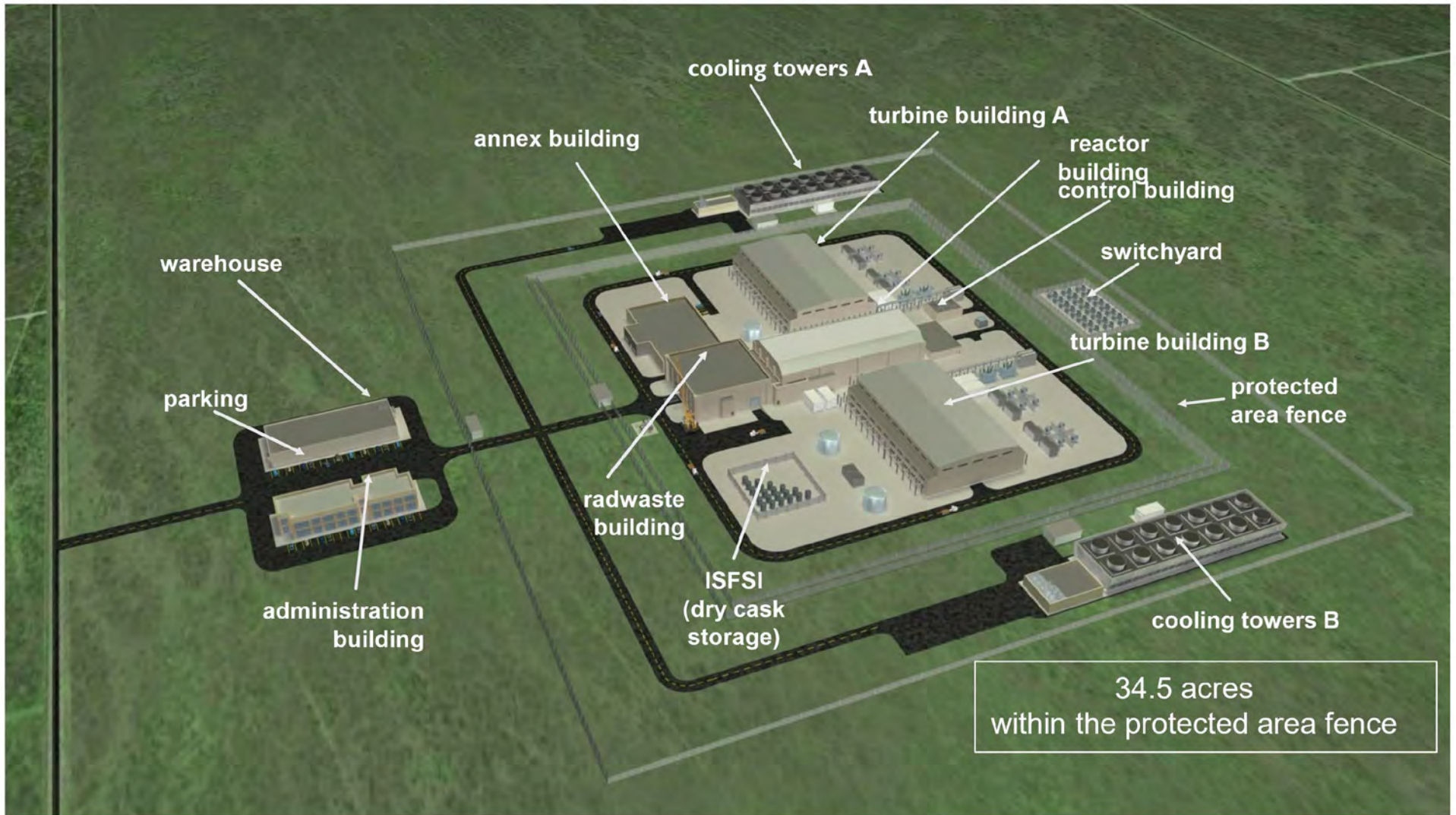


REACTOR BUILDING CROSS-SECTION

Reactor building houses NuScale power modules, spent fuel pool, and reactor pool



SITE OVERVIEW

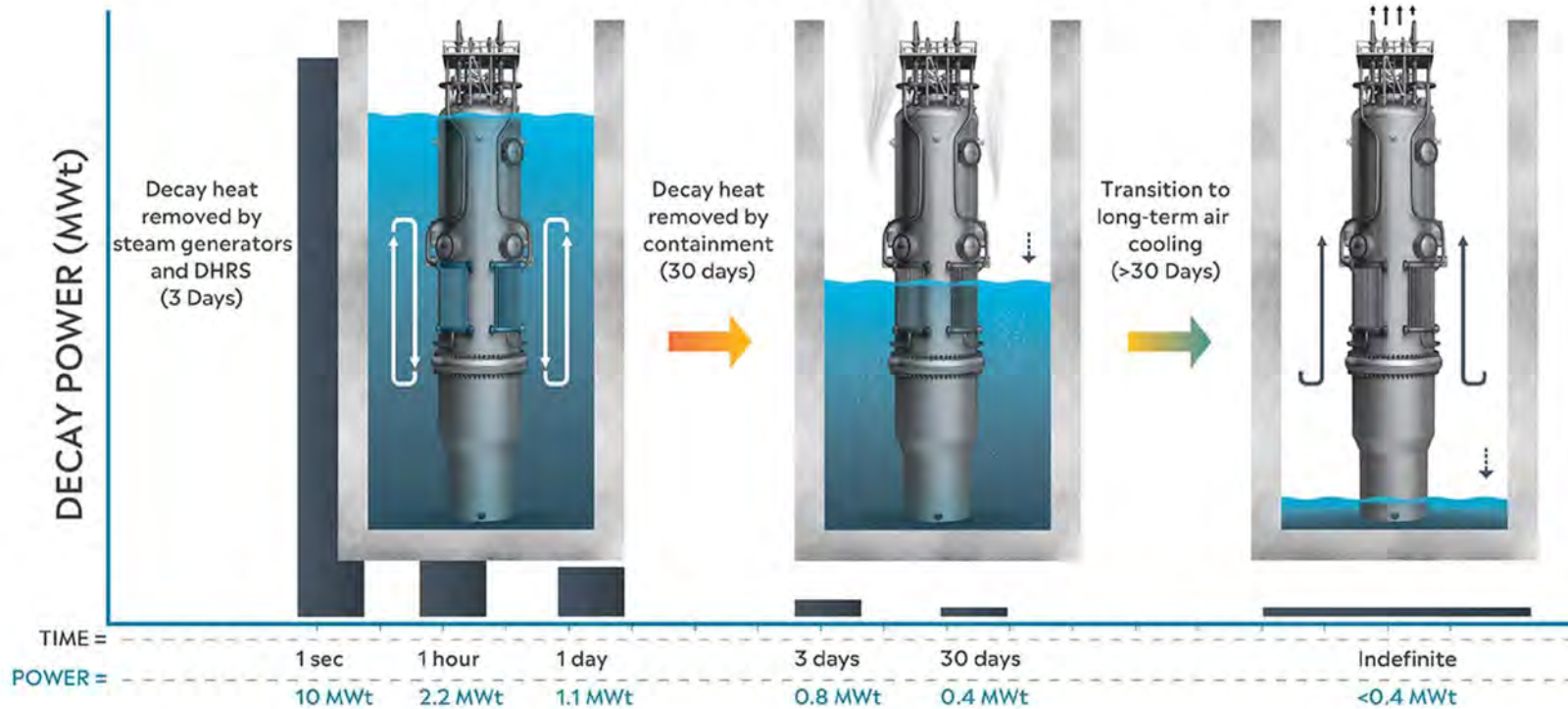


Innovative Advancements to Reactor Safety

