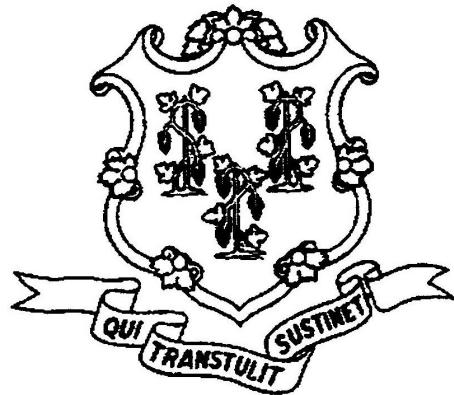


STATE OF CONNECTICUT



THE NUCLEAR ENERGY ADVISORY COUNCIL REPORT

2025

Established Pursuant to Public Act 96-245

Dr. Michael Quinn, Chairperson

Nuclear Energy Advisory Council

2025 Report

Contents

Charge to the Council	2
Council Members	2
Executive Summary.....	3
Council Recommended Actions	4
State:	4
The Council:	4
Highlighted Findings	5
Millstone Operations	5
NRC Assessment of Performance.....	5
Extended Operations of Millstone	10
Emergency Events	11
Environmental Monitoring and Events.....	11
Council Assessment of Millstone Performance.....	12
Advanced Nuclear	14
Connecticut Yankee.....	16
CY Site Update	16
2025 Emergency Plan Exercise	16
NRC Inspections.....	16
Dry Storage System Aging Management Program.....	16
Decommissioning	17
High Level Nuclear Waste.....	18
U.S. Department of Energy (DOE) Nuclear Waste Program.....	18
DOE Collaborative-Based Siting (CBS) Consortia's	18
U.S. Nuclear Waste Technical Review Board	18
Congress	19
Authorizing Legislation	19
Appropriations Legislation	19
Nuclear Regulatory Commission.....	20
NRC Commission.....	20
Private Consolidated Interim Storage Facility (CIS) Status	20
ADVANCE Act.....	20
Nuclear Executive Orders.....	22
Ordering the reform of the Nuclear Regulatory Commission.....	22

Reforming nuclear reactor testing at the Department of Energy	22
Reinvigorating the nuclear industrial base.....	23
New Reactors & Uprates:	23
Fuel Supply:.....	23
Waste & Recycling:.....	23
Workforce Development (Multiple Agencies):	23
Deploying advanced nuclear reactor technologies for national security.....	23
Nuclear Energy for Military Use	23
Exports.....	24
Environmental Reviews.....	24
Fuel Supply.....	24
Recycling SNF.....	24
Connecticut Agreement State	25
Council Activities in 2025	26
Recommendations	28
State	28
The Council	28
Conclusions	28
Appendix 1 Nuclear Energy Advisory Council Membership	1
Appendix 2 Nuclear Energy Advisory Council Meeting Minutes.....	II

In Memoriam – Representative Kevin Ryan



The Connecticut Nuclear Energy Advisory Council honors the memory of Representative Kevin Ryan, who served as Chair of the NEAC from September 2015 until his passing in November 2025. As chair, Kevin led the Council with an easygoing, steady hand, a dry sense of humor that put others at ease, and a deep commitment to public safety and meaningful public engagement on nuclear matters in Connecticut. A respected legislator with decades of bipartisan public service, he brought thoughtfulness, humility, and genuine care for the people of this state to every discussion. His leadership strengthened the Council's work, and his presence will be greatly missed.

Charge to the Council

While recognizing the regulatory authority of the U. S. Nuclear Regulatory Commission (NRC) over commercial nuclear power facilities, the State of Connecticut maintains a very serious interest in matters that could affect the health and safety of the public and the natural resources of the state. As such, section 17 of Public Act 96-245 (now CGS16-11a, as amended) authorizes the creation of a Nuclear Energy Advisory Council (the Council) and requires the Council to:

1. Hold regular public meetings to discuss issues relating to the safety and operations of nuclear power plants and to advise the governor, legislature, and municipalities within a five-mile radius of the plants on these issues;
2. Work with federal, state, and local agencies and the companies operating such plants to ensure public health and safety;
3. Discuss proposed changes in, or problems arising from, the operation of the plants;
4. Communicate, through reports and presentations, with the plants' operators about safety or operational concerns at the plants, and
5. Review the current status of the plants with the Nuclear Regulatory Commission.

Council Members

The Council consists of fourteen (14) members appointed by the Governor, legislative leadership, and the executive bodies in the towns in or near which the state's nuclear power plants are located. The Council lost a valued member, Chair Kevin Ryan, who passed away in November. Two new members, Dr. Michael Quinn and Mr. Hugh McKenney were appointed to the Council in 2025. Dr. Quinn was elected chair in December 2025. There were eleven active members at the end of 2025. Three vacancies remain. The Council urges the appointing authorities to work with the Council Chair to appoint new members. (Appendix 1).

Executive Summary

This is the thirty first annual report presented by the Nuclear Energy Advisory Council (the Council). During calendar year 2025, the NEAC met six times and received reports from representatives of the U.S. Nuclear Regulatory Commission (NRC), Connecticut Department of Energy and Environmental Protection (DEEP) and Dominion Energy Nuclear Connecticut (Dominion) as well as a written status report from Connecticut Yankee Independent Spent Fuel Storage Installation (ISFSI). The Council received and reviewed Routine and supplemental NRC inspection reports on the safety, security, and operation of Millstone Power Station (MPS) as well as other documents related to MPS and NRC activities. These documents are publicly¹ available and listed in the meeting minutes (Appendix 2).

The Council continues to examine issues relating to the safety, security, and operations of nuclear power plants and advise the governor, legislature, municipalities, and residents within a five-mile radius of the plants on these issues.

The Council concurs with the NRC that during 2025, Dominion safely operated the nuclear plants at Millstone Power Station. Spent nuclear fuel continues to be safely stored and monitored in wet and dry storage at Millstone Power Station and at the ISFSI at Connecticut Yankee. NRC and DEEP provide effective oversight of activities. Millstone continues to safely operate providing a source of carbon free energy to the citizens of Connecticut.



Figure 1- Council members at Millstone Unit 3 main generator. From left to right: Mr. Ray Woolrich, Mr. Craig Salonia, Mr. Jeffrey Semancik (DEEP), Sen Catherine Osten, Dr. Michael Quinn, Dr. James Sherrard, and Mr. Bill Sheehan.

¹ <https://portal.ct.gov/DEEP/Radiation/Nuclear-Topics>

Council Recommended Actions

State:

- Facilitate and encourage the Division of Emergency Management and Homeland Security (DEMHS)/DEEP nuclear emergency preparedness collaboration and continue executing current responsibilities and duties in kind.
- The Governor/General Assembly/DEEP should endorse a nuclear waste strategy that includes consent-based consolidated interim storage.
- Elected officials responsible for appointing Council members should work with the Council Chair to identify and appoint new members to fill existing vacancies.
- DEEP should continue its effective environmental monitoring program to verify that operations of Millstone do not have an adverse impact on the public or the environment.

The Council:

- The Council will continue to discharge its duties as specified by Section 17 of Public Act (PA) 96-245 (now section 16-11a of Connecticut General Statutes as amended).
- The Council monitored station performance and trends identified in previous years. Based upon the presentations and documents reviewed, the Council observed fewer operational events, forced outages, extended outages and reportable events during 2025. However, the Council noted that some repeat issues continue to challenge station operators. In particular, reactor coolant pump (RCP) seal degradation and failure on Unit 3, main steam safety valve performance on both units, and secondary containment boundary failures on both units. The Council continues to monitor station corrective actions regarding these repeat issues.
- The Council notes that the station continues to experience significant staffing and management turnover. As part of a corporate change, Millstone made significant changes to the management structure in 2025. The Council is monitoring the impact of these changes on organizational response to performance of Millstone Power Station.
- The Council supports Dominion efforts to move spent nuclear fuel (SNF) to passively cooled dry casks and eliminate the liability associated with maintaining the building and cooling systems.
- The Council is monitoring effectiveness of the emergency plan change to eliminate sirens and transition to wireless notifications.
- The Council noted that the state has implemented policies to encourage development of and reduce barriers to new nuclear development including lifting of the new construction moratorium for communities that opt in. The Council continues to monitor policies and progress of new nuclear development in Connecticut and the United States.
- The Council continues to monitor proposed changes to federal regulations directed by executive orders for potential impact safety of nuclear power facilities in Connecticut or on the Council's charges relating to the safety and operations of nuclear power plants in the state.

Highlighted Findings

Millstone Operations

Based upon presentations of Millstone Power Station (Millstone) in Waterford, CT performance made to the Nuclear Energy Advisory Council (the Council) by the U.S. Nuclear Regulatory Commission (NRC) and Dominion Nuclear Energy, Inc. (Dominion) in conjunction with the Council's review of NRC and Dominion correspondence and reports, the Council:

- Concludes the NRC continues to provide effective regulatory oversight.
- The Council did not identify any significant safety or operational concerns with the plants.
- The Council noted a decrease in the number of operational events and issues that challenge station operators.

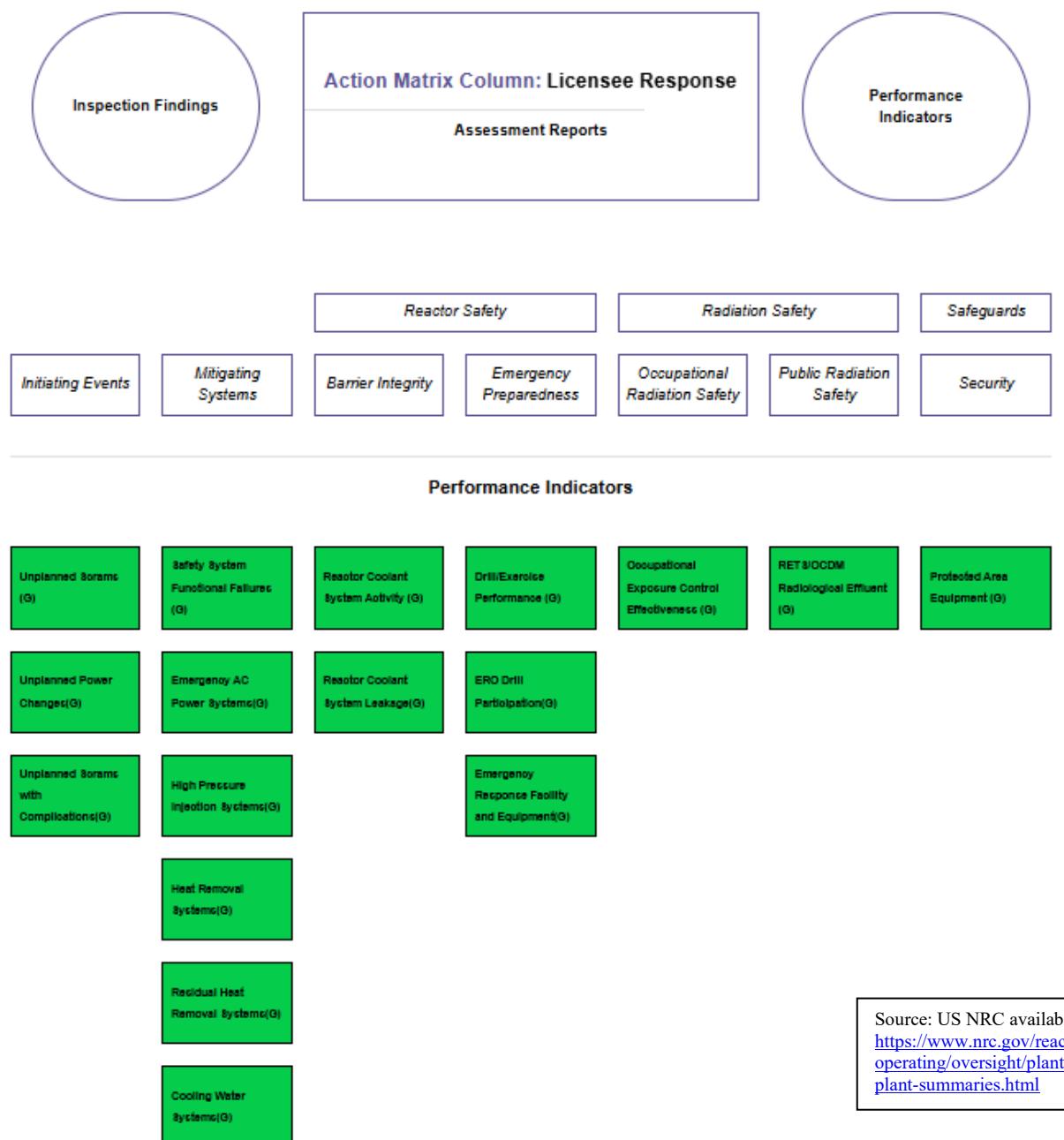
NRC Assessment of Performance

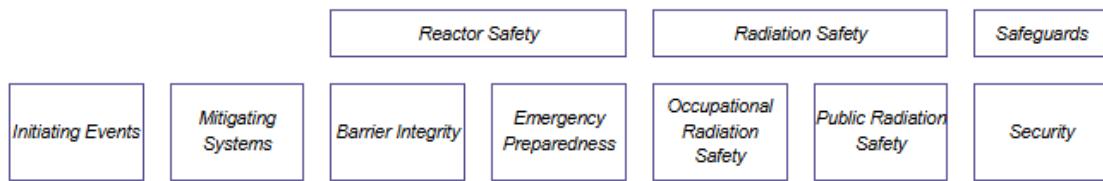
The NRC briefed the Council on its annual assessment of performance at Millstone. This assessment was informed by the observations, reports, and inspections conducted by NRC Resident Inspectors and supplemented with regional and headquarters inspectors in areas such as security, cybersecurity, health physics and engineering design basis. The NRC concluded that Dominion Nuclear Energy continues to operate Millstone Power Station safely, protect public health and safety, and protect the environment. Millstone Units 2 and 3 both remain in the Licensee Response column of the Regulatory Response Matrix (the highest level of performance) and will therefore remain under baseline inspection.

All NRC performance indicators remain Green.

