



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 15, 2022

MEMORANDUM TO: Michael I. Dudek, Chief
New Reactor Licensing Branch
Division of New and Renewed Licenses
Office of Nuclear Reactor Regulation

FROM: Carolyn Lauron, Sr. Project Manager */RA/*
New Reactor Licensing Branch
Division of New and Renewed Licenses
Office of Nuclear Reactor Regulation

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION SUMMARY OF
THE MAY 19, 2022, OBSERVATION PUBLIC MEETING
TO DISCUSS THE NUSCALE POWER, LLC, REGULATORY
ENGAGEMENT PLAN FOR THE CARBON FREE POWER
PROJECT COMBINED LICENSE APPLICATION

The U.S. Nuclear Regulatory Commission (NRC) held an observation public meeting on May 19, 2022, to discuss the NuScale Power, LLC (NuScale), regulatory engagement plan for the Carbon Free Power Project (CFPP) combined license (COL) application. The purpose of the meeting was to discuss the CFPP combined license application regulatory engagement plan submitted on January 28, 2022, and other preapplication topics.¹

This is the first in a series of planned preapplication meetings with representatives from CFPP and NuScale. This hybrid meeting had in-person attendees from the NRC, CFPP, NuScale, and members of the general public. Additionally, as this was a hybrid meeting, representatives from the NRC, CFPP, NuScale and from the public participated virtually through a Microsoft Teams Meeting link.

CONTACT: Carolyn Lauron, NRR/DNRL
301-415-2736

¹ NuScale Power, LLC, "Letter of Intent Providing the Carbon Free Power Project (CFPP) Combined License Application (COLA) Response to NRC Regulatory Issue Summary 2020-02 and Regulatory Engagement Plan," dated January 28, 2022. Agencywide Document and Access Management System (ADAMS) Accession No. ML22028A277.

The NRC issued the public meeting notice on May 3, 2021 and posted it on the NRC public website.² Prior to the meeting, NuScale submitted presentation slides for the open session and closed, proprietary session of the meeting.³ The presentation slides for the open session of the meeting were posted on the NRC public website.⁴

Enclosed are the meeting agenda (Enclosure 1), list of participants for the open and closed sessions of the meeting (Enclosure 2), summary of the open session (Enclosure 3), and summary of the closed, proprietary session (Enclosure 4).

Docket No. 99902052

Enclosures:

1. Meeting Agenda
2. List of Attendees
3. Summary of Open Session
4. Summary of Closed, Proprietary Session

² U.S. NRC, "05/19/2022 Notice of Preapplication Meeting with NuScale Power, LLC, regarding the Carbon Free Power Project (CFPP) Regulatory Engagement Plan," dated May 3, 2022. ADAMS Accession No. ML22133A004.

³ PROPRIETARY: NuScale Power, LLC, "Submittal of Presentation Materials Entitled "Carbon Free Power Project (CFPP) Combined License Application (COLA) Presentation Regulatory Engagement Plan, (Closed Session)" PM-117791, Revision 0." ADAMS Accession No. ML22130A799.

⁴ NuScale Power, LLC, "Submittal of Presentation Materials Entitled - "Carbon Free Power Project (CFPP) Combined License Application (COLA) Presentation Regulatory Engagement Plan, (Open Session)" PM-116772, Revision 0." ADAMS Accession No. ML22130A802.