NUCLEAR FUEL COOLED INDEFINITELY WITHOUT AC OR DC POWER*



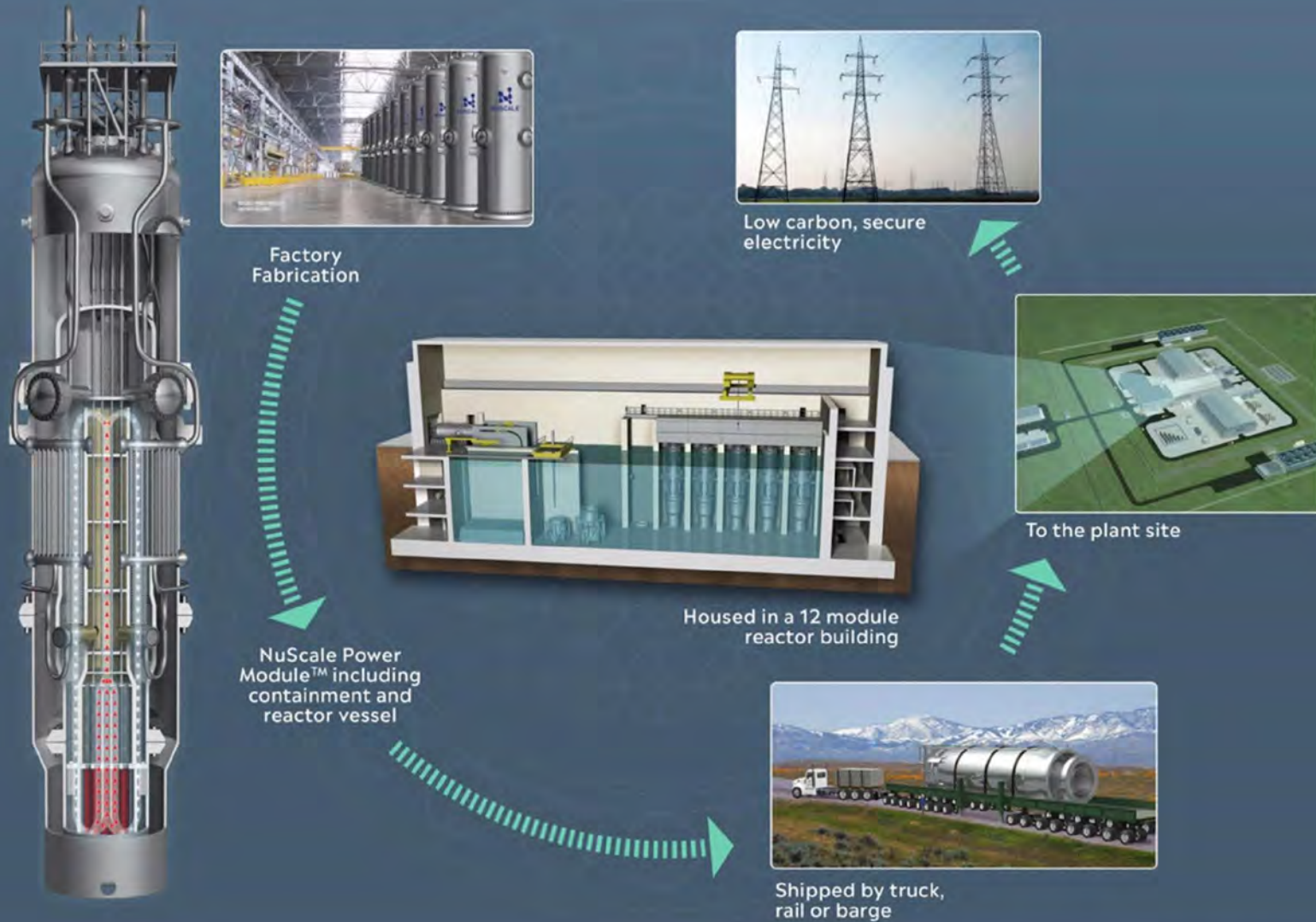
• No Pumps • No External Power • No External Water



*Alternate IE power system design eliminates the need for IE qualified batteries to perform ESFAS protective functions – Patent Pending