Millstone 2 - Quarterly Performance Summary

Q3/2025 Performance Indicators





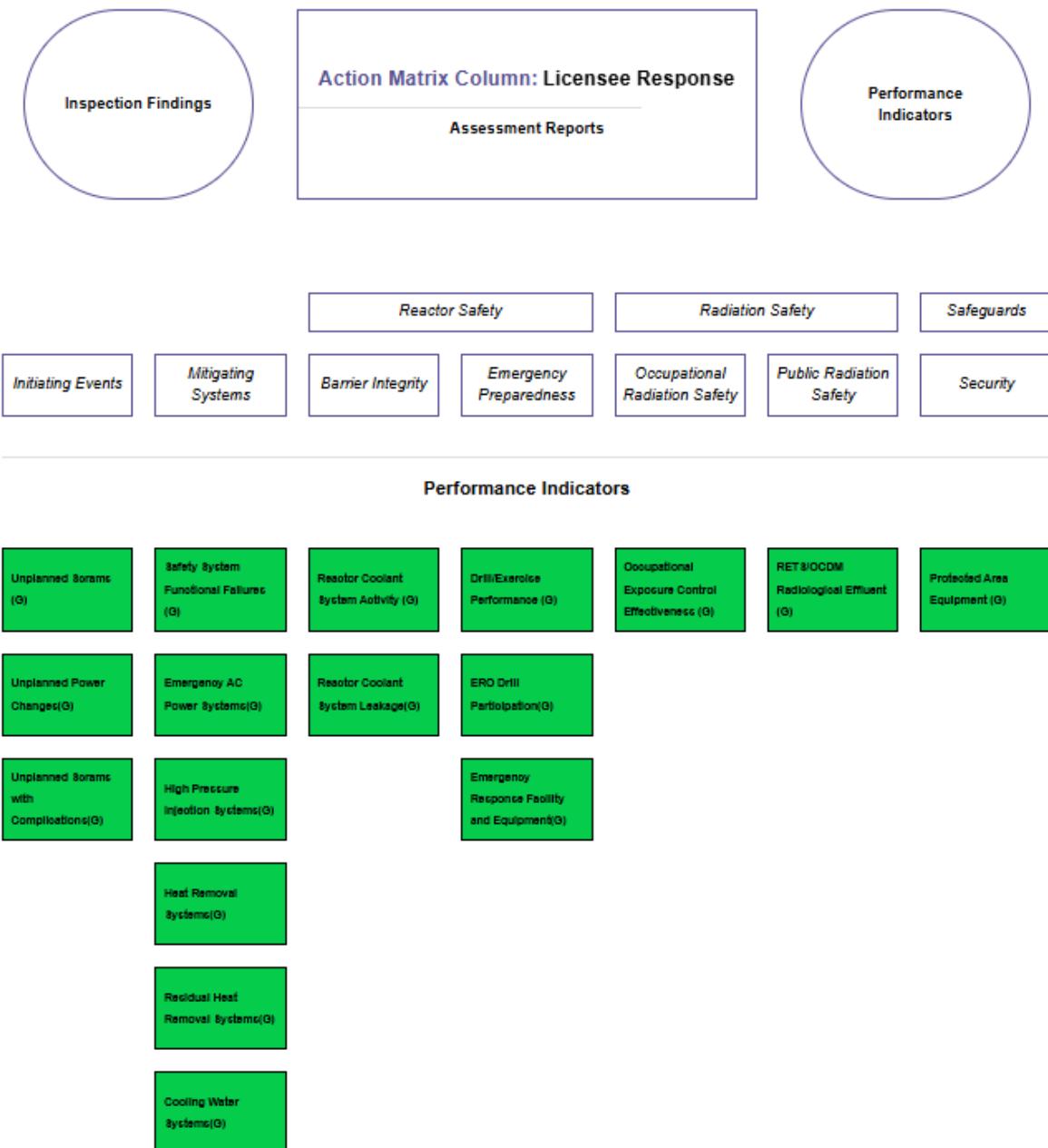
Most Significant Inspection Findings

Q3/2025	No findings this quarter						
Q2/2025	No findings this quarter						
Q1/2025	No findings this quarter						
Q4/2024	No findings this quarter	G	No findings this quarter				
Miscellaneous Findings							

Additional Inspection & Assessment Information

Millstone 3 - Quarterly Performance Summary

Q3/2025 Performance Indicators





Most Significant Inspection Findings

	No findings this quarter						
Q3/2025	No findings this quarter						
Q2/2025	No findings this quarter						
Q1/2025	No findings this quarter						
Q4/2024	No findings this quarter	G					
Miscellaneous Findings							

Additional Inspection & Assessment Information

Since the last Council report:

- There were three (3) planned refueling and maintenance outages:
 - On October 3, 2024, Unit 2 shutdown for a planned refueling outage and returned to rated thermal power on November 8, 2024. On November 13, 2024, Unit 2 reduced power to 11 percent and the turbine was taken offline to repair a hotspot on the 'A' motor operated disconnect switch. Unit 2 was restored to rated thermal power on November 15, 2024.
 - On April 10, 2025, Unit 3 shut down for a planned refueling outage and returned to rated thermal power on May 21, 2025.
 - On July 31, 2025, Unit 3 shut down for a planned maintenance outage and returned to rated thermal power on August 5, 2025.
- There were no unplanned shutdowns of Millstone Unit 2.
- There were no unplanned shutdowns of Millstone Unit 3.
- There were no unplanned power changes of Millstone Unit 2.
- There were two (2) unplanned power changes of Millstone Unit 3:
 - On August 14, 2025, the unit lowered power to approximately 18 percent for maintenance on the 'C' reactor coolant pump and returned to rated thermal power on August 16, 2025.
 - On September 28, 2025, the unit lowered power to approximately 72 percent, and subsequently, returned to rated thermal power in response to notification by ISO New England that offsite power line 371 was being removed from service.
- No station emergency events were declared.
- The NRC identified four non-cited inspection findings - all were determined to be of very low safety significance (Green). In addition, the NRC identified two (2) Severity Level IV cited violations.
- Dominion made two (2) Licensee Event Reports (LERs) at Millstone Unit 2 pursuant to 10 CFR § 50.73:
 - Millstone Unit 2 LER 2024-002-00, "Two Main Steam Safety Valves Failed to Lift Within the Acceptance Criteria Resulting in a Condition Prohibited by Technical Specifications," dated November 26, 2024.
 - Millstone Unit 2 LER 2024-002-01, "Two Main Steam Safety Valves Failed to Lift Within the Acceptance Criteria Resulting in a Condition Prohibited by Technical Specifications" dated March 20, 2025.
- Dominion made no Licensee Event Reports (LERs) at Millstone Unit 3 pursuant to 10 CFR § 50.73.

Extended Operations of Millstone

Millstone units were originally licensed for 40 years of operation (Millstone Unit 2 was licensed to 2015 and Millstone Unit 3 to 2025). In 2004 Dominion applied to the NRC to extend the licenses of both Units 2 and 3 by 20 years to 60 years for each unit.

Pursuant to NRC regulations in 10 CFR part 54, an applicant for a renewed license must review all structures, systems, and components (SSCs) to identify those that require an aging management plan (AMP). The SSCs subject to an AMP are those that perform a safety function without moving parts or without a change in configuration or properties and are not subject to replacement based on qualified life or specified time period. As part of its application to extend the operating licenses, Dominion demonstrated that the effects of aging will be managed in such a way that the intended function or functions of those SSCs will be maintained, consistent with the current licensing basis (CLB), for the period of extended operation. Only passive systems require an AMP as active equipment is considered to

be adequately monitored and maintained by existing programs. In other words, the detrimental effects of aging that may affect active equipment are more readily detectable and can be identified and corrected through routine surveillance, performance monitoring, and maintenance activities. The surveillance and maintenance activities programs for active equipment, as well as other aspects of maintaining the plant design and licensing basis, are required throughout the period of extended operation. After extensive safety review, the NRC approved the licensed extensions in 2005. The NRC published its safety review as NUREG-1838. Currently, the NRC has licensed Dominion to operate:

- Millstone Unit 2 through July 2035
- Millstone Unit 3 through November 2045

The period of extended operations (PEO) is the time period in the operations of the nuclear power plant that represents the 20 years after the initial license period. Millstone Unit 2 entered its PEO on July 31, 2015. Millstone Unit 3 entered its PEO on November 25, 2025.

Dominion submitted a letter to NRC stating that they intend to file for a Supplemental License Renewal (SLR) to allow another 20 years of operation extending the license to 80 years total. Dominion expects to submit the license amendments in the 1st quarter of 2028 and that the NRC will take about 12 months to review and approve. Once approved, this would extend the operating licenses of Millstone Unit 2 to 2055 and of Millstone Unit 3 to 2065.

Emergency Events

Dominion did not declare any emergency events at Millstone in 2025.

Environmental Monitoring and Events

There were five (5) environmental impact events at Millstone in 2025 reported to the state:

- October 2024 - DSN 001-B11 Total Suspended Solid (TSS) permit exceedance while draining RBCCW sump
- February 2025 - DSN 001-B Loss of continuous monitoring. Suspected faulty probe which was replaced
- February 2025 - DSN 006-1 Loss of pH due to faulty probe outside of calibration specifications
- February 2025 - DSN 001-B –Loss of continuous monitoring for pH. The probe is operational but faulty communication cable to plant processing computer (PPC)
- July 2025 - DSN 001-B –Observed oil sheen from diesel fuel release to Long Island Sound through stormwater outfall DSN 006-1

Council Assessment of Millstone Performance

Based upon the information presented and detailed in the minutes, the Council notes the following:

- While improvement was noted in reducing the number of operational events (forced outages, extended outages, and unplanned power changes), these events continue to challenge station performance. In particular, the Council noted the impact of RCP seal performance at Unit 3 and secondary plant issues that resulted in power changes.
- The number of required Licensee event reports decreased in 2025 indicating a station on issues that could challenge safety systems being identified and corrected at lower levels.
- Issues associated with power operated relief valves and steam supply check valves to the Unit 2 turbine driven auxiliary feedwater pump. However, the number of repeat issues associated with main steam safety valves, reactor coolant pump seals, and secondary containment barrier continue to challenge operators and station performance.
 - In particular, the Council noted that continued degradation and failures of RCP seals at Unit 3 have resulted in secondary issues challenging operations including boric acid corrosion of carbon steel targets in containment, impacts to other equipment in containment (such as containment air recirculation fans), interference with reactor coolant system (RCS) leakage monitoring, increased radioactive waste management, operator action to maintain RCS inventory, and forced down powers and challenges to manage the seals and impacts.
 - Improvements in other previous trends may be indicative of better problem resolution by station management.
- Both Units are now operating in their periods of extended operations. Issues related to aging infrastructure at the site and the inspection and maintenance of those structures should be an area of focus to verify the units continue to function as designed. The NRC and the Council should provide additional review of the aging management programs
- The Council noted fewer security-related issues. The NRC provided a security-specific session to the Council to provide visibility into nature of these issues since publicly available reports contain no details. The Council appreciates the NRC's willingness to support their oversight.
- The Council noted an increase in the number of environmental events reported to the state. While three resulted from equipment failures, two were due to maintenance activities. Dominion should implement effective corrective actions to preclude environmental releases related to maintenance activities.
- The Council noted that Millstone will be the first station in the Dominion fleet to transition from 18-month to 2-year fuel cycles. Millstone units 2 and 3 will refuel every spring, alternating units. This will provide a repeatable and steady operational cadence for the station and eliminate 7 refueling shutdowns in 20-year supplemental license renewal period. Planned outages will be conducted in the spring to minimize environmental effects by reducing cooling water flow during winter flounder larvae season. Dominion expects to start with Unit 3 refueling in spring 2028 followed by Unit 2 in spring 2029. The Council recommends that Dominion and the NRC monitor the impact of extended operational cycles on equipment performance. In particular, RCP



Figure 2 Council members observe operations in Unit 2 control room (left to right: Ray Woolrich, Bill Sheehan, Craig Salonia, Dr. James Sherrard. Sen Cathy Osten)

seals and main steam safety valves have demonstrated higher failure rates even with 18-month cycles.

- The Council supports Dominion efforts to move spent nuclear fuel (SNF) to passively cooled dry casks and eliminate reliance on active cooling. Currently all 2,284 SNF bundles from Unit 1 remain in the wet storage pool. Dominion is moving forward with a plan to move the SNF to dry cask storage to eliminate the liability associated with maintaining the building and cooling systems.
- The Council is monitoring Dominion's planned change in the offsite emergency plan that transitions away from warning sirens to the Integrated Public Alert & Warning System (IPAWS), FEMA's national system for local alerting that provides authenticated emergency and life-saving information to the public through mobile phones using Wireless Emergency Alerts, to radio and television via the Emergency Alert System, and on the National Oceanic and Atmospheric Administration's Weather Radio. The State Division of Emergency Management and Homeland Security (DEMHS) has approved this change. He noted that due to delays involving Fishers Island, the changeover is now scheduled for first quarter of 2026. The Council has expressed some concern with the ability to alert residents that might not have access to wireless phones.
- The Council notes that Dominion made organization structure and several senior management changes in 2025 including the plant manager, director of nuclear safety and licensing and station vice president. The Council will continue to monitor performance at Millstone with respect to these issues and trends as well as monitor the impact of new management on station performance.

Advanced Nuclear

The Council was briefed on Public Act (PA) No. 25-173 (Senate Bill 4) - An Act Concerning Energy Affordability, Access and Accountability. PA 25-173 allows new nuclear to be built throughout CT. The bill exempts construction of advanced nuclear reactor facilities from the state moratorium if such a facility is sited in a municipality that has consented to such facility's development through the affirmative vote of such municipality's legislative body or a referendum held in such municipality, and any additional municipality within the emergency planning zone, as determined by the Nuclear Regulatory Commission, if the proposed facility consents to such facility's development through the affirmative vote of such municipality's legislative body or a referendum held in such municipality.. Prior to this bill, new nuclear facilities could only be built at existing generation plants (Millstone).

Section 34 of PA 25-173 directs the Commissioner of Energy and Environmental Protection to establish a funding program, backed by up to five million dollars in state bonds, to support site readiness activities for advanced nuclear reactors. The program will advance Connecticut's clean energy and economic development goals by helping communities and institutions prepare for the deployment of advanced nuclear technologies. Through targeted grants or loans, it provides the early-stage support necessary to position Connecticut as a national leader in next-generation, zero-carbon nuclear energy—complementing renewable sources with reliable, always-available power that enhances grid stability, resilience, and energy security.

A key component of the program is supporting environmental and technical studies associated with the NRC Early Site Permit (ESP) process. The ESP evaluates a potential site's safety, environmental impacts, and emergency preparedness-independent of any specific reactor design. Applicants often use this process to identify and resolve siting challenges early, reduce regulatory and financial uncertainties, and effectively "bank" a site for up to 20 years for potential future use.

In addition to supporting ESP-related activities, the program can fund local and regional infrastructure assessments to ensure that transportation networks, utilities, and emergency services can accommodate potential development, and community engagement and planning initiatives to promote informed, inclusive participation. This integrated approach ensures that technical preparation and public readiness advance together, creating a strong foundation for future energy projects that align with Connecticut's environmental, economic, and workforce goals.

Eligible recipients will include municipalities, regional councils of governments, public authorities, and state or federally recognized tribes, as well as municipal electric utilities, cooperatives, and institutions of higher education. Private entities may participate in partnership with these eligible organizations. All recipients must adopt wage standards consistent with Section 31-53 of the Connecticut General Statutes, ensuring that Connecticut's transition to advanced nuclear energy supports good-paying jobs and shared economic growth across the state.

DEEP issued a Notice of Proceeding to initiate a stakeholder process to Explore New Nuclear Capacity in Connecticut. This stakeholder process is intended to first (a) engage with stakeholders and national experts through a series of informational workshops, to increase awareness and understanding of the current issues and opportunities for new nuclear development, and subsequently (b) to build on the information and dialogue fostered in the informational workshops to develop and implement a competitive advanced nuclear reactor site readiness funding program pursuant to the requirements of Section 34 of PA 25-173.

Dominion briefed the Council on the company's interest in new nuclear and small modular reactors (SMRs). Dominion management stated that the regulated electric market in VA offers lower financial risk. Dominion recently went out with a request for proposals (RFP) for SMRs in VA. This was also based on the regulated market that allows Dominion to charge ratepayers for early design work. They stated that Dominion sees SMR deployment as 10 to 15 years away with lead units in regulated markets. They hope that this will help de-risk the cost uncertainty for future deployment in deregulated markets.

Connecticut Yankee

The Connecticut Yankee Atomic Power Company (CY) plant began commercial operation in 1968 and produced more than 110 billion kilowatt-hours of electricity during its 28-year operating history. In 1996, the CY Board of Directors voted to permanently close and decommission the power plant. After two years of planning and preparation, actual decommissioning began in 1998 and was completed in 2007. CY has operated the NRC licensed Independent Spent Fuel Storage Installation (ISFSI) at the Haddam Neck site since 2004. The spent nuclear fuel and GTCC waste at the ISFSI facility is stored in 43 dry casks containing dual purpose canisters licensed by the NRC for both storage and transportation. The NRC approved the NAC-MPC Dry Cask Storage System Certificate of Compliance (CofC) renewal in 2024. The U.S. Department of Energy remains obligated under the Nuclear Waste Policy Act and by contract with CY to remove and dispose of the spent nuclear fuel and high-level radioactive waste.

