

UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

November 9, 2021

MEMORANDUM TO: Steven Lynch, Acting Chief

Advanced Reactor Policy Branch

Division of Advanced Reactors and Non-Power

Production and Utilization Facilities
Office of Nuclear Reactor Regulation

FROM: Juan F. Uribe, Project Manager

Advanced Reactor Policy Branch

Division of Advanced Reactors and Non-Power

Production and Utilization Facilities
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF OCTOBER 27, 2021, PUBLIC MEETING TO

DISCUSS THE U.S. NUCLEAR REGULATORY COMMISSION'S DEVELOPMENT OF A REGULATORY FRAMEWORK FOR THE POSSIBLE COMMERCIAL DEPLOYMENT OF FUSION ENERGY

Signed by Uribe, Juan on 11/09/21

SYSTEMS

On October 27, 2021, the U.S. Nuclear Regulatory Commission (NRC) staff held a comment-gathering meeting public meeting with stakeholders, to discuss the NRC's development of a regulatory framework for the possible commercial deployment of fusion energy systems. The meeting notice is available in the NRC's Agencywide Documents Access and Management System (ADAMS) at Accession No. ML21286A786, and the presentation slides are available at ADAMS Accession No. ML21299A313. A total of six presentations were shared at the meeting. The enclosure to this summary provides the attendees for the meeting as captured by Microsoft Teams.

Meeting Highlights

- The NRC staff informed presenters and attendees that the meeting was being recorded.
 The purpose of the recording was to take advantage of the virtual environment tools
 available and have the recording available in our fusion public website for future use.
 The NRC's fusion public website can be accessed by going to:
 https://www.nrc.gov/reactors/new-reactors/advanced/fusion-energy.html
- The first three presentations focused on the fusion industry providing a status update of recent activities related to ongoing projects, and notable updates in the areas of construction, high-temperature superconducting magnet technology, and construction/fabrication code development.

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- The Fusion Industry Association provided insights and feedback into decision-making criteria that would serve as the basis for a scalable, or graded approach.
- The two final presentations focused on the NRC staff providing examples of the scalability of 10 CFR Part 30, and also a brief overview and summary of the proposed 10 CFR Part 53 rulemaking.
- As part of the NRC staff discussions, the NRC staff reaffirmed and emphasized to stakeholders that while there are three options currently being considered by the NRC staff for the regulatory and licensing of commercial fusion systems, no decision has been made yet on a proposed regulatory framework for fusion. The NRC staff is even considering the option of providing a SECY paper to the Commission without a recommendation.
- As part of the NRC discussions to ensure openness and transparency, the NRC staff shared insights into the NRC's internal thought-process and estimated timeline for development of a SECY paper to the Commission. The NRC staff stated that the development of the paper is being done in parallel, but on a separate schedule from the development of the draft proposed 10 CFR Part 53.
- The NRC staff further clarified that a separate schedule means that if the NRC staff
 pursues rulemaking to address fusion facilities, the schedule could extend beyond 2024,
 but would be completed before 2027 to comply with the Nuclear Energy Innovation and
 Modernization Act.
- The meeting was well attended with over 150 participants. Questions and comments from stakeholders included the following:
 - An appreciation of the importance of having a technically sound regulatory framework for fusion systems.
 - An understanding of the development of a construction code and standards that adequately cover the design, manufacturing or construction of fusion energy devices that are currently being considered for future constructions.
 - An understanding of the advantages and challenges regarding the categorization criteria for fusion facilities
- There were no significant or major actions for NRC staff as a result of the meeting.

Enclosure:

Attendance List

S. Lynch 3

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NUCLEAR REGULATORY COMMISSION'S DEVELOPMENT OF A REGULATORY FRAMEWORK FOR THE POSSIBLE COMMERCIAL

DEPLOYMENT OF FUSION ENERGY SYSTEMS.