A NEW APPROACH TO CONSTRUCTION AND OPERATION



NUCLEAR REGULATORY COMMISSION (NRC) LICENSING

- NuScale pursues
 - NRC Design Certification (DC) & Standard Design Approval (SDA)
 - DC on schedule to be completed by end of 2020
 - SDA to be submitted
 - Standard Plant Design
 - Potential Additional Deployment
 - Ontario Generation Power, Energy Northwest, Tennessee Valley Authority, etc.
- UAMPS pursues
 - NRC Combined Operating License Application (COLA)

DEPARTMENT OF ENERGY (DOE) SUPPORT

- **UAMPS Existing Cost Sharing Arrangement**
 - 5-year term through 2024
 - \$59.5M UAMPS and \$59.5M DOE
 - UAMPS is working with DOE on additional cost sharing support through commercial operation date
- **UAMPS, INL and DOE Memorandum of Understanding**
 - Joint Use Modular Plant (JUMP)
 - FY20 Appropriations allocated \$10M to JUMP
 - Power Purchase Agreement
- **UAMPS Site Support**
 - Site Agreement
 - Seismic Study (SSHAC)
- **NuScale Design**
 - \$226M under original DOE award
 - \$90M under recent awards
 - New \$525M Award (50/50 cost share)



UAMPS SUBSCRIPTION EFFORTS

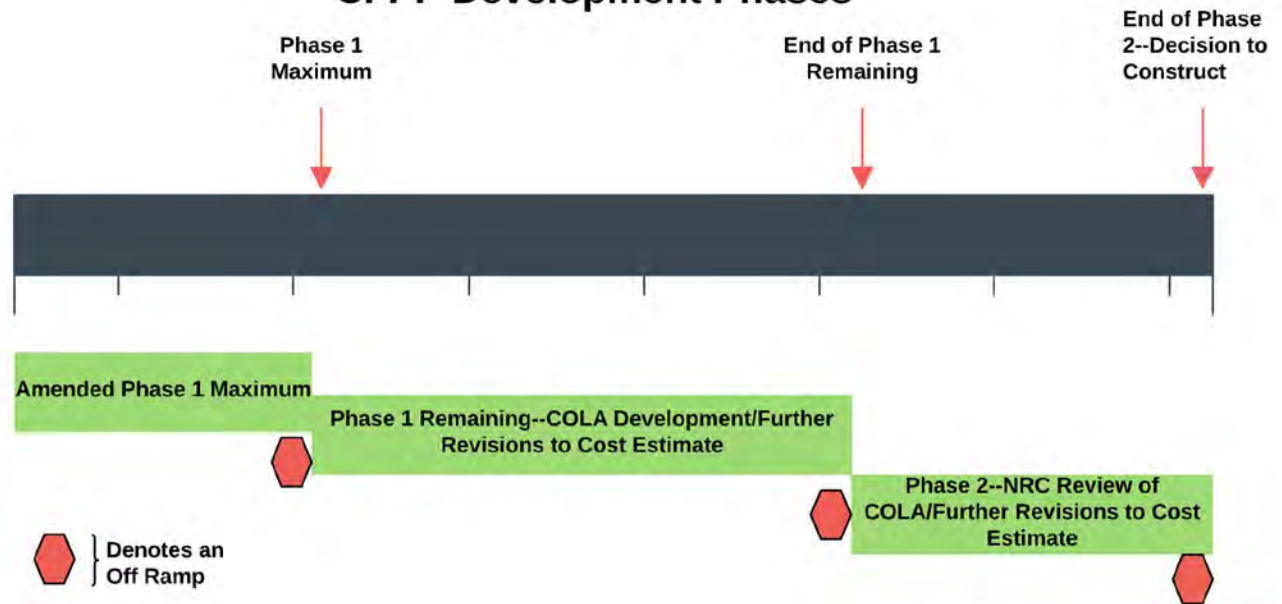
- Extensive open and public meeting process
 - 34 original study phase project participants
 - 2 new participants joined & 2 participants withdrew
 - 35 executed power sales contracts
 - 2 participants elected not to executed
 - 15 new prospective participants
- 213 MW of 720 MW of Total Capacity (30%)

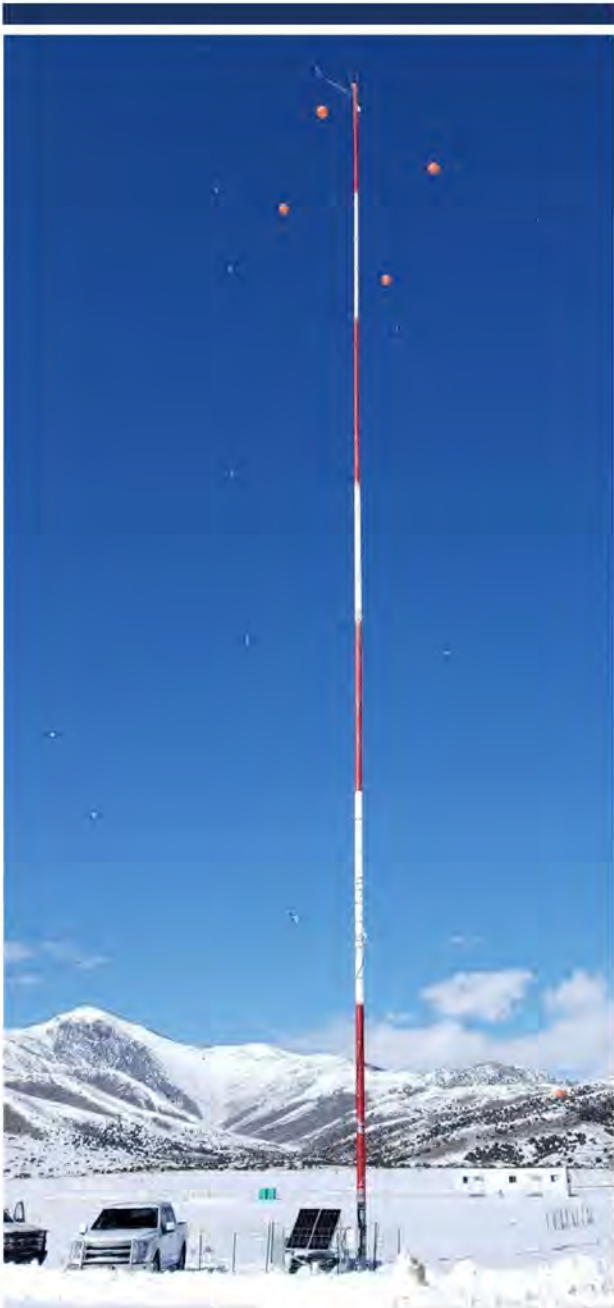


PHASED DEVELOPMENT APPROACH

- Phased development approach
 - Budget monetary caps for each phase
- Each participant has a unilateral right to exit the project at the end of each phase
- Budgets for each phase will be approved by the PMC before proceeding to the next phase
- Each participant's governing board approval is required to proceed to construction