CY Site Update

There have been no Lost Time Accidents, OSHA Recordable Injuries, First Aid cases, or near misses since the last report. The last Lost Time Accident at Connecticut Yankee occurred in March 2015. This year CY surpassed 500,000 hours of safe work.

Bids were received for the permanent removal of power from the decommissioned Emergency Operations Facility (EOF) that also included upgrades to the industrial vehicle gate, enhanced lighting, as well as additional industrial camera coverage. On August 6-7, 2025, CY hosted a Chemical Industry Outreach Workshop presented by the FBI New Haven Field Office. The training focused on how common industrial and household chemicals can be used to manufacture explosives. Approximately 60 people attended, including team members from Maine Yankee, Yankee Atomic, the 3 Yankee Companies, state and local law enforcement, CT DEEP, and local fire and EMS.

2025 Emergency Plan Exercise

CY had a successful Emergency Plan Fire Drill on May 1 as well as a Radiation Drill in July.

NRC Inspections

The NRC triennial security inspection was conducted August 20-21, 2025. There were no findings or violations. The inspector recognized the professionalism and ownership of the CY Team. The NRC ISFSI License Renewal inspection that was scheduled for the week of October 6, 2025 was postponed due to the government shutdown. A new schedule date has not been set yet.

No reports have been made to the NRC Operations Center in 2025.

Dry Storage System Aging Management Program

The Vertical Concrete Cask (VCC) 38 minor indications that were identified during the 2024 baseline inspection were re-assessed on June 24, 2025. It appeared to be unchanged. The indication was sampled with gauze wipes and during this process the indication was cleaned off, removing it entirely. These

samples were sent to a lab for analysis. Water was then introduced on top of the VCC lid and a leak past the VCC lid gasket was confirmed. The lab analysis confirmed very low levels of chlorides, with most composition being calcium and silica (concrete constituents) or environmental organics.

Decommissioning

Millstone - No significant decommissioning activities were conducted at the unit during 2025.

Connecticut Yankee – Normal operations, no regulatory findings were identified during 2025.

High Level Nuclear Waste

U.S. Department of Energy (DOE) Nuclear Waste Program

Section 3(a) of the President's May 23rd 2025 Executive Order "Reinvigorating the Nuclear Industrial Base" specifically requires that within 240 days (January 18, 2026) the Secretary of Energy (in coordination with Secretary of Defense, the Secretary of Transportation, and Director of OMB), shall prepare and submit to the President a report that includes: a recommended national policy to support the management of spent nuclear fuel and high-level waste; recommendations for legislative proposals and regulatory actions regarding the management of SNF/HLW; and an evaluation of reprocessing and recycling of defense waste and other SNF managed by DOE.

To provide recommendations for the DOE's 240-day report, eight national organizations sent DOE Secretary Wright a letter in July, urging he take action to address the back end of the nuclear fuel cycle in the U.S. and requesting a meeting to discuss the topic. Organizations that signed: Decommissioning Plant Coalition, the Nuclear Energy Institute (NEI), Energy Communities Alliance (ECA), Nuclear Industry Council, American Nuclear Society, Nuclear Waste Strategy Coalition (NWSC), National Association of Regulatory Utility Commissioners, and the Sustainable Fuel Cycle Task Force Science Panel.

DOE Collaborative-Based Siting (CBS) Consortia's

Consortia groups of grantees split \$26 million in DOE funds to help the agency develop a collaborative-based siting process for consolidated interim storage of SNF and high-level radioactive waste. The groups are holding meetings, as required by the contracts they signed with DOE, and are in the process of producing reports to present to the DOE with their findings from community engagement activities.

U.S. Nuclear Waste Technical Review Board

President Trump recently dismissed all but one member of the U.S. Nuclear Waste Technical Review Board (NWTRB) on July 16th, with the White House sending emails to seven Board members dismissing them from the Board effective that day. The Board Chair, Dr. Peter Swift, is now the sole member with NWTRB staff and funding reportedly remaining in place.

Congress

Authorizing Legislation

Congresswoman Dina Titus (D-NV) reintroduced the “Nuclear Waste Informed Consent Act,” which would require state, local, and tribal governments to provide consent before the construction of a permanent nuclear waste repository at Yucca Mountain (HR 466).

Appropriations Legislation

In September 2025 the House passed the FY2026 Energy & Water Development Appropriations bill that maintains level funding for the DOE Office of Nuclear Energy; however, the Senate Energy & Water Development Subcommittee has not yet filed a markup of its version of the bill.

Nuclear Regulatory Commission

NRC Commission

NRC Commissioner Chairman David Wright was confirmed along party lines 50-39 and sworn in on August 1st. On September 8th he was formally sworn in as NRC Chairman again.

The NRC currently has a full commission of five commissioners. Ho Nieh, the former Vice President of Regulatory Affairs at Southern Nuclear, was sworn in on December 4, 2025 to fill the vacancy left by Chris Hanson – who President Trump fired earlier this year. No Nieh brings more than 20 years of prior experience at the NRC - where he served in many leadership roles — including as Director of the Office of Nuclear Reactor Regulation, Nuclear veteran Douglas Weaver was sworn in on December 22, 2025 to fill the vacancy created by the resignation of Commissioner Annie Caputo. Mr. Weaver brings 40 years of nuclear experience including the U.S Nuclear Propulsion Program, 20 years at the NRC, Vice President, Global Nuclear Regulatory Affairs, for Westinghouse Electric and most recently consulting company, Atomic Safety, providing regulatory and licensing support to the nuclear industry.

Private Consolidated Interim Storage Facility (CIS) Status

Litigation involving the licensed private CIS facilities in Texas and New Mexico is on-going. In a 6-3 decision on June 30th, the U.S. Supreme Court reversed the Fifth U.S. Circuit Court of Appeals decision that vacated the license the NRC granted to the Texas CIS facility. The Court held that Texas and a mineral company were not a party to the NRC's licensing proceedings and hence were not entitled to judicial review of the NRC licensing decision.

On August 14, 2025, the Fifth Circuit Clerk requested the parties' legal counsels provide briefs by August 29th advising on what the Court should do next on remand. All parties told the court that in light of the Supreme Court decision, the case should be dismissed and the NRC license recognized as valid. Interim Storage Partners has indicated they won't begin construction of a facility without agreement from the Texas Governor and state legislature. On September 27, 2025, the Fifth Circuit dismissed Texas' challenge to the NRC license on remand as a result of the Supreme Court decision.

The Supreme Court decision in the Interim Storage Partners (ISP) case didn't directly rule on the parallel challenges to the NRC license for the Holtec facility, but the decision has set in motion filings that will validate the NRC's licensing action. However, Holtec said in a statement on October 8th that the company and the project's local backers agreed to cancel the deal, citing "the untenable path forward for used fuel storage in New Mexico."

ADVANCE Act

The ADVANCE Act of 2024 was passed with bipartisan support and signed into law in July 2024. It requires the NRC to take a number of actions, particularly in the areas of licensing of new reactors and fuels, while maintaining the NRC's core safety and security mission. The Act affects a wide range of NRC activities, including by supporting the recruitment and retention of the NRC workforce, adding flexibility in the NRC's budgeting process, enhancing the regulatory framework for advanced reactors and fusion technology, and requiring initiatives to support the NRC's efficient, timely, and predictable reviews of license applications.

The NRC will address the Act's requirements by:

- implementing initiatives for efficient, timely, and predictable license application reviews
- establishing an expedited procedure for reviewing qualifying new reactor license applications
- developing a regulatory framework for fusion technology
- implementing changes to how the agency recovers fees from licensees, including establishing a lower hourly rate for advanced reactor applicants and pre-applicants
- assessing the licensing review process for new nuclear facilities at former fossil-fuel power plant sites and brownfield sites
- developing strategies and guidance for microreactors
- removing certain limitations on foreign ownership of some types of licensed facilities
- continuing to support international coordination on nuclear technologies and licensing activities
- implementing new requirements relating to nuclear fuel

As required by the Act, the NRC updated its mission statement to “The NRC protects public health and safety and advances the nation’s common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment.” The NRC has committed to remain the world’s gold standard nuclear regulator where nuclear safety and security will always come first.

The NRC is working to meet the Act’s various deadlines for providing reports to Congress and completing appropriate revisions to agency regulations or guidance. The Office of the Executive Director for Operations (OEDO) is coordinating the implementation of the provisions in the ADVANCE Act and the development and submission of reports to Congress.

.

Nuclear Executive Orders

On May 23, 2025, President Trump signed four Executive Orders (EOs) intended to strengthen U.S. nuclear energy leadership and facilitate increased deployment of new nuclear reactor technologies. These executive orders direct multiple federal agencies to implement a wide range of initiatives spanning nuclear fuel supply, waste management, workforce development, reactor exports, and more. The Council was briefed on the EO's and had some concerns that relaxing oversight could result in conditions that could challenge nuclear safety. The Council will continue to follow the specific implementation of the changes resulting from the EO's.

Ordering the reform of the Nuclear Regulatory Commission

This EO directs the NRC to reform its structure, personnel, regulations, and operations with the goal of reestablishing the United States as the global leader in nuclear energy, facilitating increased deployment of new nuclear reactor technologies, and quadrupling U.S. nuclear energy by 2050. Specifically, this EO directs the NRC to:

- Undertake a review and wholesale revision of its regulations and guidance documents, in consultation with the White House Department of Government Efficiency (DOGE) and Office of Management and Budget (OMB). NRC must propose new rules within 9 months (by Feb 23, 2026) and publish final rules within 18 months (by Nov 23, 2026). In doing so, NRC must establish fixed deadlines for license evaluations, reconsider its radiation exposure model, and more.
- Reorganize NRC structure and staffing to not unduly restrict the benefits of nuclear power. This includes reducing the number of NRC staff and creating a new NRC team of at least 20 officials to draft new regulations.
- Reduce the personnel and functions of the Advisory Committee on Reactor Safeguards (ACRS) to the minimum necessary, and limit ACRS review to licensing activities that are novel or noteworthy.
- Consider the economic and national security benefits of nuclear power when licensing nuclear reactors, in addition to safety, health, and environmental considerations.

Reforming nuclear reactor testing at the Department of Energy

This EO establishes a new DOE test reactor pilot program and streamlines DOE regulations to enable rapid deployment at DOE sites and national lab sites. Specifically, it directs DOE to work with OMB to:

- Construct at least three new nuclear reactors and achieve criticality by July 4, 2026, and establish a new pilot program for this initiative.
- Take action to expedite the deployment of advanced reactors at DOE and national lab sites within 90 days (by Aug 21, 2025) by revising DOE regulations and procedures and ensuring “qualified test reactors” can be operational within 2 years.
- Issue guidance regarding what counts as a “qualified test reactor” within 60 days (by Jul 22, 2025).
- Assemble support teams dedicated to assisting applicants seeking to deploy advanced reactors at DOE or national lab sites once applications are received.
- Streamline environmental reviews by: (a) taking action to reform DOE rules governing compliance with the National Environmental Policy Act (NEPA) by June 30, 2025, and (b) using all available authorities to eliminate or expedite DOE's environmental reviews.

Reinvigorating the nuclear industrial base

This EO directs DOE, the Department of Labor (DOL), and Department of Education (ED), to conduct various initiatives. Specifically, it directs these agencies to do the following. Note that the agency responsible for each activity is indicated in parenthesis.

New Reactors & Uprates:

- (DOE) Start construction of 10 new large reactors and 5 GW of power uprates to existing nuclear reactors by 2030. DOE shall prioritize funding this initiative within 180 days (by Nov 19, 2025). DOE must also leverage their Loan Programs Office for this initiative.

Fuel Supply:

- (DOE) Develop a plan to increase domestic uranium conversion and enrichment capacity, in consultation with the NRC and OMB, within 120 days (by Sep 20, 2025).
- (DOE) Establish a program to process excess plutonium held by the National Nuclear Security Administration (NNSA) into a form that can be used in advanced nuclear reactors.
- (DOE) Update its excess uranium management policy within 90 days (by Sep 20, 2025).
- (DOE) Pursue agreements with private companies to supply low-enriched uranium (LEU) and high-assay low-enriched uranium (HALEU) within 30 days (by Jun 22, 2025).

Waste & Recycling:

- (DOE) Submit a report to the President, in coordination with DoD, DOT, and OMB, within 240 days (by Jan 18, 2026) that includes analysis and recommendations on U.S. spent nuclear fuel (SNF) management and SNF recycling

Workforce Development (Multiple Agencies):

- (DOL & ED) Seek increased participation in nuclear energy-related apprenticeships and education programs within 120 days (by Sep 20, 2025).
- (All executive departments) Make nuclear energy-related careers a priority area for investment within 120 days (by Sep 20, 2025).
- (DOE) Take steps to increase university access to National Labs for R&D within 120 days (by Sep 20, 2025).

Deploying advanced nuclear reactor technologies for national security

This EO directs multiple federal agencies to carry out a wide range of activities. Specifically, it directs these agencies to do the following. Note that the agency responsible for each activity is indicated in parenthesis.

Nuclear Energy for Military Use

- (U.S. Army) Establish a program to operate a nuclear reactor at a domestic military base or installation no later than September 30, 2028.
- (DoD) Submit recommendations for legislative and regulatory changes regarding the management of advanced nuclear reactors and SNF on military installations to the White House

National Security Advisor within 240 days of the date of this order (by Jan 18, 2026) and consult with OMB.

- (DOE) Start designating DOE-related AI data centers as critical defense facilities, along with the electrical infrastructure needed to operate these facilities.
- (DOE) Designate one or more sites for the deployment of advanced reactors provided they are owned or controlled by the DOE within 90 days of the date of this order (by Aug 21, 2025) for the purpose of powering AI infrastructure, and with the goal of operating an advanced reactor no later than 30 months (by Nov 23, 2027).

Exports

- (State Department) Pursue 20 new 123 Agreements (agreements to facilitate peaceful nuclear cooperation) by the end of the 120th Congress (by Jan 2029) and renegotiate 123 Agreements set to expire within the next decade.
- (DOE) Review and approve or deny all technology transfer export authorization requests within 30 days.
- (White House) Determine a U.S. financial export strategy that better leverages the U.S. International Development Finance Corporation, U.S. Export-Import Bank, U.S. Trade and Development Agency to strengthen global U.S. nuclear energy leadership and encourage U.S. nuclear energy exports within 90 days (by Aug 21, 2025).
- (Treasury Department) Determine a strategy that supports foreign access to U.S. financial and technical assistance, in consultation with the White House, for the purpose of U.S. nuclear exports within 90 days (by Aug 21, 2025).
- (State Department), Implement a program to compete for global nuclear energy projects within 90 days (by Aug 21, 2025).
- (DoD) Prioritize expediting the issuance of security clearances to support the rapid distribution and use of U.S. nuclear energy and fuel cycle technologies abroad.

Environmental Reviews

- (DoD and DOE) Consult with the White House Council on Environmental Quality regarding streamlining compliance with NEPA, including the use of categorical exclusions.

Fuel Supply

- (DOE) Provide at least 20 metric tons of HALEU to any project that will be sited at a DOE-owned or controlled site that will power AI and other infrastructure.

Recycling SNF

- (DOE) Identify all U.S. uranium and plutonium stockpiles that may be recycled into new fuel within 90 days (by Aug 21, 2025).
- (DoD and DOE) Authorize construction of a fuel recycling facility at a DoD or DOE site using all legal means.