DATED: NOVEMBER 9, 2021

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OFFICE	NRR/DANU/UARP/PM	NRR/DANU/UARP/BC (a)	NRR/DANU/UARP/PM
NAME	JUribe	SLynch	JUribe
DATE	11/02/2021	11/09/2021	11/09/2021

OFFICIAL RECORD COPY

October 27, 2021, Public Meeting to Discuss the NRC's Development of a Regulatory Framework for the Possible Commercial Deployment of Fusion Energy Systems

Attendance List*

NAME NAME

Uribe, Juan Crowley, David P
Fowler, William F. Manoly, Kamal
Bromley, Blair Hsu, Scott C
Arndt, Steven Clark, Daniel

Heather Kleb (Guest)

Shanmugasundaram, Aravind

Palmrose, Donald Fowler, Sidney L.
Jane Hotchkiss Segala, John
Bergman, Jana Thomas Davis
Stephens, Mike N Parsons, Matthew
Tracy Rychlyk (Guest) Justin Joseph
Cappello (Guest) Chris Ajemian

Swanson, Charles (PPPL) (Guest) Dial-in

Jennings, Robert Reckley, William White, Duncan Walker, Shakur Tim Peckinpaugh (Guest) Clausen, Scott Kamtorn Saidarasamoot Spencer (Guest)

Harris, Robert C. Spencer (Guest)
Erwin, Kenneth
Corinne Mitchell (Guest)

Tyler Ellis Akhavannik, Huda
Sally FORBES (UKAEA) (Guest) Nakanishi, Tony
Floud DesChamps (Guest) RD Edelmon (Guest)

Floyd DesChamps (Guest)

Merrifield, Jeffrey S.

RD Edelman (Guest)

Edwin Lyman

Elmar Moelzer (Guest)

Staudenmeier, Joseph

Lynch, Steven

Reed, Wendy

Gendelman, Adam

SEELY, Stephanie

Saenz, Diego S - DHS

Rahimi, Meraj

Grierson, Brian (Guest)

Poebler Jeffrey

Jennifer Ganten

Poehler, Jeffrey
Niko McMurray (ClearPath) (Guest)

Andrew (Guest)

Carlson, Jesse
Jennifer Ganten
Huning, Alex
Sachin Desai

Tsao, John Chowdhury, Prosanta

Roger Fenner GORDON Charles - KINECTRICS

RD Edelman (TAE) (Guest) Harris, Brian Dittman, Bernard Hsu, Kaihwa

Widmayer, Derek Phillip Peterson (Colorado) (Guest)

Bob (Guest) Paul W. Humrickhouse

^{*} Attendance list based on Microsoft Teams Participant list. List does not include individuals that connected via phone.

NAME

Snee, Michael Rebstock, Paul

Michael Hua

Jake Blanchard

Derstine, Terry

Ryan Umstattd (Guest)

Francesca Poli (PPPL) (Guest)

Dale Meade (Guest)

Mike O'Neill (K&L Gates LLP) (Guest)

Iyengar, Raj

Dial-In

Dial-In

Vladimir (Guest)

Wurzel, Sam

Melanie K. Snyder

Krsek, Robert

Williams, Kevin

Seth Hoedl

paulballantyne1

Hoellman, Jordan

Mike Zarnstorff (Guest)

Basavaraju, Chakrapani

steve ohearn (Guest)

Allan Offenberger

Spencer, Mary

Ulmer, Christopher

Jake Blanchard" (Guest)

Kato, Yutai

Scott Krisiloff

Lore, Donald

Cary Forest

Bernard Bevill

Jessie, Janelle

Dial-in

Dial-in

Vladimir (Guest)

Spencer, Michael

Jerry Levine (Guest)

Kristen Cullen, CFS (Guest)

Peter Harter

Philpott, Stephen

Brett Rampal

Aykut Tor

Dr. Jurgita Randakeviciute-Alpman

NAME

^{*} Attendance list based on Microsoft Teams Participant list. List does not include individuals that connected via phone.