CFPP Development Phases





CURRENT STATUS OF PHASED DEVELOPMENT APPROACH

- Prioritization of Securing DOE Support for the CFPP—finalizing this support necessary before approving a new budget
- Other Near-Term Work:
 - Finalizing contracts between UAMPS and NuScale and Fluor and UAMPS
 - Cooling decision
 - Shared Services Model for Operations
 - Legislative work to secure appropriations for DOE funding; continued support from Idaho Legislature (resolution pending that supports the CFPP)
 - Pre-engagement with NRC on UAMPS NRC permit application—initial site characterization has begun—data collection will feed into UAMPS NRC application



CFPP SITE

TRANSMISSION

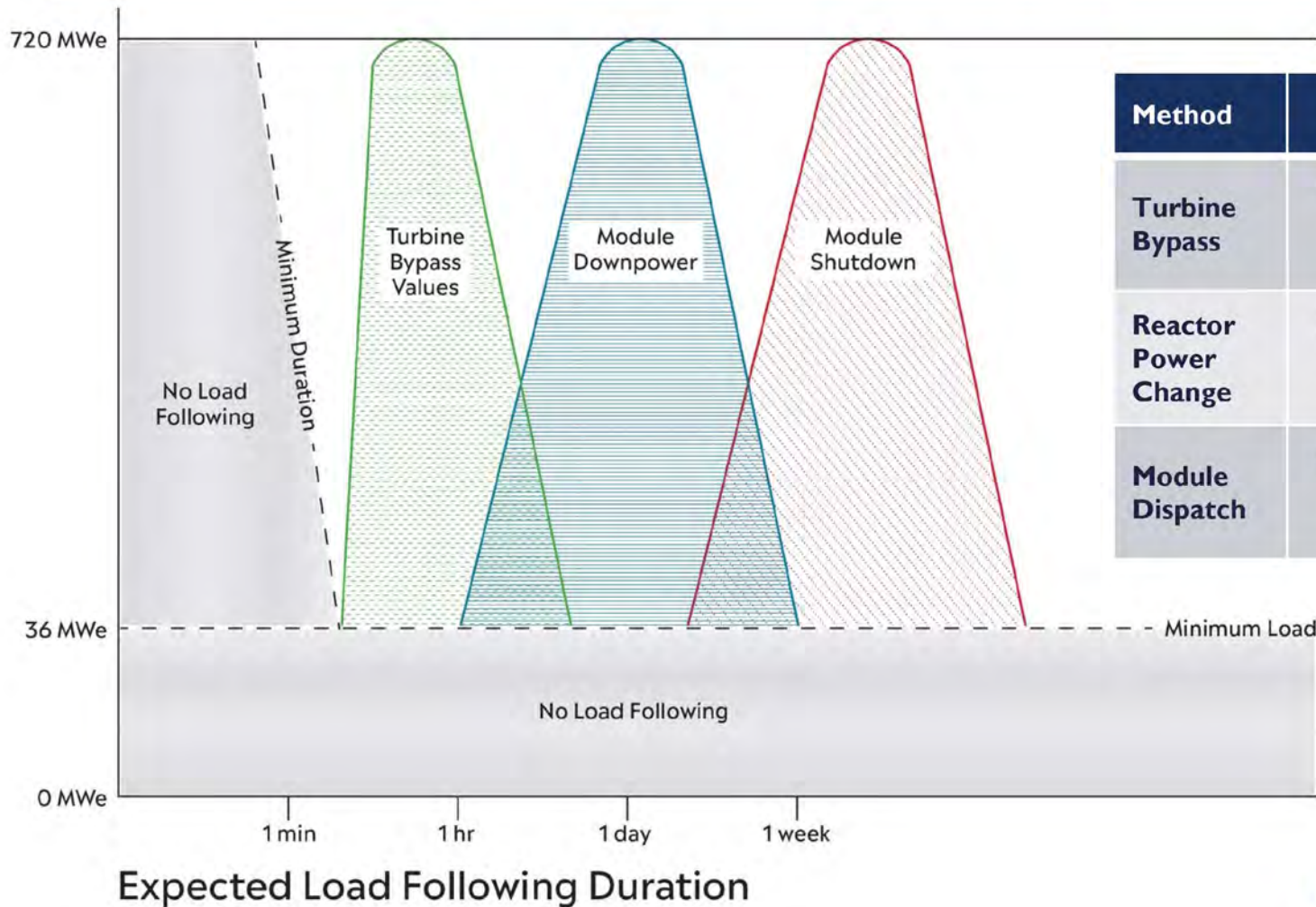
- Transmission limitations exist from Eastern Idaho to WA and OR loads
- Opportunities for energy and capacity exchange
 - South Idaho Exchange
 - BPA/UAMPS/NW public power utilities
- Alternative to BPA participation in Boardman to Hemmingway transmission project

INTEGRATION STUDY

- NuScale includes unique capabilities for following electric load requirements as they vary with customer demand and rapid output variations from renewables: NuFollow™
- There are three means to change power output from a NuScale facility:
 - **Turbine Bypass** – bypassing turbine steam to the condenser (short time frames)
 - **Power Maneuverability** – adjusting reactor power for one or more modules (intermediate time frames)
 - **Dispatchable modules** – taking one or more reactors offline for extended periods of low grid demand
- Study published on integration with Horse Butte wind farm in Idaho
- Partnered with Utah Associated Municipal Power Systems and Energy Northwest