Connecticut Agreement State

On September 25, 2025, Governor Ned Lamont and NRC Chairman David Wright signed an agreement making Connecticut the federal agency's 40th "Agreement State," giving the State of Connecticut oversight over the handling of radioactive materials used by more than 100 Connecticut businesses in the research, manufacturing, and healthcare fields. The Agreement became effective on September 30, 2025.

Under the Agreement DEEP oversees the licensing, inspection, and enforcement of the use of radioactive materials in medicine, academia, and industry within the state's borders. The NRC continues to regulate commercial nuclear power plants, such as Millstone, and spent fuel facilities, such as Connecticut Yankee. The Agreement is the culmination of a multi-year process led by staff from DEEP's Radiation Division.

The Agreement State framework eliminates dual regulation and provides licensees direct access to local regulators who know their communities, without any additional cost to licensees or taxpayers. Connecticut's partnership with the NRC will continue. Through its periodic review process, the NRC will ensure Connecticut's program remains adequate and effective at ensuring the safe use of radioactive materials.

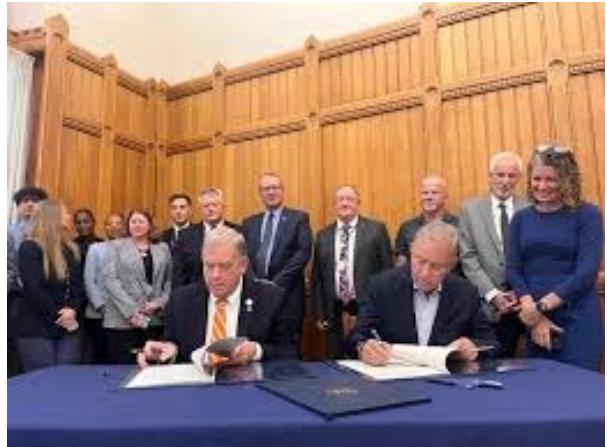


Figure 3 NRC Chairman Wright (left) and Connecticut Governor Lamont (right) sign the Agreement for Connecticut to assume regulatory authority for radioactive materials in the state. DEEP staff, legislators and DEEP Commissioner Katie Dykes observe.

Council Activities in 2025

As required by CGS16-11a (PA 96-245) as amended, the Council held four public meetings and participated in two non-public briefings. The purpose of these meetings was to provide a venue for discussion of issues relating to the safe operation of the state's nuclear power plants. Detailed meeting minutes are included in Appendix 2.

- April 30, 2025 (Waterford Town Hall): This was a joint meeting with the NRC Region I staff and focused on the Annual Assessment Report of Millstone Power Station Units 2 and 3 for the four quarters of calendar year 2024 by US Nuclear Regulatory Commission (NRC): Matt Young, Chief, Projects Branch 2, Division of Operating Reactor Safety; Justin Fuller, Senior Resident Inspector; E. Bousquet, Resident Inspector; Dominic Antonangeli, Resident Inspector. The NRC reported that both Millstone Units 2 and 3 were operated in a manner that preserved public health and safety and fully met NRC cornerstone objectives.
- July 24, 2025 (Connecticut State Community College – Three Rivers Campus): Connecticut Department of Energy and Environmental Protection (DEEP) briefed the Council on Connecticut's Agreement State status to assume regulatory authority for certain radioactive materials: Brandon Gruber, Project Lead and Michael Firsick, Office Director. The brief provided an overview of what an Agreement State (AS) is, why Connecticut decided to become an AS, the process of becoming an AS, and the schedule. Council also discussed four presidential executive orders related to nuclear power.
- July 24, 2025 (Commonwealth Fusion Systems - Devens, MA): The Council travelled to Commonwealth Fusion Systems in Devens, MA for a tour and briefing on the progress of private fusion energy development, regulation of fusion machines, and safety of fusion machines. Due to discussion of proprietary information and security access requirements at Commonwealth Fusion Systems, this briefing and tour were closed to the public.
- July 29, 2025 (virtual meeting via Teams): NRC staff provided a briefing to Council members on results of recent security inspections at Millstone Power Station. Under federal FOIA laws, all security related information is exempt from public disclosure. Due to discussion of security related information this briefing was closed to the public.
- September 18, 2025 (Millstone Simulator Training Building – Waterford, CT): Council members participated in a tour of Millstone Station including Unit 3 emergency diesel generator, Unit 3 turbine building, and the Unit 2 Main Control Room. Dominion staff were available to answer questions for Council members. Dominion Nuclear Energy Inc. representatives Mr. Mark Goolsbey, Operations Director; Mr. Alex Trespalacios, Plant Manager; Ms. Susan Adams, State Policy Director for New England; Mr. Chris Chapman, Director Plant Support; Mr. Adam



Figure 4 Council members discuss activities in the Unit 2 Control Room with the Dominion Unit 2 Shift Manager.

McGuire, Director of Engineering; Mr. Bill Bessette, Director of Maintenance; and Mr. James Petty, Station Vice President provided an update of activities at Millstone Power Station.

- December 18, 2025 (Waterford Town Hall): The Council discussed trends and observations for preparing the 2025 annual report.

Millstone 1 Decommissioning Advisory Committee (M1DAC): Since Millstone 1 remains in Safe Storage (SAFSTORE) and no significant activities were conducted at the Unit during the past calendar year, M1DAC did not meet in CY2025.

FSAC Meeting:

The CY Fuel Storage Advisory Committee meeting was held on May 5, 2025. Three members of the Council, Mr. Jeffrey Semancik, Mr. Craig Salonia and Dr. James Sherrard attended.

Recommendations

State

1. DEMHS and DEEP should continue to address any emergency preparedness issues at Connecticut's nuclear sites.
2. DEEP, in conjunction with Connecticut State Police should continue to address any security issues at Connecticut's nuclear sites.
3. DEEP should continue radiological and environmental monitoring of Connecticut's nuclear sites.
4. DEEP should dedicate sufficient resources to the review of Millstone's application for renewal of its National Pollutant Discharge Elimination System (NPDES) permit to ensure a timely determination decision
5. The Governor, General Assembly, DEEP, and the Council should continue to insist that the NRC continue vigilant oversight of Connecticut Yankee and Millstone Power Station sites for as long as high-level nuclear waste remains on site.
6. The Governor, General Assembly, and DEEP should encourage the federal government to develop a solution to the spent fuel storage. Specifically, The Governor, General Assembly and DEEP should endorse a nuclear waste strategy that includes consent based consolidated interim storage that gives priority to removal of waste from permanently shutdown reactors.
7. Elected officials should work with the Council to make appointments necessary to fill vacant Council positions.

The Council

1. Continue to monitor the effectiveness of the Employee Concern Program and Safety Conscious Work Environment and Corrective Action Program at Millstone Power Station.
2. Continue to monitor operations and activities at Millstone Power Station and Connecticut Yankee Site, including the dry cask storage programs.
3. Continue to encourage the development of a solution to the problem of Spent Nuclear Fuel, High Level Waste and Greater Than Class C Low-Level Radioactive Waste and the safe transfer of this nuclear waste from Connecticut. Including the establishment of a consent based consolidated interim storage that gives priority to removal of SNF and GTCC waste from permanently shutdown and operating reactor sites and transfers title of SNF to DOE upon receipt.
4. The Council should facilitate an effective interface for the industry and the public as a forum to discuss safety and environmental costs and benefits of extending the existing nuclear fleet and deployment of new nuclear reactors in the state.
5. The Council should monitor actual and proposed changes to the Millstone emergency plan and as well as implementation of these changes to ensure effective regional preparedness.

Conclusions

Dominion continues to safely operate the nuclear plants at Millstone Power Station. Spent nuclear fuel is safely stored and monitored in wet and dry storage at Millstone Power Station and in the ISFSI at Connecticut Yankee. NRC and DEEP oversight provide effective oversight of activities. All oversight entities and stakeholders must continue vigilant oversight of Connecticut Yankee and Millstone Power Station sites for as long as high-level nuclear waste remains on site.

Appendix 1 Nuclear Energy Advisory Council Membership

Chair, Representative Kevin Ryan (through November 2025) Oakdale: OD, Pennsylvania College of Optometry. State Representative and Assistant Deputy Speaker representing Ledyard, Montville, Norwich in the 139th House District. Adjunct Faculty, University of New Haven and University of Hartford.

Chair, Michael Quinn (chair from December 2025) Marlborough: Doctor of Science (Sc.D.) and MBA, University of New Haven; BSc Chemistry, Charter Oak College; Bachelor General Studies-Biology, UCONN. Formerly licensed Senior Reactor Operator (SRO) at Connecticut Yankee (PWR). Consultant - commercial Nuclear Power in the U.S. and Canada.

Arnold “Skip” Jordan. Noank: BSME, Maine Maritime Academy; MBA, Boston University. Retired, former Vice President Dominion Support Services and Site Vice President Millstone Station. Former Reactor Operator at Millstone Unit 2.

John McGunnigle East Lyme: BS, Computer Science, US Naval Academy; MS Operations Research, US Naval Postgraduate School; former Commanding Officer, Nuclear Powered Submarine; Former Submarine Squadron Commander; Navy Captain.

Hugh McKenney (from October 2025) Salem: BS Nuclear Engineering, University of Massachusetts, Lowell. Former Shift Technical Advisor and Reactor Engineer, Yankee Atomic Electric Company. Former Fleet Supervisor, Reactor Engineering, Dominion Nuclear Energy Company.

Representative Anthony Nolan. New London: State Representative serving New London’s 39th district. He is Chair of the legislature’s Veterans and Military Affairs Committee and a member of the Appropriations and Internship Committees. He served with the U.S. Navy and retired after 23 years as a New London Police Officer.

Senator Catherine Osten Sprague: Mohegan Community College; State Senator and Deputy President Pro Tempore representing the residents of the 19th state Senatorial District communities of Columbia, Franklin, Hebron, Lebanon, Ledyard, Lisbon, Marlborough, Montville, Norwich, and Sprague

Craig Salonia Haddam: BS in Medical Technology from Northeastern University. Account manager and trainer for GE Health care Life Sciences division.

Deputy Chair, Jeffrey Semancik Groton: BS Physics, US Naval Academy. MS, Electrical Engineering, RPI. MBA UCONN. Former qualified engineer, nuclear powered aircraft carrier. Former Senior Reactor Operator at Millstone Unit 3. Director, Radiation Division, Department of Energy and Environmental Protection representing Commissioner Dykes.

John W. (Bill) Sheehan Waterford: BS, Naval Science, US Naval Academy; MBA, Rensselaer Polytechnic Institute; former Commanding Officer, Nuclear powered submarine.; retired Navy Captain

James Sherrard Mystic: Ph.D. Nuclear and Mechanical Engineering MIT/UCONN. Chairman, Nuclear Engineering Technology Department, Three Rivers Community College.

Raymond D. Woolrich Waterford: BS, Nuclear Science, US Naval Academy; MS Computer Systems and Financial Management, US Naval Postgraduate School; former Commanding Officer, Nuclear Powered Submarine; retired Navy Captain; Naval Analyst, Sонаlysts, Inc.

Appendix 2

Nuclear Energy Advisory Council Meeting Minutes

NUCLEAR ENERGY ADVISORY COUNCIL
April 30, 2025 6:00 PM
Waterford Town Hall

MINUTES

Members Present:

Rep Kevin Ryan, Chair
Alternate Chair Mr. Jeffrey Semancik representing DEEP Commissioner Dykes
Mr. James Sherrard
Mr. R. Woolrich
Mr. Bill Sheehan
Sen Cathy Osten
Mr. Craig Salonia
Mr. A. Jordan
Mr. John McGunnigle
Mr. Michael Quinn

Members not present:

Rep Anthony Nolan

1. Call to Order of Meeting

The Council's Alternate Chair called the meeting to order at 6:00.

2. NRC Reactor Oversight Program/Millstone End of Cycle Report – Briefing on Millstone

Power Station Annual Assessment by US Nuclear Regulatory Commission (NRC): Matt Young, Chief, Projects Branch 2, Division of Operating Reactor Safety; Justin Fuller, Senior Resident Inspector; E. Bousquet, Resident Inspector; Dominic Antonangeli, Resident Inspector.

- a. Mr. Young introduced himself and discussed his experience. He noted that the NRC has three fulltime resident inspectors (RIs) with unfettered access to all areas of Millstone Power Station. These RI's conduct the baseline inspections and supplements them with technical specialists from the Region 1 office in King of Prussia, PA and from NRC Headquarters in Bethesda, MD.
- b. Senior Resident Inspector (SRI) Mr. Fuller and Resident Inspectors (RIs) Mr. Antonangeli and Mr. Bosquet introduced themselves and stated their experience and education.
- c. Mr. Antonangeli briefed the Council on overall NRC assessment of performance related to Dominion Energy's operation of Millstone in 2024. He stated that both Millstone Units 2 and 3 operated safely and securely, protected public health and safety, and protected the environment throughout 2024 and continues to do so. He reviewed the NRC's Reactor Oversight Process (ROP) emphasizing that there are multiple inputs to the assessment process including inspector inputs and findings, regional specialist inspectors, project manager

input and performance indicators. The goal of the ROP is to catch low safety significance issues early and correct them. In 2024, Millstone Units 2 and 3 operated in the Licensee Response Column of the Regulatory Response Matrix except for one period in 2024, from April 11 to July 11, when the station was in the Regulatory Response column due to a Greater than Green (GTG) security finding which was resolved by the licensee and verified by the NRC. Based upon NRC's assessment, both Millstone Units 2 and 3 are now operating in the Licensee Response Column of the Regulatory Response Matrix (the highest level of performance) and will therefore remain under baseline inspection.

- d. Mr. Antonangeli discussed overall indicator and inspection results at Millstone. The NRC conducted 9,495 hours of inspection activities at Millstone in 2024. The NRC identified 16 inspection findings in 2024. Eleven (11) were of very low safety significance (Green). There were also 4 Severity Level IV violations under traditional enforcement discretion. One security violation identified in 2024 was classified as GTG and greater than severity level IV. All performance indicators (PIs) are Green. The NRC did not identify any cross-cutting issues. This included a biennial Problem Identification and Resolution (PI&R) inspection in which the NRC evaluates Safety Conscious Work Environment (SCWE). The NRC received three (3) allegations in 2024 consistent with the national average.
 - i. Mr. Sheehan asked if any of the allegations were valid. Mr. Fuller stated the NRC determined all the violations were "not substantiated." He noted that the number of violations tended to indicate a healthy program. If there were no allegations, he stated he would be concerned that workers were afraid to bring up issues. Too many would indicate Dominion's program was not being used. NRC believes that Millstone has a healthy Employee Concerns Program.

