



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

August 4, 2022

MEMORANDUM TO: Steven T. Lynch, Chief
Advanced Reactor Policy Branch
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

FROM: J. Andrew Proffitt, Project Manager
Non-Power Production and Utilization
Facility Licensing Branch
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

A handwritten signature in black ink, appearing to read "J. Proffitt", written over the printed name.

Signed by Proffitt, Joseph
on 08/04/22

SUBJECT: SUMMARY OF JUNE 7, 2022, PUBLIC MEETING TO DISCUSS
THE NRC'S DEVELOPMENT OF A REGULATORY
FRAMEWORK FOR THE POSSIBLE COMMERCIAL
DEPLOYMENT OF FUSION ENERGY SYSTEMS

On June 7, 2022, the U.S. Nuclear Regulatory Commission (NRC) staff held a comment gathering 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. [ML22151A281](#), and the presentation slides are available at ADAMS Accession No. [ML22159A269](#). The enclosure to this summary provides the attendees for the meeting as captured by Microsoft Teams.

Meeting Highlights

- The NRC staff informed attendees that the purpose of the meeting was to gather insights to inform the development of a notation vote paper on the regulation of commercial fusion energy systems that will be provided to the Commission by Fall 2022.
- Over 100 stakeholders participated in the meeting hearing a broad array of perspectives including from Agreement State, industry, U.S. Department of Energy (DOE), university, and public stakeholders.
- Presentations included: National Environmental Policy Act (NEPA) Overview (Don Palmrose, NRC), Agreement States Current Oversight of Fusion Research and Development Activities (Diego Saenz, State of Wisconsin), Fusion Industry Association (FIA) Presentation (Andrew Holland and Sid Fowler, FIA), Atomic Energy Act Common Defense and Security/Application of Materials Framework Tools for Fusion (Michael Hua and Sachin Desai, Helion), General Atomics Perspectives (Brian Grierson, General Atomics), Commonwealth Fusion Systems (CFS) Regulatory Presentation (Tyler Ellis, CFS), Right-sizing Regulation Based on Scale of Fusion Facility Hazards (Patrick White), Fusion and Tritium Accident Risks and Analysis (Dave Babineau, Savannah River National Lab), Development of Integral Management Scheme for Fusion Radioactive Materials: Recycling and Clearance, Avoiding Disposal (Laila El-Guebaly,

University of Wisconsin).

- Fusion industry stakeholders noted that regulatory certainty is desired by 2023 to support current industry and DOE-backed timelines for fusion energy deployment.
- Stakeholders that presented or expressed views at the meeting largely appeared aligned behind a byproduct material (10 CFR Part 30 Rules of General Applicability to Domestic Licensing of Byproduct Material) approach to fusion licensing and regulation.
- Stakeholder views expressed at the meeting:
 - Potential exists for additional guidance, regulatory tweaks (e.g., definitions), or a “10 CFR Part 38” in the longer-term, following initial licensing and runtime to collect operating experience.
 - Regulatory requirements should be scalable based on the hazards of the facility, Part 30 does this.
 - No concrete regulatory or legislative roadblocks have been identified.
 - Common defense and security is tied to special nuclear material, which fusion energy systems under development in the US do not contain.
 - Current export control infrastructure is sufficient to address proliferation and intellectual property concerns.
 - Industry and regulatory bodies should consider the potential large amount of low-level waste that a fusion energy industry could produce.
- NRC staff posed a question regarding whether all fusion devices under development for near-term deployment fit under the legal and regulatory definitions of “particle accelerator” which was not able to be fully discussed due to time constraints. The NRC staff is interested in hearing more from stakeholders on this topic and may include it on the agenda for future meetings.
- There were no significant or major actions for NRC staff as a result of the meeting. The NRC staff noted that the series of public meetings on fusion will likely continue, and the next meeting is expected in the fall 2022 timeframe.

Enclosure:
Attendance List

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OFFICE	NRR/DANU/UARP/PM	NRR/DANU/UARP/BC
NAME	AProffitt	SLynch
DATE	8/1/2022	8/4/2022

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June 7, 2022, 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	Name
Christopher P. Chwasz	Ulreich, Jeff	Rich Hawryluk
Lynch, Steven	Akhavannik, Huda	John Pfabe
Bergman, Jana	Saenz, Diego S - DHS	Scott Krisiloff
Tonsfeldt, Scott	Brenda Garcia-Diaz	Derek Sutherland
Palmrose, Donald	Jonathan Musgrove	Dale Meade
Thomas Davis	Hull, Amy	Andrew Sowder (EPRI)
Michelle Byman	White, Duncan	Matthew Greenwood
Frank Schaaf	Jake Blanchard	Ann Weeks
Susan Hoxie-Key	Dr. Jurgita Randakeviciute-Alpman	Wally Johnston
Laila El-Guebaly	Kessel, Charles	Edelman
Chris Ajemian	Fowler, Sidney L.	Stephen P O'Hearn
Stephanie Jacobs	Susan Gallier	Landry, Scott@CDPH
Proffitt, Andrew	Jerry Levine	Pascal Dumont
Allan Offenberger	Malik, Shah	Foreman, Bruce
O'Neill, Mike L.	Corinne Mitchell	Matthew J Nyberg
Erwin, Kenneth	Spencer, Michael	Susan Podziba
Dave Babineau	Bernard Bevill	Sheehan, Neil
D R Demers	Jason	Brent Nelson
de Messieres, Candace	Tyler Ellis	Hsu, Scott C
Floyd DesChamps	Tim Bohm-UWisc	Vamvakias, Brian (DSHS)
Widmayer, Derek	Patrick White (NIA)	Gregory Staack
Rorem, EJ	Ryan Umstatt	Harris, Robert C.
Shober, Megan L - DHS	Cameron Goodwin	Andrew Holland
GONZALEZ DE VICENTE, Sehila	Staudenmeier, Joseph	Semancik, Jeffrey
Matteo Barbarino	Shaw, Guinevere	Brian Grierson (GA)
Gendelman, Adam	Sachin Desai	Andrew H FIA
Jennings, Robert	Caroline Anderson	Mason YU
Eric Sezgen	O'NEILL, Martin	Tharakan, Binesh
Reckley, William	Kate Hyam	Holly Flynn
Scott Brennan	Andrew Holland FIA	Brent Nelson
Thomas, Matt	Merrifield, Jeffrey S.	
BONANNO, Jerry	Nardella, Gene	
Michael Hua	Segala, John	
Sebrosky, Joseph	Torrin	
Loughlin, Michael	Tom Rognlien	
Carusone, Caroline	Humrickhouse, Paul	
Colling, Bethany	Dumont, Joseph Henry	
Forbes, Sally	Timothy Krentz	
Ian Campbell (KCC)	Ford, Monica	

* Attendance list based on Microsoft Teams Participant list. Phone numbers of participants who participated by phone are not included.

Enclosure