INTEGRATING RENEWABLES: LOAD FOLLOW STRATEGIES



Method	Up Power	Down Power
Turbine Bypass	20% to 100% (27 min) 3%/min	100% to 20% (8 min) 10%/min
Reactor Power Change	20% to 100% (96 min) 50%/hr	100% to 20% (≤ 24 min) 200%/hr
Module Dispatch	HSD to 100% (13 hrs) Refueling	100% to HSD (30 min) 200%/hr





QUESTIONS AND DISCUSSION

From: Mark Gendron

Sent: Tue Apr 14 17:22:25 2020

To: Cook,Joel D (BPA) - P-6

Subject: [EXTERNAL] short video

Importance: Normal

Thanks for the time today Joel. Check out this short video! Feel free to share.

<https://youtu.be/vU-llqiP4sU>

From: Wilson,Scott K (BPA) - PSW-6

Sent: Fri Dec 04 14:31:18 2020

To: Mark Gendron

Subject: RE: following up

Importance: Normal

2:00 - 3:00 on Monday. Just call me at 503-752-7409.

From: Mark Gendron <MGendron@uamps.com>

Sent: Friday, December 4, 2020 2:24 PM

To: Wilson,Scott K (BPA) - PSW-6 <skwilson@bpa.gov>

Subject: [EXTERNAL] Re: following up

Scott

Monday and Tuesday both work for me. Pick the day and time and I will call you. Much thanks!

Get [Outlook for iOS](#)

From: Wilson,Scott K (BPA) - PSW-6 <skwilson@bpa.gov>

Sent: Friday, December 4, 2020 1:49:24 PM
To: Mark Gendron <MGendron@uamps.com>
Subject: RE: following up

Hi Mark

Its use-or-lose season so my time is waning a bit. Looking at my calendar I have afternoon on Monday and late afternoon on Tuesday available next week. I'm OOO for the last 3 weeks of the year but I could still meet you over a socially distant beer if you wanted to, especially the first week. So if next week works we could make that happen. Hope all is well in your world and sorry my time is getting squeezed so much.

—Scott

From: Mark Gendron <MGendron@uamps.com>
Sent: Friday, December 4, 2020 1:01 PM
To: Wilson, Scott K (BPA) - PSW-6 <skwilson@bpa.gov>
Subject: [EXTERNAL] following up

Scott

As we discussed a few days ago, I would like to discuss the following matters with you:

- In 2028, the forecast of BPA's Tier 1 system fire critical output

- Also in 2028, the forecast preference load that BPA anticipates if:
 - o This total load is the same as the aggregate HWM of customers today
 - o Customers request an increase in HWM, such as 10% for example
 - o Same as above, with customers' also requesting all Above-HWM load served at Tier 1
- How would BPA supply comply with WA CETA requirements? (GHG neutral by 2030 and 100% carbon free by 2045)
- The impact of BPAs participation in the EIM on the T1 system
- BPA's possible need for resource to meet RA requirements outside its BAA
- Transmission from CFPP to the FCRTS

Would you have the time in the next few weeks to discuss?

Mark

From: Mark Gendron

Sent: Wed Feb 17 16:19:00 2021

Required: Garrett,Paul D (BPA) - PSS-6

Subject: FW: CFPP Update and SILS

Location: <https://uamps.zoom.us/j/95627434087?wd=ZDIyQzQxSU4xTk1NNFI1NWJXVWR4UT09>

Start time: Tue Mar 02 16:00:00 2021

End time: Tue Mar 02 17:00:00 2021

Importance: Normal

Hi Paul – If you are interested, Mark has invited us to an update on how he sees a possible fit for the CFPP and SILS.

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

From: Mark Gendron <MGendron@uamps.com>

Sent: Wednesday, February 17, 2021 2:54 PM

To: Mark Gendron; Cook,Joel D (BPA) - P-6; Cooper,Suzanne B (BPA) - PT-5; Thompson, Kim T (BPA) - PS-6; Bas,JoAnn L (BPA) - P-6

Subject: CFPP Update and SILS

When: Tuesday, March 2, 2021 4:00 PM-5:00 PM (UTC-08:00) Pacific Time (US & Canada).

Where: <https://uamps.zoom.us/j/95627434087?pwd=ZDIyQzQxSU4xTk1NNFI1NWJXVWR4UT09>

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

From: Mark Gendron <MGendron@uamps.com>

Sent: Wednesday, February 17, 2021 2:53 PM

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

Subject: CFPP Update and SILS

When: Tuesday, March 2, 2021 4:00 PM-5:00 PM (UTC-08:00) Pacific Time (US & Canada).

Where: <https://uamps.zoom.us/j/95627434087?pwd=ZDIyQzQxSU4xTk1NNFI1NWJXVWR4UT09>

Mark Gendron is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting

<https://uamps.zoom.us/j/95627434087?pwd=ZDIyQzQxSU4xTk1NNFI1NWJXVWR4UT09>

Meeting ID: (b)(6)

Passcode: (b)(6)

One tap mobile

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+14086380968, (b)(6) (San Jose)

Dial by your location

+1 346 248 7799 US (Houston)

+1 408 638 0968 US (San Jose)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 646 876 9923 US (New York)

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

877 853 5257 US Toll-free

855 880 1246 US Toll-free

Meeting ID: 956 2743 4087

Find your local number: <https://uamps.zoom.us/u/atdNk6s9Q>

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

Sent: Wed Feb 17 16:19:22 2021

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

Subject: RE: Response needed: Meeting with Kim and Suzanne

Importance: Normal

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

Hi JoAnn – I saw the invite come through from Mark & forwarded it to Paul so he has the option to join.