- 3. NRC staff addressed specific topics previously provided to the NRC by the Council.
 - a. Repeat Failure such as Reactor Coolant Pump (RCP) seals – Mr. Antonangeli discussed how the NRC uses the PI&R inspection process to evaluate how the licensee addresses issues whenever they note declining performance in an area. The NRC PI&R inspection team targets areas where RI's have questions. With respect to RCP seals, the NRC has reviewed licensee actions in three different PI&R inspection.
 - b. GTG Security Cornerstone - Mr. Antonangeli noted that the NRC conducted a follow-up reactive inspection using their procedure (95001) with a team of security experts from NRC regional office. The NRC noted that the licensee took appropriate actions to prevent recurrence, but could not publicly comment on specifics in a public meeting as security information is protected from disclosure.
 - c. Millstone Unit 2 Condensate Storage Tank (CST) Trench Aging Management – Mr. Fuller discussed the state of licensee actions to conduct inspections required under their aging management program. He noted that in 2023 NRC issued a finding related to the Unit 2 service water pipe trench in which the licensee had become complacent with the state of corrosion on pipe supports. As an extent

of condition, the NRC identified that the licensee had failed to inspect the CST pipe trench as a baseline for the period of extended operations because the licensee had incorrectly changed the work order. When this was identified, the licensee made efforts to conduct a remote camera inspection of the trench through an opening but was unable to navigate to complete the inspection. In order to gain full access, Dominion would have to move several heavy (greater than 5000 pounds) concrete blocks covering the safety related auxiliary feedwater piping. Dominion concluded the risk of conducting the inspection on-line was too risk significant. As a result, they planned and conducted the inspection at the first acceptable opportunity when auxiliary feedwater was not required during the refueling outage. The inspection was completed during the fall 2024 refueling outage. The piping was determined to be in excellent condition. The pipe supports required repair of some degradation and restoration to full design compliance.

- i. Mr. Sheehan asked if the licensee could use cameras internal to the pipes. Mr. Fuller responded that the concern is external corrosion. The licensee used other measures to verify the pipe was not leaking which was part of the justification to access the area in the refueling outage. He noted that both units use cameras extensively for internal pipe inspections, especially in service water. Mr. Young added that NRC Region 1 staff also followed the issue and conducted an independent risk assessment to ensure it was safe to wait for the scheduled refueling outage. They also reviewed licensee readiness to conduct the inspections.
- ii. Mr. Semancik asked how such generic issues (aging management inspections) are shared within the NRC. Mr. Young responded that the NRC has a process for knowledge transfer for industry issues. In this case they conducted training on aging management for Region 1 RI's and showed pictures of the degraded conditions at Millstone. Nationally, the NRC has an Operational Experience Branch that reviews findings for sharing to all RI's. In 1 to 2 months this branch pushed information to all RI's to understand what is meant by inaccessible areas for aging management. Mr. Fuller added that RI's organically also share lessons learned and can adjust their inspection plans to incorporate a look at areas identified at other plants.
- d. Power History and number of operational events – Mr. Antonangeli discussed operational performance of Millstone units. The power changes in 2024 included three unplanned downpowers of Unit 3 due to feedwater heater leaks, one planned refueling outage at Unit 2, one planned outage to replace a safety valve on Unit 3, and 1 unplanned outage at Unit 2 for a repair in the electrical switchyard.
 - i. Mr. Sheehan noted a number of small power changes and asked about the cause. Mr. Antonangeli responded that they were due to feedwater

heater level control issues and for a leaking safety relief valve on the Unit 2 feedwater heating system.

ii. Senator Osten asked if the NRC had a slide to show how much power Connecticut gets from Millstone. Mr. Antonangeli responded that the NRC only regulates offsite power when it impacts nuclear safety. They do not evaluate the grid impacts.

e. Apparent higher than normal number of conditions reported in Licensee Event Reports (LERs) – Mr. Antonangeli noted Millstone was required to submit 5 LERs in 2024. He also noted that the RI's conduct follow up inspections of issues reported in the LERs within 12 months. The LERs also serve to provide operational experience to the rest of the industry. Mr. Young added that when the NRC is initially notified of an event they immediately assess risk and will inspect sooner than 12 months if they determine it is risk significant. Mr. Fuller noted that the LER follow-up inspection results are included in the quarterly inspection reports.

i. Mr. Salonia noted there were a number of findings related to failures of the secondary containment barrier at Millstone and that some lasted for several hours. He asked how they all still screened to Green. Mr. Antonangeli responded that the NRC conducted independent risk assessment, and all were very low safety significance (Green). Mr. Fuller acknowledged that both units had challenges to secondary containment barriers. He noted a few things that factor into low safety significance including that they some involved door/hatch latches that the license allows 24 hours to repair. Overall, both secondary containment systems have a lot of margin. Mr. Young also noted that for dose mitigation systems (such as secondary containment), the size of the breach is more risk significant than the time (which tends to dominate for systems designed to mitigate core damage.)

4. **Other Questions from the Council**

a. Mr. Salonia noted that the Council had reviewed license amendments for improved fuel that allows 24 month fuel cycles. He asked if it changes the volume of high-level waste. Mr. Fuller acknowledged the licensee was working on new fuel, but did not have specifics on waste. Mr. Semancik commented that the fuel is the same size and volume, and the spent nuclear fuel would contain more fission products which are proportional to the integrated power.

b. Mr. Quinn asked what extent of condition review Dominion conducted related to performing required surveillances on other the “difficult to access” components. Mr. Fuller stated that Dominion did an extensive review after the service water issue and identified the CST pipe trench. They modified their procedures but failed to notice that they never did the baseline inspection until questioned by the NRC. With Unit 3 entering its period of extended operations this year, Dominion is working to ensure all the baseline aging inspections are completed.

- c. Senator Osten asked if there were other sites moving forward with adding new nuclear at their facilities. Mr. Fuller responded that several were pursuing power uprates to generate more electricity. Mr. Young noted that NRC approval would be required, but they currently had no pending applications. Any application would be public and information would be on the website.
- d. Mr. Semancik asked about a recent prompt report issued by Dominion related to the loss of offsite notification and communications. Mr. Fuller responded that since this occurred in 2025, it was still being evaluated by NRC in the Emergency Preparedness inspection. NRC regional experts reviewed to ensure no other immediate actions were required.
- e. Mr. Jordan asked NRC to discuss how LERs that reflect repeat issues are assessed. Mr. Fuller noted the NRC and industry were aware of several repeat issues and take actions to better understand the causes and address corrective actions. For example, he noted there were repeat LERs reporting setpoint drift in Main Steam Safety valves. The industry, through the Electric Power Research Institute, has done testing to show that in a real event they will still function. Mr. Young added that if the event represents a significant condition adverse to quality, the licensee is required to take corrective actions to prevent recurrence.
- f. Mr. Semancik asked if the NRC was expecting changes to RI staffing or the ROP process. Mr. Young noted that the ADVANCE Act requires the NRC to assess all aspects of the ROP and make it more efficient. He does not expect any reductions to baseline RI staffing. Overall, Mr. Young felt that inspection numbers might be more performance based. NRC Office of General Counsel is still reviewing several executive orders. Mr. Young noted that the NRC did retain all probationary employees and is still hiring RI's.
- g. Mr. Semancik asked about the change to the NRC Mission Statement. Mr. Young stated that the NRC Commissioner state that safety and security remain the "guiding star" for the NRC but the mission was revised to become more efficient so as not to hinder development. Mr. Fuller read the revised NRC mission statement, "The NRC protects public health and safety and advances the nation's common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment." Mr. Quinn noted that the verb "advances" is just short of "promotes," shared in the context that in the 1974-75 time frame the former Atomic Energy Commission had been re-framed as the US NRC, which would 'regulate' but could no longer 'promote' nuclear power.
- h. Mr. Sheehan noted that the Millstone units are old and getting older and that Dominion is looking to extend the license even further. He asked if NRC has guidance on how to inspect a pipe that has to last 80 years versus the 40 it was designed for. Mr. Antonangeli responded that when a plant enters the period of extended operations, the RI's have been trained on the aging management program requirements as described in the licensee's license renewal application.

Mr. Fuller noted that they do have gaining management inspection procedures and that they are periodically updated. He noted that he submitted a change based on the service water issues identified at Millstone. The inspection procedure was updated.

5. Public Comment. There were nine members of the public present. The public had no questions or comments.

- a. One member of the public asked how the NRC staff uses Artificial Intelligence (AI) to enhance operational experience searches Mr. Young said that AI guidance for staff was coming out shortly. He also noted that the NRC has access to licensee systems and expects that these will be the first to use AI and noted that the federal government limits what sensitive data can be used to train the AI. Mr. Fuller added that he was one of the RI's in a pilot program to use MS Copilot and found it helpful for summarizing design requirements.

6. NEAC Business

a. NRC Correspondence Reviewed since the last meeting.

The following NRC Correspondence was reviewed by the Council:

- i. Millstone Power Station, Unit No. 3 – Issuance of Amendment No. 292 Regarding Adoption of Technical Specification Task Force Traveler TSTF-421 (EPID L-2024-LLA-0035) dated December 3, 2024.
- ii. Millstone Power Station, Unit No. 3 Reactor Vessel Internals Inspections Aging Management Program Submittal Related to License Renewal Commitment No. 13 (EPID L-2023-LRO-0091) dated December 19, 2024.
- iii. Millstone Power Station, Unit No. 3 Reactor Coolant System Alloy 600 Inspection Program for License Renewal Commitment No. 15 (EPID L-2023-LRO-0092) dated December 19, 2024.
- iv. Millstone Power Station, Units 2 and 3 – Integrated Inspection Report 05000336/2024004 and 05000423/2024004 dated February 12, 2025.
- v. Annual Assessment Letter for Millstone Power Station, Units 2 and 3 (Reports 05000336/2024006 and 05000423/2024006) dated March 11, 2025.

b. Other Correspondence Reviewed since past meeting.

The following other Correspondence was reviewed by the Council.

- i. Dominion Energy Nuclear Connecticut, Inc. Millstone Power Station Non-Emergency Report, Primary and Backup Methods of Activating the Site Emergency Response Organization (ERO) Not Available dated February 18, 2025.

c. Future Council Meetings.

- i. July 24, 2024 – Tour of Commonwealth Fusion
 - 1. Mr. Semancik to confirm date and tour details with Commonwealth Fusion staff.
 - 2. Mr. Sherrard noted he can use the school van to arrange travel.
- ii. September 25, 2025 – Millstone Operations Update (Dominion Presentation)
- iii. December 11, 2025 – Annual Report Writing Meeting

7. Adjournment

A motion was made to adjourn by Mr. Sheehan and seconded by Mr. McGunnigle; no objections; unanimous vote in favor; meeting adjourned at 7:40 PM.

Millstone Units 2 & 3

2024 Annual Assessment Meeting

Reactor Oversight Process

Nuclear Regulatory Commission
Region I

April 30, 2025

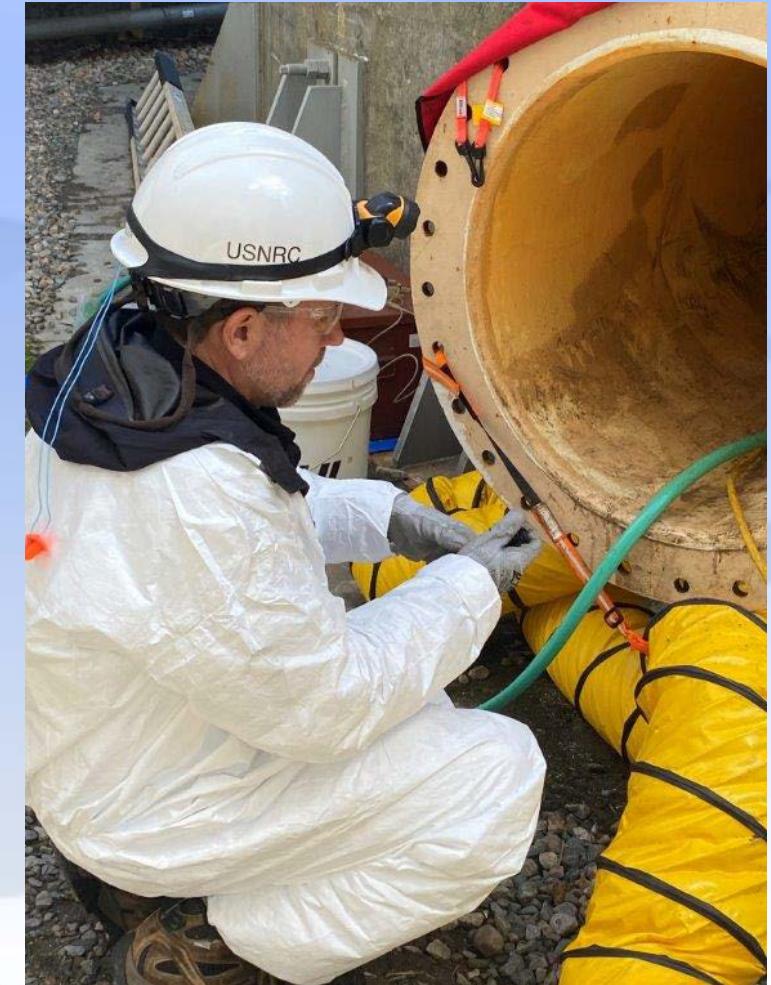


ML25118A244



Agenda

- Opening Remarks
- 2024 Millstone Reactor Oversight Process (ROP) Assessment Summary
- Q&A





Overall Assessment

**Millstone Units 2 and 3 were operated safely in 2024
and continue to operate safely today**





Inspection and Oversight

- Three full-time residents assigned to Millstone



Justin Fuller
Senior Resident



Dominic Antonangeli
Resident Inspector

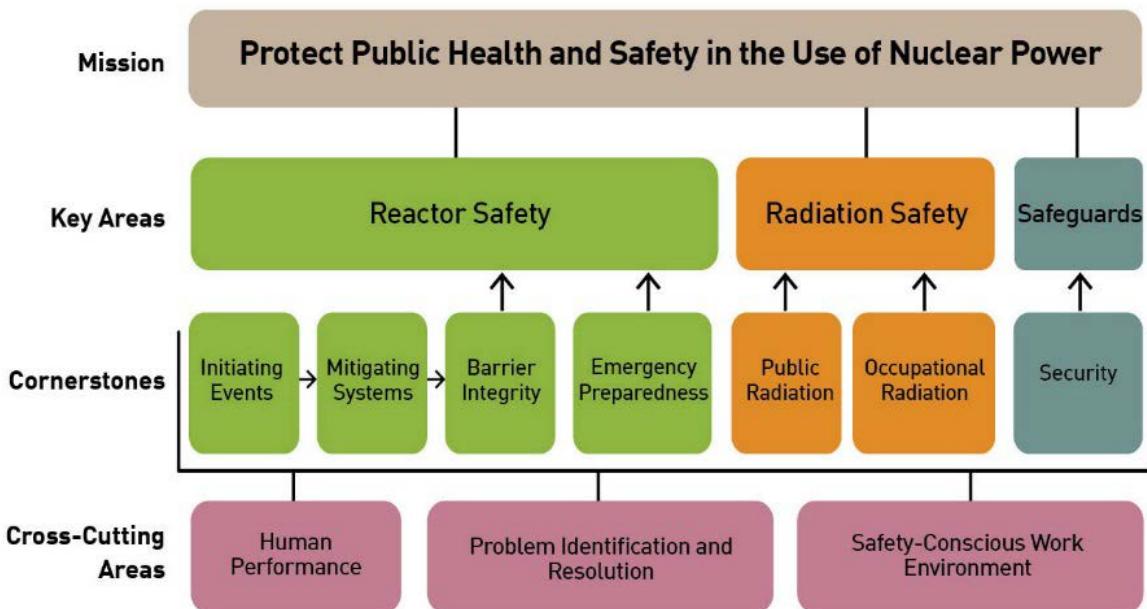


Earl Bousquet
Resident Inspector



Reactor Oversight Process

Reactor Oversight Framework



Reactor Oversight Action Matrix Performance Indicators

Performance Indicators



Inspection Findings





Types of Inspections

- **Baseline Inspection Program**
 - Minimum level of inspection conducted at all facilities regardless of their performance.
- **Reactive Inspections (e.g., Special Inspections)**
 - Events involving reactor facilities are investigated in a timely, objective, systematic and technically sound manner.
- **Supplemental Inspections (e.g., IP 95001)**
 - Applies NRC inspection resources in a graded manner when risk-significant performance issues are identified.