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PKG: ML22166A301

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PROP: ML22147A064 (Enclosure 4: Proprietary Summary): *via email NRR-106

OFFICE	NRR/DNRL/NRLB	NRR/DNRL/NRLB	NRR/DNRL/NRLB	NRR/DNRL/NRLB
NAME	CLauron*	SGreen*	MDudek*	CLauron*
DATE	06/08/2022	06/09/2022	06/13/2022	06 /15/2022

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**U.S. NUCLEAR REGULATORY COMMISSION SUMMARY OF THE MAY 19, 2022,
OBSERVATION PUBLIC MEETING TO DISCUSS THE NUSCALE POWER, LLC,
REGULATORY ENGAGEMENT PLAN FOR THE CARBON FREE POWER PROJECT
COMBINED LICENSE APPLICATION**

Meeting Agenda

Time	Topic	Speaker
1:00 pm – 1:45 pm	[Open Session] Welcome Opening Remarks Applicant Presentation Discussion	NuScale / CFPP / NRC
1:45 pm – 2:00 pm	Opportunity for Public Comment	Open
2:00 pm – 4:00 pm	[CLOSED SESSION] Discussion of Proprietary Information	NuScale / CFPP / NRC

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Meeting Attendees

Name	Organization	Open Session		Closed Session	
		In-Person	Remote	In-Person	Remote
Alex Mychalowych	MPR	x		x	
Amanda Marshall	NRC/NSIR	x		x	
Amy Rama	HoganLovells	x		x	
Andrea Mota			x		x
Anthony Bowers	NRC/NSIR	x		x	
Bernie Thomson	NRC/NRR	x		x	
Beth Brewer	NuScale	x		x	
Beth Dalick	NuScale	x		x	
Bob Coward	MPR	x		x	
Bradley Brown	DOE		x		x
Brian Yip	NRC/NSIR	x		x	
Bruce Bavol	NRC/NRR		x		x
Calvin Cheung	NRC/NRR		x		x
Carolyn Lauron	NRC/NRR	x		x	
Chelsea Lockwood			x		x
Dan Mussatti	NRC/NMSS				x
Dan Stenger	CFPP	x		x	
Dan Warner	NRC/NSIR		x		x
David Drucker	NRC/NRR		x		x
Demetrius Murray	NRC/NRR	x		x	
Duane White	NRC/NSIR		x		x
Edwin Lyman			x		
Eiji Fujiwara			x		
Fred Miller	NRC/NMSS		x		x
Gary Becker			x		x
Gerry Stirewalt	NRC/NRR	x		x	
Glenn Neises					x
Greg Cranston	NRC/NRR		x		x
Ismael Garcia	NRC/NSIR		x		x
James Shea	NRC/NRR		x		
James Tatum	NuScale		x		x
Jenise Thompson	NRC/NRR		x		x
John Pfabe			x		
John Volkoff	NuScale	x		x	
Joseph Ashcraft	NRC/NRR		x		x
Joseph Colaccino	NRC/NRR		x	x	
Julie Ezell	NRC		x		x

Name	Organization	Open Session		Closed Session	
		In-Person	Remote	In-Person	Remote
Kenneth Erwin	NRC/NMSS		X		X
Kerri Kavanagh	NRC/NRR		X		X
Kevin Deyette	NuScale		X		X
Kevin Quinlan	NRC/NRR		X		X
Kyra Perkins	NuScale	X		X	
Laurel Bauer	NRC/NRR	X		X	
Lauren Nist	NRC/NRR		X		X
Lindsay Vance			X		X
Lisa Matis			X		
Mark Shaver			X		X
Mary Frances Woods	NRC/OGC		X		
Maurin Scheetz	NRC/NRR		X		X
Melissa Bates	DOE	X		X	
Michael Dudek	NRC/NRR		X		X
Michael Norris	NRC/NSIR		X		X
Miriam Juckett	NRC/NMSS		X		
Odunayo Ayegbusi	NRC/NRR		X		X
Patrick Guevel			X		X
Patrick Leary	NuScale		X		X
Peter Shaw	NuScale		X		X
Peter W. Kissinger			X		X
Richard McIntosh			X		X
Ralph Costello	NRC/NSIR				X
Robert Taylor	NRC/NRR	X		X	
Ron Markovich			X		X
Sarah Fields			X		
Scott Bean			X		
Scott Head	CFPP	X		X	
Shawn Harwell	NRC/NMSS		X		X
Stanton Scoma	NuScale		X		X
Steven Dolley			X		
Steven Vitto	NRC/NSIR		X		X
Steven Wessels			X		
Tamela Cohen	NuScale		X		X
Tony Nakanishi	NRC		X		
Wendy Reid	NuScale		X		X