Best Regards,

Kim Thompson

Northwest Requirements Marketing | Vice President

[Bonneville Power Administration](#)

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

From: Bas, JoAnn L (BPA) - P-6 <jlbas@bpa.gov>

Sent: Wednesday, February 17, 2021 1:40 PM

To: Cook, Joel D (BPA) - P-6 <jdcook@bpa.gov>; Thompson, Kim T (BPA) - PS-6 <ktthompson@bpa.gov>

Subject: RE: Response needed: Meeting with Kim and Suzanne

It’s really hard to get an hour that will work for all of you. Our next option is March 2 from 4-5. I’ll propose that to Mark unless you’re willing to miss the first hour of your training.

JoAnn Bas

Executive Associate Officer to Joel D. Cook, Senior VP | Power Services

Executive Associate Officer to Kim Thompson, VP | NW Requirements Marketing

[Bonneville Power Administration](#)

[jlbas@bpa.gov](#) | P 503.230.4983

From: Cook,Joel D (BPA) - P-6 <jdcook@bpa.gov>;
Sent: Wednesday, February 17, 2021 1:24 PM
To: Bas,JoAnn L (BPA) - P-6 <jibas@bpa.gov>; Thompson,Kim T (BPA) - PS-6 <ktthompson@bpa.gov>;
Subject: RE: Response needed: Meeting with Kim and Suzanne

I would like to participate

From: Bas,JoAnn L (BPA) - P-6 <jibas@bpa.gov>;
Sent: Wednesday, February 17, 2021 1:14 PM
To: Thompson,Kim T (BPA) - PS-6 <ktthompson@bpa.gov>; Cook,Joel D (BPA) - P-6 <jdcook@bpa.gov>;
Subject: Response needed: Meeting with Kim and Suzanne

Finding an hour next week for both of you and Suzanne is very difficult. I can make Wednesday at 9 AM work for Kim and Suzanne. Joel, are you okay with missing this meeting and getting an update from them later? Kim, do you want me to invite Paul? I'll let Mark schedule it so he can use Zoom.

JoAnn Bas
Executive Associate Officer to Joel D. Cook, Senior VP | Power Services
Executive Associate Officer to Kim Thompson, VP | NW Requirements Marketing
[Bonneville Power Administration](mailto:jibas@bpa.gov)
jibas@bpa.gov | P 503.230.4983

From: Mark Gendron <MGendron@uamps.com>;
Sent: Wednesday, February 17, 2021 9:28 AM
To: Bas,JoAnn L (BPA) - P-6 <jibas@bpa.gov>;
Subject: [EXTERNAL] Meeting with Kim and Suzanne

Hey Jo

Are you ready to get back in the office yet??? Or are you loving working from home, no commute, saving \$, etc? Seriously, I hope all is well with you. (b)(6)

Will you find an hour for me to meet with Kim, Suzanne, and Joel if he can? Maybe Paul Garrett too but that is up to Kim. I want to brief them on the status of CFPP, our SMR project. We have important new information to share and want to talk about how CFPP can help with Southeast Idaho Load Service. It would be great to schedule something within the next week, but I know that can be challenging. If you can find time, I would offer to set up a Zoom call so that I can share information, AND see everyone too.

Mark

From: Mark Gendron

Sent: Tue Jun 08 14:24:42 2021

To: Cook,Joel D (BPA) - K-7; Cooper,Suzanne B (BPA) - P-6; Thompson,Kim T (BPA) - PS-6; Garrett,Paul D (BPA) - PSS-6

Cc: Doug Hunter; Mason Baker; Marshall Empey

Subject: [EXTERNAL] Carbon Free Power Exchange Draft Term Sheet

Importance: Normal

Attachments: Clean -Carbon Free Power Exchange84.docx

Ladies and Gentlemen

As you are aware, for the past several years UAMPS has been engaged in preliminary development activities for its Carbon Free Power Project, a proposed nuclear generating facility to be located at the Idaho National Laboratory utilizing small modular reactors developed by NuScale. CFPP is expected to be a 462 MW project made up of 6-77 MW SMRs. The project will be interconnected in the PacifiCorp East BAA at the Antelope Substation. The commercial online date for the Project is expected to be 2029.

UAMPS has 100 MW of firm subscription from 27 utilities in 5 western states, including Idaho. In addition, several utilities located in the BPA balancing authority area (FCRTS) are currently considering participating in the Project, for aggregate participation levels of between 150 and 200 MW. To deliver power from CFPP to participants located in the FCRTS, transmission service would be needed across the PACE system, the FCRTS, and potentially other transmission owners' systems.

As we have discussed over the past year, UAMPS has explored the opportunity for a power exchange that we believe would provide great value and cost savings for BPA, CFPP participants located in the FCRTS, BPA

preference customers in Southern and Southeast Idaho, and all preference power customers of BPA. We have appreciated your interest in an exchange and have prepared a draft term sheet for your review and consideration.

Attached is the draft term sheet for the Carbon Free Power Exchange. The concept in the draft is a simple and straightforward exchange and should be considered as a starting point for further discussion.

We suggest that we arrange for a meeting in the near future to discuss the term sheet as well as next steps for further exploration of an exchange.

Please feel free to contact myself, Doug Hunter or Mason Baker at any time should you have any questions or comments on this proposal, or to make arrangements for a follow-on discussion.

My best,

Mark Gendron

Carbon Free Power Exchange

Term Sheet

03/18/2021

Summary:

Proposed Energy and Capacity exchange between BPA and UAMPS.

Background and Transaction Overview:

BPA has load service obligations to Southeast Idaho and Southern Idaho preference customers located in the PacifiCorp balancing authority area (PACE BAA) and Idaho Power balancing authority area (IPCo BAA) respectively, where FCRPS resource is delivered through network wheeling arrangements across PAC through two network transmission agreements and across IPCo through one network transmission agreement. Network resources to serve these loads consist of FCRPS resources delivered directly from BPA to the extent possible but is necessarily supplemented through Point-to-Point wheeling arrangements and market power purchases at Mona. These additional transmission service and market power purchases that BPA needs to make to serve their load obligations have caused the investigation by BPA into alternative transmission investments and/or purchases.