Action Matrix Concept

Licensee Response	Regulatory Response	Degraded Performance	Multiple/Repetitive Degraded Cornerstone	Unacceptable Performance
--------------------------	----------------------------	-----------------------------	---	---------------------------------



Increasing Safety Significance

Increasing NRC Inspection Efforts

Increasing NRC/Licensee Management Involvement

Increasing Regulatory Actions



Millstone Units 2 & 3

2024 Assessment Summary

- Operated safely and in a manner that preserved the public health and safety and protected the environment
- Licensee Response Column
 - Regulatory Response Column April 11, 2024, to July 11, 2024
- 9495 hours of inspection and related activities
- Green Performance Indicators
- 11 Green Findings and 4 Severity Level IV Violations
- A Greater-Than-Green finding and Greater-Than-Severity Level IV violation in the Security cornerstone



Safety Culture

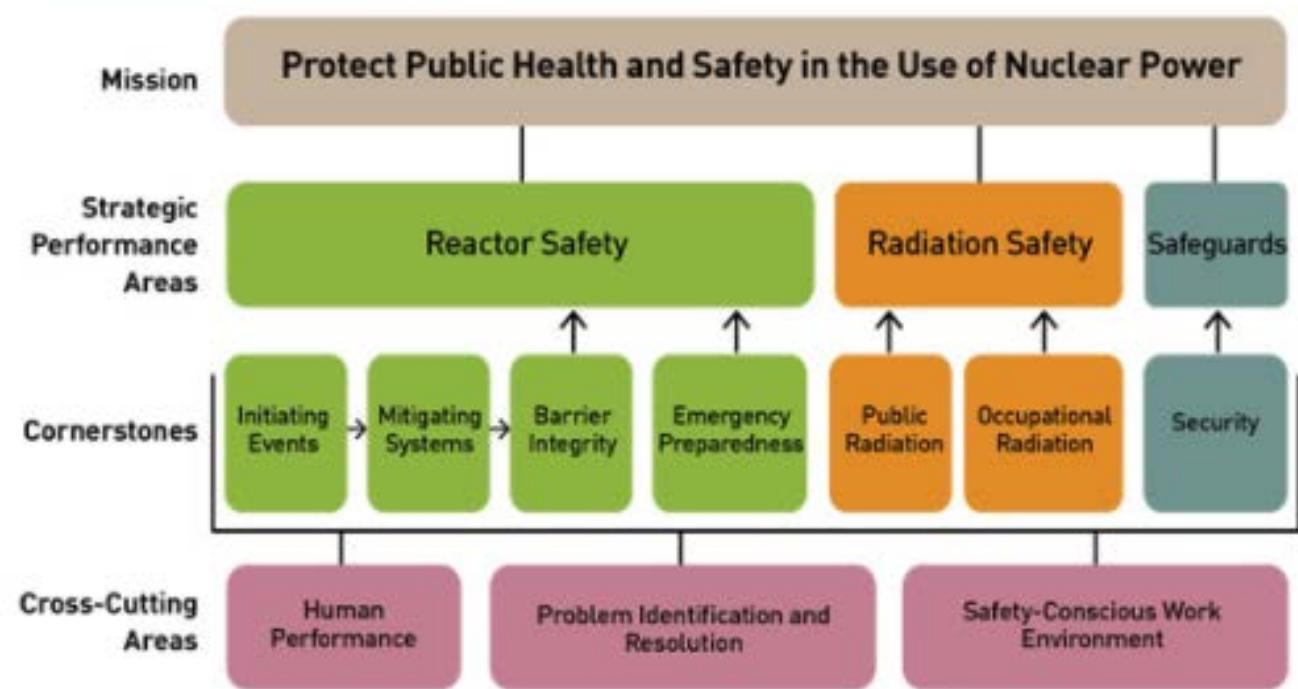
Cross-Cutting Aspects

- No Human Performance concerns
- 2024 Problem Identification and Resolution (PI&R) Inspection
- No SCWE concerns

Allegations

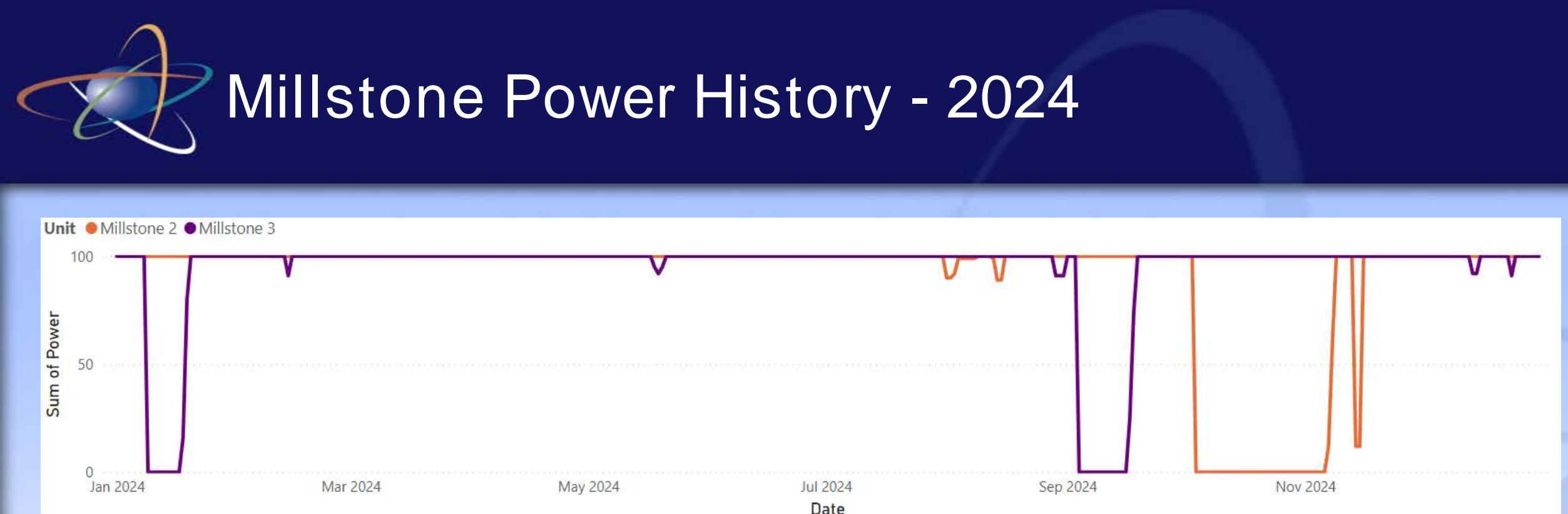
- 3 allegations in 2024 (National Avg. = 3)
- Resident inspectors and regional staff are highly accessible and take all allegation matters seriously

Reactor Oversight Framework





- Security Cornerstone Greater-than-Green Finding and Greater-than-Severity Level IV Violation
 - Special Inspection Report, November 16, 2023 (ML24010A182)
 - Special Inspection Follow-up Report and Choice Letter, April 25, 2024 (ML24116A045)
 - Final Significance Determination and Notice of Violation, May 2, 2024 (ML24123A204)
 - Supplemental Inspection Report, August 6, 2024 (ML24219A016)
- Unit 2 CST Trench Aging Management
 - NCV 05000336/2024001-01, Failure to Implement Structures Monitoring, Infrequently Accessed Areas, and Buried Piping Aging Management Programs for the Condensate Storage Tank (CST) Pipe Trench



Date	Unit	Cause
January 9, 2024	3	Unplanned Downpower – Feedwater Leak Repair
September 4, 2024	3	Planned Maintenance Outage – Pressurizer Safety Relief Valve Replacement
October 4, 2024	2	Refueling Outage
November 14, 2024	2	Unplanned Downpower - Switchyard Repair



Event Date	Unit	Topic	Status
October 20, 2023	3	Pressurizer power operated relief valve failed to open during surveillance testing resulting in a condition prohibited by Technical Specifications	Closed (Inspection Report 2024004)
April 14, 2024	2	Control room air conditioning unit inoperable due to refrigerant overcharge resulting in a condition prohibited by Technical Specifications	Closed (Inspection Report 2024002)
August 21, 2024	3	Loss of safety function and condition prohibited by Technical Specifications for loss of secondary containment boundary	Closed (Inspection Report 2024004)
October 1, 2024	2	Two main steam safety valves failed to lift within the acceptance criteria resulting in a condition prohibited by Technical Specifications	Open
October 10, 2024	3	Door latch failure resulted in loss of safety function for secondary containment boundary	Closed (Inspection Report 2024004)



Office of Public Affairs



Diane Screnici

Diane.Screnici@nrc.gov

610-337-5330



NRC Social Media Channels



- Facebook www.facebook.com/nrcgov
- Twitter twitter.com/nrcgov
- YouTube www.youtube.com/user/NRCgov
- Instagram www.instagram.com/nrcgov
- Flickr www.flickr.com/photos/nrcgov/sets
- LinkedIn www.linkedin.com/company/u-s--nuclear-regulatory-commission/mycompany/
- GovDelivery service.govdelivery.com/accounts/USNRC/Subscriber/new



More Information

- Inspection Reports
 - <https://www.nrc.gov/reactors/operating/oversight/listofrpts-body.html>
- Reactor Oversight Process
 - <https://www.nrc.gov/reactors/operating/oversight.html>
- Fact Sheets and Brochures
 - <https://www.nrc.gov/reading-rm/doc-collections/fact-sheets/>
- NRC Information Digest
 - <https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/>
- Regulations
 - <https://www.nrc.gov/reading-rm/doc-collections/cfr/>



Annual Assessment Meeting Feedback



Ways to submit feedback:

- Scan QR Code
- Visit <https://feedback.nrc.gov/pmfs/> and enter the meeting number
- Visit the NRC Public Meeting Schedule after the meeting and click the Meeting Feedback Form link

Meeting number: 20250469



Questions and Answers





This Ends the Meeting
Thank You for Attending

NUCLEAR ENERGY ADVISORY COUNCIL

**Public Meeting
July 24, 2025 11:00 AM
CT State Community College
Three Rivers Campus
President's Conference Room
Norwich, CT 06360**

**Closed Briefing
Commonwealth Fusion Systems
117 Hospital Road
Devens, MA 01434**

MINUTES

Members Present

Rep Kevin Ryan, Chair

Alternate Chair Mr. Jeffrey Semancik representing DEEP Commissioner Dykes

Rep A. Nolan Mr. M. Quinn

Members Not Present

Mr. A. Jordan

1. Call to Order of Meeting

Council Chair Ryan called the meeting to order at 11:00 AM at the in the CT State Community College in Norwich, CT.

2. Assuming Regulatory Authority for Certain Radioactive Materials, Connecticut Agreement

State Status – Briefing on Connecticut Agreement State status by Brandon Gruber, Connecticut Department of Energy and Environmental Protection (DEEP) and Michael Firsick, Office Director, DEEP. Mr. Gruber provided an overview of what an Agreement State (AS) is, why Connecticut decided to become an AS, the process of becoming an AS, and the schedule. (presentation attached)

a. Mr. Gruber explained that the Atomic Energy Act allows states to build a compatible radioactive materials regulatory program and enter into an Agreement with the U.S. Nuclear Regulatory Commission (NRC) for the state to assume and the NRC discontinue regulatory authority for certain radioactive material – byproduct, source and special nuclear material. He explained the NRC retains authority for regulation of fission nuclear

power plants and spent nuclear fuel, and the state retains its existing authority to regulate radiation generating equipment (such as x-rays). He also explained that a recent ruling by the NRC established that fusion machines are not reactors and would be regulated by AS's under the materials framework.

- b. Mr. Graber explained the rigorous process of developing statutory authority, regulations, program and trained staff to become an AS.
- c. Mr. Graber discussed outreach to the regulated community as well as with federal and tribal entities. He explained that use of radioactive materials on federally recognized tribal lands remains under the jurisdiction of the NRC.
 - i. Mr. Woolrich asked what radioactive material the tribes had. Mr. Graber responded that the tribes did not currently have any licensed radioactive material. Mr. Firsick added that the most likely would be byproduct material for medical use. Sen. Osten noted that one of the federal tribes was building a medical center. Mr. Semancik noted that the state would work with the NRC in such cases to determine who had jurisdiction for regulation of the material as it can depend on whether the land is on federally recognized tribal land and other factors.
- d. Mr. Graber noted that the application to become an AS has been accepted by NRC staff and pending a Commission vote Connecticut will be the 40th AS effective September 30, 2025.
 - i. Mr. Semancik noted that the federal executive orders on overhauling regulation of nuclear power plants has the potential to change what else could be regulated under the agreement. For example, some states are requesting the regulations be changed to allow AS's to permit siting for microreactors. (NRC would continue to license the physical reactor but states could approve siting.)

3. **Nuclear Power Executive Orders (EO's)** – Mr. Quinn requested the Council be made aware of and discuss recent executive orders (listed in paragraph 5) related to nuclear power. Mr. Quinn stated that April 9th executive order used energized words that task the NRC to review and incorporate sunset provisions on 10CFR (licensing of nuclear facilities, nuclear materials safety, and security) regulations. He compared this effort to possibly removing stop signs and traffic lights to improve traffic but with additional risk. The April 8th EO entails State Overreach, which as presently written does not mention nuclear. However, should significant 10CFR sunset provisions be enacted, state bodies such as NEAC could be constrained should the Administration determine nuclear will apply to the State Overreach Executive Order. He wanted to make sure the Council was aware of these EO's.

- a. Mr. Semancik stated it was his opinion that the Council's statutory role was to continue to monitor the safety of the nuclear power plants in the state to see if there was any adverse impact from the EO's.
- b. Mr. Sheehan read a quote from Admiral Rickover on the importance of responsibly in managing nuclear power safely including commitment to the recognition that any amount a radiation must be respected.

4. NRC Correspondence Reviewed since past meeting

Council reviewed the following NRC Correspondence. The Council did not have any questions or comments.

- a. Millstone Power Station, Unit 3 – Information Request Tt Support Post-Approval Site Inspection for License Renewal; Inspection Report 05000423/2025010 dated May 2, 2025
- b. Millstone Power Station, Units 2 and 3 – Integrated Inspection Report 05000336/2025001 and 05000423/2025001 and Independent Spent Fuel Storage Installation Inspection Report 07200047/2025001 dated May 5, 2025.
- c. Public Meeting Announcement: Public Meeting on Executive Order 14300 Section 5(b) – Reconsidering the NRC's Radiation Protection Framework: July 16, 2025.
- d. Millstone Power Station, Units 2 and 3 – Security Baseline Inspection Report 05000336/2025401 AND 05000423/2025401 dated July 16, 2025.

5. Other material reviewed

NEAC reviewed the following information related to nuclear industry and trends. The council did not have any questions or comments.

- a. Presidential Executive Orders:
 - i. Deploying Advanced Nuclear Reactor Technologies for National Security dated May 23, 2025.
 - ii. Ordering the Reform of the Nuclear Regulatory Commission dated May 23, 2025.
 - iii. Reforming Nuclear Reactor Testing at the Department of Energy dated May 23, 2025.
 - iv. Reinvigorating the Nuclear Industrial Base dated May 23, 2025.
 - v. Zero-Based Regulatory Budgeting to Unleash American Energy dated April 9, 2025.
 - vi. Protecting American Energy From State Overreach dated April 8, 2025.

6. Council Business

- a. Agreed to next meeting on September 18, 2025. Meeting topic is presentation of performance by Dominion. Council members requested a tour of the facility as they have not been on site for several years.

7. Public Comment

- a. One member of the public was in attendance. There were no questions from the public.

8. Adjournment

Meeting adjourned at 11:55 AM.