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Meeting Summary of Open Session

The U.S. Nuclear Regulatory Commission (NRC) held an observation public meeting on May 19, 2022, to discuss the NuScale Power, LLC (NuScale), regulatory engagement plan for the Carbon Free Power Project (CFPP) combined license application. The purpose of the meeting was to discuss the CFPP combined license (COL) application regulatory engagement plan submitted on January 28, 2022, and other preapplication topics.⁵

The NRC issued the public meeting notice on May 3, 2021 and posted it on the NRC public website.⁶ Prior to the meeting, NuScale submitted presentation slides for the open session and closed, proprietary session of the meeting.⁷

The hybrid public meeting was conducted in two parts. The open session of the meeting was recorded and provided members of the public an opportunity to observe the staff's interactions with the prospective applicant and to comment near the end of the session. The closed session of the meeting provided the staff and the prospective applicant an opportunity to discuss proprietary information.

- Agenda Overview, Meeting Purpose and Objectives: NuScale provided an overview of the agenda that covers the project overview, structure, approach and goals followed by the COL application content, the types and frequencies of interactions, and technical topics to support the preapplication activities.

The purpose of the meeting was to discuss its preapplication schedule and to give an overview of the preapplication topics discussed in the regulatory engagement plan submitted on behalf of CFPP. NuScale's objectives in this meeting include obtaining initial NRC feedback on its plans, aiding the initial discussions of certain regulatory topics, assisting the NRC in resource planning for the review of preapplication submittals and ultimately the review of the COL application, and understanding the interactions between the NuScale standard design approval (SDA) and COL projects.

- Project Structure, Approach, Goals and Relationship with the SDA: Utah Associated Municipal Power Systems (UAMPS) is a nonprofit joint action governmental agency that

⁵ NuScale Power, LLC, "Letter of Intent Providing the Carbon Free Power Project (CFPP) Combined License Application (COLA) Response to NRC Regulatory Issue Summary 2020-02 and Regulatory Engagement Plan," dated January 28, 2022. Agencywide Document and Access Management System (ADAMS) Accession No. ML22028A277.

⁶ U.S. NRC, "05/19/2022 Notice of Preapplication Meeting with NuScale Power, LLC, regarding the Carbon Free Power Project (CFPP) Regulatory Engagement Plan," dated May 3, 2022. ADAMS Accession No. ML22133A004.

⁷ NuScale Power, LLC, "Submittal of Presentation Materials Entitled "Carbon Free Power Project (CFPP) Combined License Application (COLA) Presentation Regulatory Engagement Plan, (Closed Session)" PM-117791, Revision 0." ADAMS Accession No. ML22130A798; proprietary slides are available in ADAMS Accession No. ML22130A800.

provides energy services. UAMPS is working to provide the next generation of nuclear reactors at the Idaho National Laboratory (INL) site in eastern Idaho as part of the CFPP. The CFPP was established under a DOE approved cost share to develop a COL application for a power generation facility using the NuScale and has selected Fluor to lead the engineering, procurement, and construction for the combined license application with NuScale serving as the licensing lead for the project on behalf of CFPP and as the point of contact with the NRC for preapplication engagement and support for the CFPP COL application.

CFPP is using the combined license process under 10 CFR Part 52, Subpart C, to develop and submit a COL application for a power generation facility using the NuScale 6-module plant. Each module will generate up to approximately 77 MWe output. The COL application is planned for January 2024 and will reference the standard design approval for a 6-module plant. The SDA application for a 6-module plant is planned to be submitted during the fourth quarter of calendar year 2022.

NuScale summarized the content and structure of the COL application following NRC regulations and guidance as shown on Slide 7 and noted that topical reports may be submitted for review and approval independent of the COL application to support the COL application.