UAMPS is developing the Carbon Free Power Project (CFPP) and expects to have participants that are located in the BPA BAA and are also preference customers of BPA looking to supplement their power purchases from BPA with additional carbon-free resources. CFPP will be located in the PACE BAA and interconnected to PAC's system and, we believe, IPCo's system at the Antelope substation. Delivery of CFPP power to participants in the PACE BAA will be over existing network transmission agreements, but delivery to participants in the BPA BAA

would require the acquisition of Point-to-Point transmission from PAC and possibly other transmission owners. UAMPS is investigating ways to deliver power to these participants.

BPA (and its customers) and UAMPS (and its CFPP participants) would benefit from an exchange arrangement that would eliminate or reduce their respective need to purchase Point-to-Point transmission from source to load. An exchange would allow BPA to serve its SE Idaho and Southern Idaho load from a CFPP resource exchange and for UAMPS to serve its CFPP load from a FCRPS resource exchange. The only contractual change would be to have BPA simply add CFPP as a designated resource on their existing network transmission agreement with PacifiCorp at the PACE Antelope substation. Similarly, UAMPS or its participants in the BPA BAA would add a designated resource from BPA to their transmission arrangements.

Term: 40 years or other negotiable term

Start Date: October 1, 2029 or date of CFPP commercial operation

Exchange: Capacity and Energy: BPA will provide scheduled energy and capacity hourly from the FCRPS for CFPP participants located in the BPA BAA equal to such participants aggregate CFPP output for the hour. UAMPS will simultaneously provide scheduled energy and capacity hourly from CFPP to BPA at the PACE Antelope Substation in amounts equal to the CFPP participants located in the BPA BAA.

Price: No cost for either party for basic energy and capacity exchange.

Transmission: BPA will make FCRPS energy available at Points of Receipt on the FCRTS that are mutually agreeable to BPA and CFPP participants located in the BPA BAA.

CFPP customers will be responsible for transmission costs from POR to their POD under their transmission service contracts or OATT with BPA.

UAMPS is in the process to acquire an interconnection agreement with PAC at Antelope Substation. UAMPS has also completed the study process to ensure that sufficient transmission will be available to serve network loads from CFPP. Pursuant to a Transmission Construction Agreement, PAC will make network system improvements necessary from Antelope Substation to the Goshen Substation consisting of constructing a new 345-kV transmission line.

UAMPS will make CFPP energy available at the PAC 230 kV Antelope Substation. BPA will add the exchange amount of the CFPP as a designated resource on their existing network transmission agreement with PAC at the PACE Antelope Substation. BPA will be responsible for transmission costs to deliver CFPP energy to Southeast Idaho customers PODs. Likewise, UAMPS believes that BPA could make the Antelope Substation a designated Point of Receipt for the exchange amount of the CFPP on their existing network agreement with IPCo.

Scheduling: UAMPS anticipates that the Exchange would be facilitated by (1) UAMPS separately scheduling power from the CFPP to BPA for delivery to their loads in the PACE BA and the IPCo BA using normal scheduling procedures and (2) BPA scheduling the same amount of power and energy to UAMPS CFPP participants in or connected to the BPA BA. Transmission from the Antelope Substation POR to the BPA loads in PACE and IPCo would be the responsibility of BPA and/or its customers. Transmission from BPA resources to UAMPS CFPP participants in the BPA BAA or connected to the BPA BAA would be the responsibility of UAMPS and/or its CFPP participants.

Options available and negotiable:

CFPP Resource firming, storage and shaping

From: Bas,JoAnn L (BPA) - P-6

Sent: Thu Jun 17 09:57:05 2021

To: Laura Whitworth; Mark Gendron

Subject: RE: Response requested: Carbon Free Power Exchange Draft Term Sheet

Importance: Normal

Yes these are Pacific time. Let's go with the 8th.

JoAnn Bas

Executive Associate Officer to Suzanne B. Cooper, Senior VP | Power Services

Executive Associate Officer to Kim Thompson, VP | NW Requirements Marketing

Bonneville Power Administration

jlbas@bpa.gov | P 503.230.4983

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01D390F8.DFED0CE0cid:image006.jpg@01D390F8.DFED0CE0

From: Laura Whitworth <Laura@uamps.com>

Sent: Thursday, June 17, 2021 9:18 AM

To: Mark Gendron <MGendron@uamps.com>

Cc: Bas,JoAnn L (BPA) - P-6 <jlbas@bpa.gov>

Subject: [EXTERNAL] RE: Response requested: Carbon Free Power Exchange Draft Term Sheet

Hi JoAnn:

I assume these dates and times are Pacific Correct? With that in mind, Doug, Mason, Marshall and Mark are available on July 8th and the 15 from 1-2 p.m. Pacific time.

Please let me know your preference and I can issue a zoom meeting to secure the date on everyone's calendars.

Thank you,

Laura Whitworth

Manager of Administrative Services

UAMPS

155 North 400 West, Suite 480

Salt Lake City, UT 84103

Direct: 801-214-6422

Cell: (b)(6)

[*laura@uamps.com*](mailto:laura@uamps.com)

From: Mark Gendron <MGendron@uamps.com>
Sent: Thursday, June 17, 2021 7:41 AM
To: Laura Whitworth <Laura@uamps.com>
Cc: Bas,JoAnn L (BPA) - P-6 <jlb@bpa.gov>
Subject: FW: Response requested: Carbon Free Power Exchange Draft Term Sheet

Laura

Will you please work with JoAnn to schedule a Zoom call on one of these dates. For UAMPS the required attendees would be Doug, Mason, Marshall and myself. Thank you!

Mark

From: Bas,JoAnn L (BPA) - P-6 <jlb@bpa.gov>
Sent: Wednesday, June 16, 2021 10:26 AM
To: Mark Gendron <MGendron@uamps.com>
Subject: FW: Response requested: Carbon Free Power Exchange Draft Term Sheet

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Mark,

As you know, VP calendars are packed. The earliest I could find is July 8 from 1-2. Is that too far out? Other

options are July 9 from 1-2 or July 15 from 1-2. If this is too far out, let me know and I'll see what I can do.