9. Closed Briefing

- a. After conclusion of the public meeting, the Council travelled to Commonwealth Fusion Systems in Devens, MA for a tour and briefing on the progress of private fusion energy

development, regulation of fusion machines, and safety of fusion machines. Due to discussion of proprietary information and security access requirements at Commonwealth Fusion Systems, this briefing and tour were closed to the public.

Connecticut

The 40th Agreement State

DEEP Radiation Division Meeting with
Nuclear Energy Advisory Committee (NEAC)

July 24, 2025

Brandon Graber
Environmental Analyst III
AS Project Lead

Jeffery Semancik
Director, Radiation Division



Connecticut
Department of Energy &
Environmental Protection
RADIATION DIVISION

Goal

- Provide NEAC an overview of Agreement State program and schedule
- Ensure NEAC's understanding of CT's regulatory authority over radioactive material



Connecticut
Department of Energy &
Environmental Protection
RADIATION DIVISION

Agenda

- What is an Agreement State?
- Regulation of Sources of Ionizing Radiation
- Regulation of Fusion
- Stakeholder Engagement
- Building the Agreement Program
- Schedule & Milestones

October 1st, 2025!

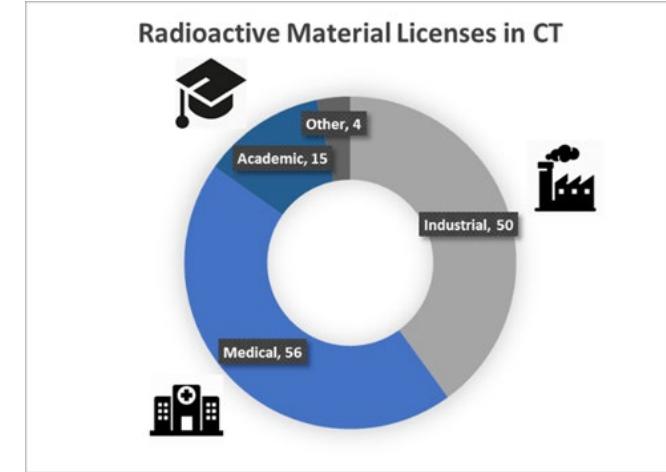


Connecticut
Department of Energy &
Environmental Protection
RADIATION DIVISION

What is an Agreement State?

- A State that has assumed regulatory authority over certain categories of radioactive materials* through a cooperative Agreement with the NRC as authorized by the Atomic Energy Act of 1954
- State becomes responsible for:
 - licensing, inspection, and enforcement of medical, academic, and industrial uses of certain radioactive materials
 - Fusion Machines
 - responding to certain types of incidents and allegations within their borders

Discontinuation of federal authority and assumption of state authority – not a delegated program



** NRC remains regulatory authority for nuclear power plants, spent nuclear fuel, or federal facilities.*



Connecticut
Department of Energy &
Environmental Protection
RADIATION DIVISION

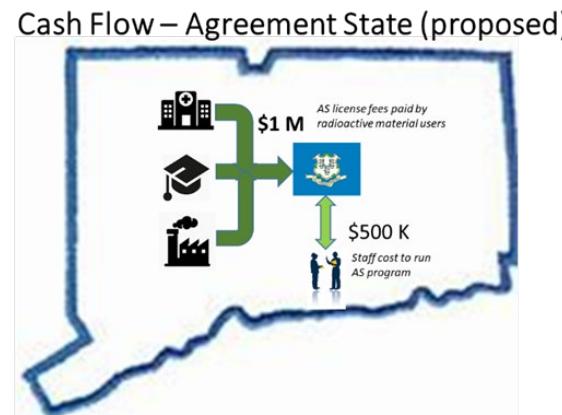
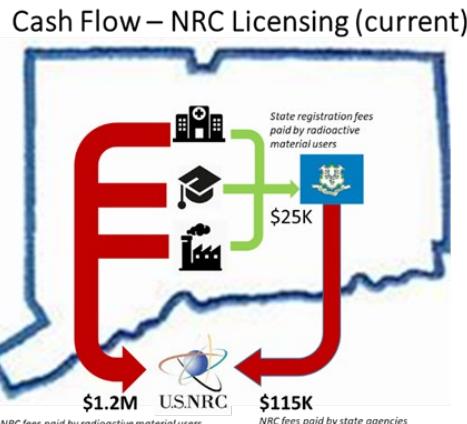
Making the Decision

- Gov Lamont signed a Letter of Intent to become an Agreement State on December 10, 2020
 - CT will be the **40th** Agreement State
- Why take this on?
 - Regulatory Certainty
 - Eliminate dual regulation
 - Compatibility
 - Local access and accountability to licensees and public
 - Safety and Security
 - State responsibility/accountability for radiation sources, safety and security
 - Ownership for oversight of EJ issues (former clock factories)
 - Economic
 - Over \$1M in fees stay in CT
 - Streamlined program administration



National Materials Program

- 39 Agreement States
- 16 NRC States/Territories
- 3 states (CT, IN, WV) with LOI



Radioactive Materials & Other Sources of Radiation



Radioactive Materials



- State authority when Agreement signed
- National Materials Program (NRC & OAS) oversight
- Regulations (Part A) must be compatible with NRC regulations. Incorporation by reference
- **Includes Regulation of Fusion Machines**

Other Sources of Ionizing Radiation



Nuclear Power/Spent Nuclear Fuel



- NRC has sole regulatory authority
- NRC regulations
- Not impacted by Agreement



Connecticut
Department of Energy &
Environmental Protection
RADIATION DIVISION

Regulation of Fusion

- Nuclear fusion is the process by which two atomic nuclei—the central cores of atoms, made up of protons and neutrons—combine to form a heavier nucleus, releasing energy.



• Fusion Machine (not Reactor)

- Machines such as tokamaks and stellarators, use powerful magnetic fields or lasers to heat and confine hydrogen isotopes until they fuse, releasing energy.
 - If the machine shuts down, the fusion reaction stops
- No special nuclear material (no Uranium or Plutonium)
 - While often referred to as "fusion reactors," fusion machines are *not* reactors in the sense normally associated with nuclear power because they do not rely on a self-sustaining chain reaction to produce energy.
- However, fusion machines will use and generate byproduct material.
 - Most designs will use substantial amounts of tritium (H-3)

• Authority for Regulation of Fusion

- On July 9, 2024, the enactment of the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2024, or the ADVANCE Act, amended the definition of byproduct material in Atomic Energy Act of 1954 (AEA) to include radioactive material produced by fusion machines.
 - This codified Commission decision to regulate fusion machines under material license framework
 - Public Act No. 25-170 incorporated compatible changes to statutory definitions in Connecticut General Statutes
- When Connecticut becomes an "Agreement States," the possession of byproduct material, including radioactive material produced by fusion machines, will be regulated by the State rather than the NRC.
- Authority to regulate the machine portion (ie the accelerator) is under existing state authority

Regulated Community Outreach

- **NRC Licensees**

- about 120
- communications during inspection accompaniments



Yale
New Haven
Health

- **Stakeholder Engagement**

- Connecticut Hospital Associations (CHA)
- Connecticut Association of Medical Physicist (CAMPs)



- **Tribal partners**

- Federal tribes (NRC)
- State tribes (DEEP)



Connecticut
Department of Energy &
Environmental Protection
RADIATION DIVISION

A Rigorous and Thorough Process

- Clear guidance
 - NRC SA-700 Handbook for Processing an Agreement
 - Benchmarks – VT (2019) and other state applications
- NRC Project Manager
 - Experienced with other state agreements
 - Routine project meetings
- Dedicated state lead, CHP
- Assigned AS staff
 - Diverse staff with experience in healthcare, academic, industry, and other Agreement State Programs
 - Completed approximately 2200 person-hours of NRC provided inspector training
 - Accompanied NRC inspectors in over 80 inspections (over 550 person-hours of inspections)
- Involvement with Organization of Agreement States (OAS) and National Materials Program (NMP)
- Leveraging experience from other states
- Periodic Audits (IMPEP) by NRC and other AS's
 - IMPEP – Integrated Materials Performance Evaluation Program



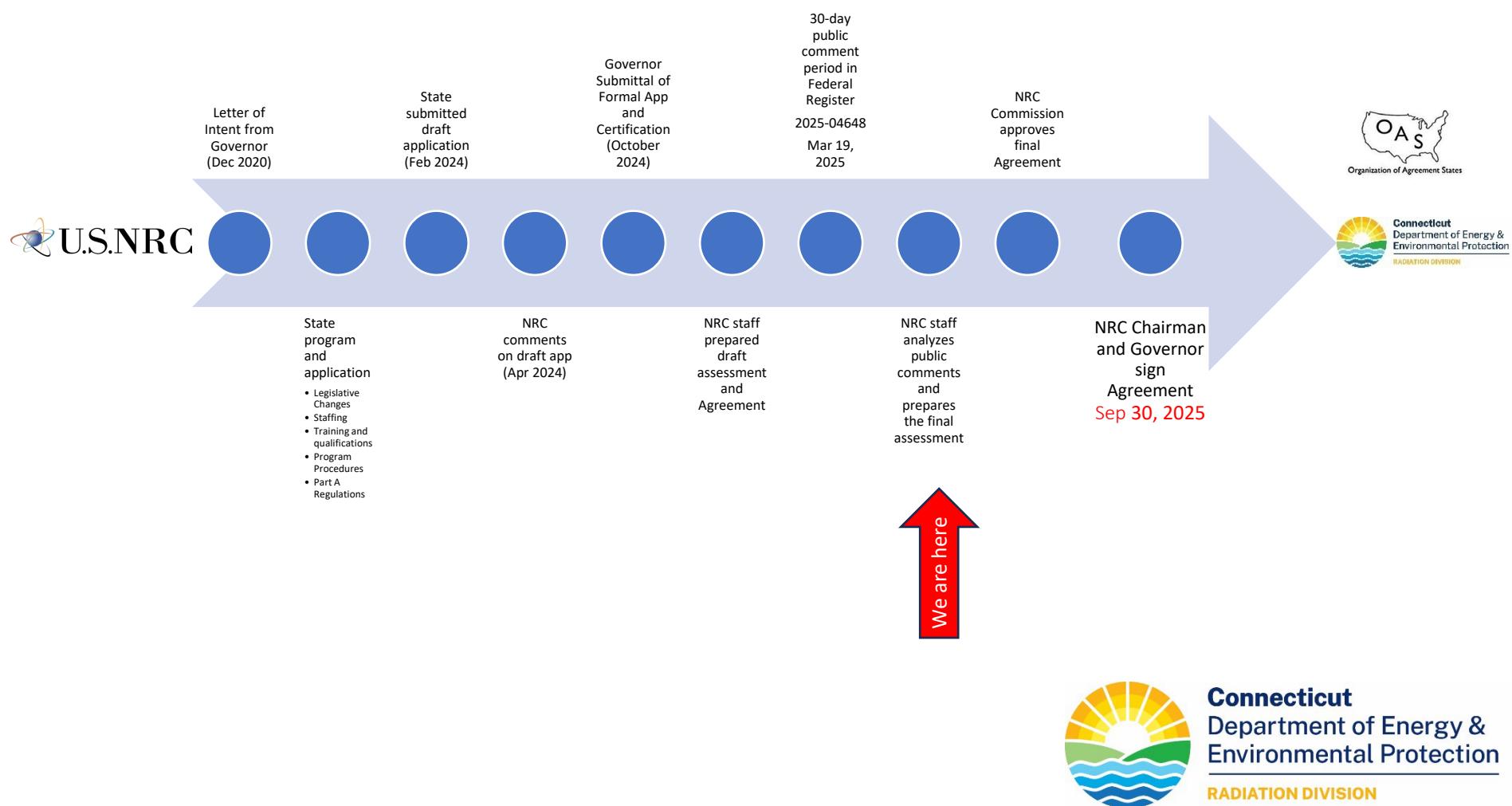
Program Elements Required for an Agreement

- Legal Authority - Legislation
- Regulatory Requirements - Regulations
- Licensing Program
- Inspection Program
- Enforcement Program
- Technical Staffing and Training
- Event and Allegation Response Program



Connecticut
Department of Energy &
Environmental Protection
RADIATION DIVISION

Connecticut Agreement Progress



Questions?

Brandon Gruber

Environmental Analyst III

brandon.gruber@ct.gov

860-424-3921

Jeff Semancik

Director, Radiation Division

jeffrey.semancik@ct.gov

860-424-4190

NRC: State and Tribal Programs - National Materials Program – Connecticut



Connecticut
Department of Energy &
Environmental Protection
RADIATION DIVISION

NUCLEAR ENERGY ADVISORY COUNCIL

**Closed Special Meeting
July 29, 2025 1:30 PM
Virtual Meeting with U.S. Nuclear Regulatory Commission**

MINUTES

Members Present

Rep Kevin Ryan, Chair
Alternate Chair Mr. Jeffrey Semancik representing DEEP Commissioner Dykes
Mr. Bill Sheehan
Mr. C. Salonia
Sen C. Osten
Mr. M. Quinn

Members Not Present

Mr. A. Jordan
Mr. James Sherrard
Mr. J. McGunnigle
Mr. R. Woolrich
Rep A. Nolan

1. Call to Order of Meeting

Council Chair Ryan called the meeting to order at 1:35 PM in virtual meeting.

2. Briefing on Security Inspection Results – U.S. Nuclear Regulatory Commission (NRC) staff provided a briefing to Council members on results of recent security inspections at Millstone Power Station. Under federal FOIA laws, all security related information is exempt from public disclosure. Due to discussion of security related information this briefing was closed to the public.

3. Adjournment

Meeting adjourned at 2:30 PM.

NUCLEAR ENERGY ADVISORY COUNCIL
September 18, 2025 at 6:30 PM
Millstone Simulator Training Building
Waterford, CT

MINUTES

Members Present

Rep Kevin Ryan, Chair

Alternate Chair Mr. Jeffrey Semancik representing DEEP Commissioner Dykes

Mr. Craig Salonia Mr. R. Woolrich

Dr. James Sherrard Mr. Michael Quinn

Mr. Bill Sheehan Mr. J. McGunnigle (meeting only)

Sen Cathy Osten (tour only)

Member not present:

Mr. A. Jordan

- 1. Tour of Millstone Station.** Council members participated in a tour of Millstone Station including Unit 3 emergency diesel generator, Unit 3 turbine building, and the Unit 2 Main Control Room. Dominion staff were available to answer questions for Council members. The tour was conducted from 4:30 PM to 6:00 PM.
- 2. Call to Order of Meeting**
Council Chair Rep. Ryan called the meeting to order at 6:30 PM.
- 3. Approval of Minutes of previous Council meetings.**
 - a. A motion was made to approve the minutes of the July 24, 2025 and July 29, 2025 Council meetings by Mr. Sheehan and seconded by Mr. Sherrard. The minutes were approved without objection.
- 4. Program - Presentation by Dominion Nuclear Energy Inc. Mr. Mark Goolsbey, Operations Director; Mr. Alex Trespalacios, Plant Manager; Ms. Susan Adams, State Policy Director for New England; Mr. Chris Chapman, Director Plant Support; Mr. Adam McGuire, Director of Engineering; Mr. Bill Bessette, Director of Maintenance; and Mr. James Petty, Station Vice President (presentation attached).**
 - a. Safety - Mr. Chapman highlighted industrial safety performance at Millstone. He noted Dominion follows a “safety always” approach that focuses on protecting public health and safety and climate resiliency by understanding the threats and ensuring the plant can safely generate electricity. He also noted that the station has recently completed a State of Connecticut Workers Compensation audit that concluded the station has a healthy culture and an effective safety committee. (slide 2)
 - b. Millstone Unit status - Mr. Chapman discussed the two-year power history curves for both Millstone Units 2 and 3 (slides 3 and 4):
 - i. Currently both Units 2 and 3 are at 100% power.