- Preapplication Topics and Interactions: The proposed preapplication topics and the types and frequency of the interactions are described on Slides 8 and 9.
- Design Center Working Group: NuScale plans to initiate a design centered working group (DCWG) consistent with the standardization of the applications to enhance the safety of nuclear power plants. The initial DCWG team will include CFPP as the reference COL, NuScale and Fluor, with the Nuclear Energy Institute and others joining at a later time. NuScale seeks agreement with the NRC to establish the DCWG, reach alignment on key stakeholders, and establish recurring agenda for the meetings.
- Volcanic Hazards Assessment (VHA): NuScale plans to use an approach consistent with Regulatory Guide 4.26 and to submit a White Paper on its VHA approach methodology. A second engagement with the NRC on this topic is scheduled for June 30, 2022 to discuss the contents of a White paper.
- Cybersecurity: NuScale is evaluating the need to submit a cyber security methodology topical report to the NRC and plans to discuss this topic in a meeting scheduled for June 9, 2022.
- Physical Security: NuScale plans to develop the physical security plan in accordance with the proposed rulemaking under 10 CFR 73.55 and pursue a performance-based plan. NuScale has implemented a security by design approach that will support the key points listed on Slide 13. In response to the NRC staff's question, NuScale clarified that it is monitoring the progress of the rulemaking and potentially developing exemptions from the existing rule.
- Operator Licensing: NuScale plans to use the hot and cold licensing phase approaches with modifications from standard submittals for advanced design, passively cooled reactors. The hot licensing approach relies on two previous submittals submitted on

July 13, 2020, and the knowledge and abilities catalog. NuScale last engaged with the staff in March to discuss the proposed operator education requirement change. The next preapplication engagement is planned for later this year. The cold licensing phase relies on two additional actions: the NRC rulemaking to align 10 CFR Parts 50 and 52, and industry guidance document changes.

- Site Characterization: The geotechnical work at the INL site was initiated in August 2021 and ended in January 2022. CFPP completed 53 geologic borings of the subsurface and surface geophysical measurements. Ten groundwater wells were installed for the site. The meteorological tower was operational on December 8, 2021. Site-specific groundwater and meteorological monitoring has been delayed because of the migratory birds and nesting seasons. The PS-suspension testing and resistivity testing are planned for completion in May. The ecological surveys started at the beginning of May will continue through the first quarter calendar year 2023. The cultural resources surveys are ongoing and planned for completion this summer. The geotechnical report is being finalized and will be available for NRC review prior to the NRC site visit planned later this summer.
- Environmental Report: CFPP plans a future engagement to discuss whether a memorandum of agreement will be entered between the NRC and the Department of Energy to support the CFPP limited work authorization application. CFPP plans to use the guidance in Regulatory Guide 4.3, Revision 3, for the small modular reactor footprint, and to use existing hydrological, ecological and meteorological data for the INL site. A future CFPP White Paper will be submitted to the NRC after collecting a year's worth of data from the site. CFPP plans to give an overview of the site selection methodology during the NRC visit to the INL site later this summer.
- Emergency planning: CFPP plans to use the NuScale emergency planning zone (EPZ) methodology currently under NRC review. With respect to emergency action levels (EALs), CFPP plans to base its EAL scheme on the site boundary EPZ. The required staffing for on-shift and the emergency response organization is still being determined. CFPP plans to use the new emergency preparedness final rule expected in July.

Public comments: Edwin Lyman from the Union of Concerned Scientists requested clarification on whether the applicant will have to meet the requirements in 10 CFR 73.1 related to protection against radiological sabotage which is a different standard than what was described on slide 12. The NRC staff responded that 10 CFR 73.1 related to the protection against cyber threat would apply and that the applicant would have to meet the regulatory requirements in 10 CFR 73.54 similar to the currently operating fleet with the option to submit exemptions to specific requirements that the NRC could review as appropriate.