JoAnn Bas

Executive Associate Officer to Suzanne B. Cooper, Senior VP | Power Services

Executive Associate Officer to Kim Thompson, VP | NW Requirements Marketing

Bonneville Power Administration

jlbas@bpa.gov | P 503.230.4983

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From: Cooper, Suzanne B (BPA) - P-6 <sbcooper@bpa.gov>
Sent: Wednesday, June 9, 2021 6:32 AM
To: Mark Gendron <MGendron@uamps.com>; Cook, Joel D (BPA) - K-7 <jdcook@bpa.gov>; Thompson, Kim T (BPA) - PS-6 <ktthompson@bpa.gov>; Garrett, Paul D (BPA) - PSS-6 <pdgarrett@bpa.gov>
Cc: Doug Hunter <doug@uamps.com>; Mason Baker <mason@uamps.com>; Marshall Empey <marshall@uamps.com>; Bas, JoAnn L (BPA) - P-6 <jlbas@bpa.gov>
Subject: RE: Carbon Free Power Exchange Draft Term Sheet

Thank you for sending the draft term sheet, Mark. We look forward to discussing it with you. I will ask JoAnn to reach out to you next week to coordinate a meeting time.

Regards,

Suzanne

From: Mark Gendron <MGendron@uamps.com>
Sent: Tuesday, June 8, 2021 2:25 PM
To: Cook, Joel D (BPA) - K-7 <jdcook@bpa.gov>; Cooper, Suzanne B (BPA) - P-6 <sbcooper@bpa.gov>;

Thompson, Kim T (BPA) - PS-6 <ktthompson@bpa.gov>; Garrett, Paul D (BPA) - PSS-6 <pdgarrett@bpa.gov>
Cc: Doug Hunter <doug@uamps.com>; Mason Baker <mason@uamps.com>; Marshall Empey <marshall@uamps.com>
Subject: [EXTERNAL] Carbon Free Power Exchange Draft Term Sheet

Ladies and Gentlemen

As you are aware, for the past several years UAMPS has been engaged in preliminary development activities for its Carbon Free Power Project, a proposed nuclear generating facility to be located at the Idaho National Laboratory utilizing small modular reactors developed by NuScale. CFPP is expected to be a 462 MW project made up of 6-77 MW SMRs. The project will be interconnected in the PacifiCorp East BAA at the Antelope Substation. The commercial online date for the Project is expected to be 2029.

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As we have discussed over the past year, UAMPS has explored the opportunity for a power exchange that we believe would provide great value and cost savings for BPA, CFPP participants located in the FCRTS, BPA preference customers in Southern and Southeast Idaho, and all preference power customers of BPA. We have appreciated your interest in an exchange and have prepared a draft term sheet for your review and consideration.

Attached is the draft term sheet for the Carbon Free Power Exchange. The concept in the draft is a simple and straightforward exchange and should be considered as a starting point for further discussion.

We suggest that we arrange for a meeting in the near future to discuss the term sheet as well as next steps for further exploration of an exchange.

Please feel free to contact myself, Doug Hunter or Mason Baker at any time should you have any questions or

comments on this proposal, or to make arrangements for a follow-on discussion.

My best,

Mark Gendron

From: Mark Gendron

Sent: Mon Nov 01 14:10:11 2021

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

Subject: [EXTERNAL] Re: Check in request

Importance: Normal

Perfect. Thanks Jo!

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From: Bas,JoAnn L (BPA) – P-6 <jlbas@bpa.gov>

Sent: Monday, November 1, 2021 2:07:50 PM

To: Mark Gendron <MGendron@uamps.com>

Subject: RE: Check in request

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Should I have her call you at (b)(6)

JoAnn Bas

Executive Associate Officer to Suzanne B. Cooper, Senior VP | Power Services

Executive Associate Officer to Clarisse Messemer, Acting Deputy SVP | Power Services

Executive Associate Officer to Kim Thompson, VP | NW Requirements Marketing

Bonneville Power Administration

jlbas@bpa.gov | P 503.230.4983

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From: Mark Gendron <MGendron@uamps.com>

Sent: Monday, November 1, 2021 12:55 PM

To: Bas,JoAnn L (BPA) - P-6 <jlbas@bpa.gov>; Cooper,Suzanne B (BPA) - P-6 <sbcooper@bpa.gov>

Subject: [EXTERNAL] RE: Check in request

Thanks JoAnn! (b)(6)

(b)(6) Doing great now!

Lets do next Monday the 8th at 3:30.

Take good care of Suzanne!

Mark

From: Bas, JoAnn L (BPA) - P-6 <jibas@bpa.gov>

Sent: Monday, November 1, 2021 12:36 PM

To: Mark Gendron <MGendron@uamps.com>; Cooper, Suzanne B (BPA) - P-6 <sbcooper@bpa.gov>

Subject: RE: Check in request

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Hello Mark,

I'm doing great. Hope you and your family are all doing well.

As you can remember, Suzanne is super busy. She has 3:30 on Monday's open on November 8 or 15th. Would that time work for you?

JoAnn Bas

Executive Associate Officer to Suzanne B. Cooper, Senior VP | Power Services

Executive Associate Officer to Clarisse Messemer, Acting Deputy SVP | Power Services

Executive Associate Officer to Kim Thompson, VP | NW Requirements Marketing

Bonneville Power Administration

jlbas@bpa.gov | P 503.230.4983

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From: Mark Gendron <MGendron@uamps.com>
Sent: Monday, November 1, 2021 12:06 PM
To: Cooper, Suzanne B (BPA) - P-6 <sbcooper@bpa.gov>
Cc: Bas, JoAnn L (BPA) - P-6 <jbas@bpa.gov>
Subject: [EXTERNAL] Check in request

Hello Suzanne and JoAnn

I hope all is well with you both!

I would like to find 30 minutes for a check in to update you on our efforts on the Carbon Free Project. In particular, I would like to share what we are now exploring for transmission access for CFPP participants located in the BPA BAA. Hopefully we can find some time in the next couple weeks.

My best

Mark