- ii. Millstone 2 had a forced shutdown in December 2024 following its completion of a scheduled refueling and maintenance outage to address a hot spot (high temperature) on the electrical disconnect switch on the output of the main generator. Maintenance on the switch was completed and the unit returned to full power.
- iii. Millstone Unit 3 completed a 15 day maintenance outage in September 2024 to replace a pressurizer safety relief valves that was exhibiting seat leakage.
- iv. Millstone Unit 3 completed a 32-day scheduled maintenance and refueling outage in April and May of 2025.
- v. In August of 2025, Millstone 3 was taken offline to replace the C reactor coolant pump (RCP) seal and to implement temporary design changes to capture any reactor coolant system (RCS) leakage from the seal.
- vi. In September 2025, Unit 3 reduced power to facilitate an online containment entry to enhance cooling the C RCP motor by removing motor cooler inspection covers to improve air flow.

- c. Mr. Petty discussed restructuring of the senior leadership team that was conducted across the Dominion nuclear fleet. The changes focused on forward looking and fleet first after benchmarking industry best performers. As part of the restructure, Dominion added a project manager director as a member of the senior leadership team to ensure success on large capital projects. It also consolidated work management and maintenance departments under a single director to improve performance. (slide 5)
- d. Nuclear Regulatory Commission (NRC) Findings – Mr. Chapman briefed the Council that there were 9 NRC issued findings since last meeting, 4 of which were licensee identified. This is down from 19 findings reported at last year's briefing. (slide 6)
 - i. Mr. Semancik asked what Dominion attributed the reduction in findings to. Mr. Chapman responded that Dominion established a more robust relationship with the regulator to identify and address issues and address concerns earlier. They also have regular communication with operators to understand issues that may be of concern to them.
 - ii. Mr. Sheehan asked how long it takes to complete corrective actions. Mr. Chapman responded that all findings are in the Dominion corrective action system and the team works to understand cause within 30 days. Mr. Trespalacios added that there are no open corrective actions associated with any NRC findings. Mr. Petty also stated that the NRC conducts a Problem Identification and Resolution (PI&R) inspection every 3 years and there were no issues identified in the last PI&R.
- e. Mr. Chapman reviewed recent license amendments request submitted by Dominion. All NRC correspondence related to license amendments is reviewed by the Council as noted in section 4 of the minutes. (slide 7)
 - i. Dominion received NRC approval to use a new design of nuclear fuel that will allow them to transition from their current 18-month fuel cycles to 24-month fuel cycles. In addition, this new fuel design is considered Accident Tolerant Fuel (ATF).
 - ii. NRC approved Dominion's request to extend inspection frequency for RCP flywheels.

1. Mr. Semancik asked in the boric acid in the RCS leakage form the C RCP seal had any effect on the assumptions of this analysis. Mr. Chapman responded that it did not.
- f. Mr. Chapman noted all NRC performance indicators for the station are green. (slide 8)
- g. Mr. Chapman noted the Dominion continues to perform required internal oversight audits and has not identified any significant issues in recent corrective action and fire protection audits. Mr. Goolsbey also briefed the Council on changes to Fleet Operations and Training program with more corporate oversight and the ability to levels of concern, (Slide 9)
 - i. Mr. Semancik asked if there was a separate report change for the Fleet Operations and Training program. Mr. Goolsbey responded "Yes" and that the stronger fleet assistance from the corporate functional area managers. Mr. Trespalacios added that there has been considerable improvement in the corporate response to urgent issues form the fleet as a result of this change. This also includes leveraging peer teams for steady-state improvement.
- h. Mr. Chapman discussed 5 reportable environmental events since the last Council presentation in September 2024. He acknowledged this was above the station goal of 0. (slide 10)
- i. Emergency Preparedness and Response update was provided by Mr. Chapman. Millstone made no emergency declarations since presentation to the Council in 2025. (slide 11) Mr. Goolsbey discussed the planned change to the offsite emergency plan that transitions away from warning sirens to the Integrated Public Alert & Warning System (IPAWS), FEMA's national system for local alerting that provides authenticated emergency and life-saving information to the public through mobile phones using Wireless Emergency Alerts, to radio and television via the Emergency Alert System, and on the National Oceanic and Atmospheric Administration's Weather Radio. The State Division of Emergency Management and Homeland Security (DEMHS) has approved this change. He noted that due to delays involving Fishers Island, the changeover is now scheduled for 1Q26. He further explained that instead of sirens, Millstone emergency alerts would be like amber alerts. Mr. Chapman noted that Dominion will only maintain sirens on Fishers Island, NY and will remove all others. (slide 12)
 - i. Mr. Sheehan noted that in response to recent flooding events in Texas, the communities with sirens had few issues, but those without sirens had more issues including the deaths at the campground. He suggested Dominion should reconsider this decision in light of this recent operational experience. He noted, as a Waterford resident, he has recommend to town officials that Waterford keep their sirens. Mr. Trespalacios noted that the issues in Kirk County, TX stemmed form a failure to implement IPAWS vice the decision to use IPAWS. Mr. Semancik noted that the decision to go to IPAWS was not a unilateral decision by Dominion but had the concurrence of the Connecticut Division of Emergency Management and Homeland Security and the Emergency Management directors in the Emergency Planning Zone communities. Mr. Petty noted that the Council still had some questions and asked his folks to follow up.

- j. Mr. Goolsbey discussed environmental releases (slide 13) and noted the Advanced Liquid Processing system has essentially reduced radioactive liquid discharges to zero.
- k. Mr. Chapman discussed major equipment improvements planned for both Units 2 and 3 over the next year. These design changes are intended to maintain safety and provide reliability for future operations. (slides 14 and 15)
 - i. Ms. Adams provided an update on nuclear policy issues. Connecticut recently passed Senate Bill 4 which, in part lifted the moratorium on construction of any new nuclear generating facilities provided the host municipality votes to opt in. It also has DEEP administer up to \$5M in state bond funds to support communities in early site permitting activities. She noted this was indicative of a national trend as 25 states passed pro-nuclear legislation such as lifting moratoriums and streamlining permitting. (slide 16) Ms. Adams noted the state currently has a 10 year power purchase agreement (PPA) with Millstone that expires in 2029. Connecticut has passed a bill to allow a new PPA provided at least two other states also support the PPA. Massachusetts, Maine and Rhode Island all passed legislation to allow them to enter into a PPA for electricity generated by nuclear power. Dominion would still like to extend the PPA. Dominion prefers to a regulated-like structure in order to support capital outlay and is willing to include 100% of its output in a PPA. (slide 17)
- l. Topics requested by the Council (slide 18)
 - i. Unit 3 RCP Seals.

Mr. Chapman provided background on RCPS seals at Unit 3, - Dominion was originally challenged by RCP service life of Westinghouse seals and had good experience with the Flowserve seals at Unti 2. Mr. Goolsbey noted the original Westinghouse RCP seals could have up to 50 gpm each of RCS leakage in a loss of offsite power scenario. Mr. Petty added, however, that Westinghouse has since come up with a low leakage seal. So, station management made a decision to move to Flowserve seals at Unit 3, but the larger RCPs at Unit 3 required significant design changes that have resulted in a number of unplanned outages. While they have fixed some of the earlier issues such as pitting of the seal faces, this has resulted in new issues causing high leakage. As a result they will be changing to a new seal vendor.

 1. Mr. Semancik asked if the failure modes were well understood to ensure that the safety function (limiting RCS leakage on a loss of offsite power) was not adversely impacted. Mr. Chapman answered that the design has a static abeyance seal that is not in paly during normal operating conditions. The failed seals have been carefully autopsied to understand failure mechanisms and effects. Mr. Trespalacios added that the station has strict Operational Decision Making guidelines in place to have operator take action to shutdown before any major adverse impacts to the seals.
 2. Mr. Semancik asked how Millstone was managing current RCP seal leakage into containment, especially with respect to understanding and mitigating any adverse effects from boric acid corrosion on any targets, especially the reactor vessel head. Mr. Chapman responded that they have a fleet team of

experts monitoring the sela leakage weekly. They have conducted containment entries to clear boric acid build up on the C RCP motor and remove some motor covers to improve cooling flow. They are also monitoring boron buildup in containment ventilation air coolers. Mr. Petty added that they have conducted drone flights in containment to look for targets. From a nuclear safety perspective, he stated there was nothing driving them to shutdown and replace the seals until at least January. However, they are ready to execute a replacement if necessary.

- ii. Mr. Goolsbey discussed the status of the decommissioned Unit 1. Currently all 2,284 spent nuclear fuel (SNF) bundles from Unit 1 remain in the wet storage pool. Dominion is moving forward with a plan to move the SNF to dry cask storage to eliminate the liability associated with maintaining the building and cooling systems.
 - 1. Mr. Sheehan asked if there was room on the Independent Spent Fuel Storage Installation (ISFSI) pad. Mr. Goolsbey responded that there is enough room on the pad to support station operations through 2045 with the Unit 1 fuel added, but that Dominion is evaluating whether it makes more sense to build a dedicated pad for Unit 1 fuel.
 - 2. Mr. Sheenan asked about what approvals were needed. Mr. Goolsbey responded that they need approval from the NRC, town, and siting council. He noted the schedule was to select a vendor in 2026. He estimated that it would take 5 to 7 years to build out the ISFSI and transfer all the Unit 1 SNF. Mr. Sheehan recommended that Dominion communicate and coordinate with local residents before and throughout the process.
- iii. Mr. Goolsbey discussed license duration for both units. He noted that both Unit 2 and Unit 3 are in the period of extended operations, that period after the original license expiration (40 years) and within the subsequent 20-year license extension approved by the NRC. He also stated that Dominion is currently working on license amendment requests for both units to extend their operating licenses by another 20 years (to 80 years). He said Dominion was the only utility that already has multiple stations licensed to 80 years, Millstone will be the 4th station extended. Dominion expects to submit the license amendments in the 1st quarter of 2028 and that the NRC will take about 12 months to review and approve.
- iv. Mr. Goolsbey discussed how Dominion will be the first station in the Dominion fleet to transition from 18-month to 2-year fuel cycles. Millstone units 2 and 3 will refuel every spring, alternating units. This will provide a repeatable and steady operational cadence for the station and eliminate 7 refueling shutdowns in 20-year supplemental license renewal period. Planned outages will be conducted in the spring to minimize environmental effects by reducing cooling water flow during winter flounder larvae season. They expect to start with Unit 3 refueling in spring 2028 followed by Unit 2 in spring 2029.
 - 1. Mr. Semancik asked in the 24-month fuel required any changes to SNF dry casks. Mr. Goolsbey responded that Dominion is already using new casks that can handle the higher burnup SNF.

2. Mr. Ryan asked if there was any possibility of restarting Unit 1. Mr. Goolsbey responded that Unit 1 was too far into the decommissioning to be restarted. Dominion is not pursuing Unit 1 restart.
- v. Mr. Sheehan asked if Dominion could provide any status update on the proposal to co-locate a Data Center at Millstone. Mr. Goolsbey responded Dominion is not actively pursuing any data center deal.

5. Public Comment

- a. No members of the public were in attendance.

6. Council Business

Next Council meeting will be at 7 PM Thursday, December 19, 2025 at Waterford Town Hall for discussion and drafting of the annual report.

7. NRC Correspondence Reviewed since past meeting.

The following list of NRC Correspondence was reviewed.

- a. Millstone Power Station, Units 2 and 3 – Integrated Inspection Report 05000336/2025002 and 05000423/2025002 dated August 12, 2025.
- b. NRC Docket No. PRM-50-123; NRC-2020-0155, Public Protective Actions During a General Emergency. Federal Register Vol. 90, No. 137, July 21, 2025.

8. Other material reviewed

NEAC reviewed the following information:

- a. Wagner et al, INL/RPT-25-85463, Reevaluation of Radiation Protection Standards for Workers and the Public Based on Current Scientific Evidence. Idaho National Laboratory, July 2025.

9. Adjournment

Motion was made by Mr. Sheehan and seconded by Mr. McGunnigle to adjourn; no objections; unanimous vote in favor; meeting adjourned at 7:40 PM.



Nuclear Energy Advisory Council Meeting
September 18, 2025

Millstone Power Station
Waterford, Connecticut

Safety

- Standards first, safety always
- Commitment to protect the health and safety of the public

Millstone Current Status

Millstone Unit 2

- 308 days online
- 99.95% capacity factor YTD
- 4134 days since last automatic reactor trip (2092 days manual trip)

Millstone Unit 3

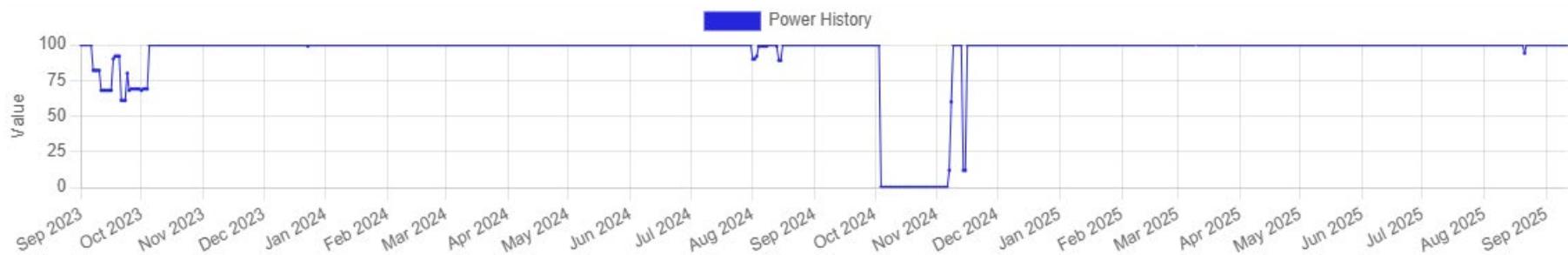
- 45 days online
- 82.31% capacity factor YTD
- 842 days since last automatic reactor trip

Station Capacity Factor

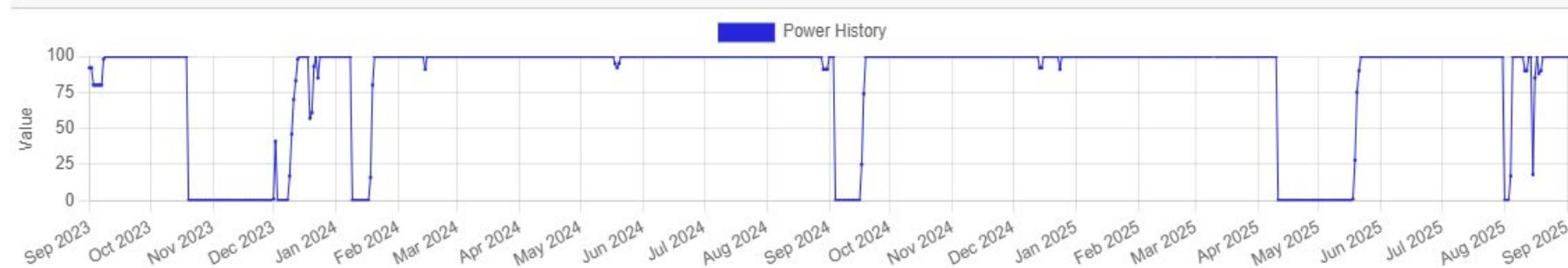
- 2023: 74.59%
- 2024: 91.81%
- 2025 YTD: 89.2%

Operations Power History

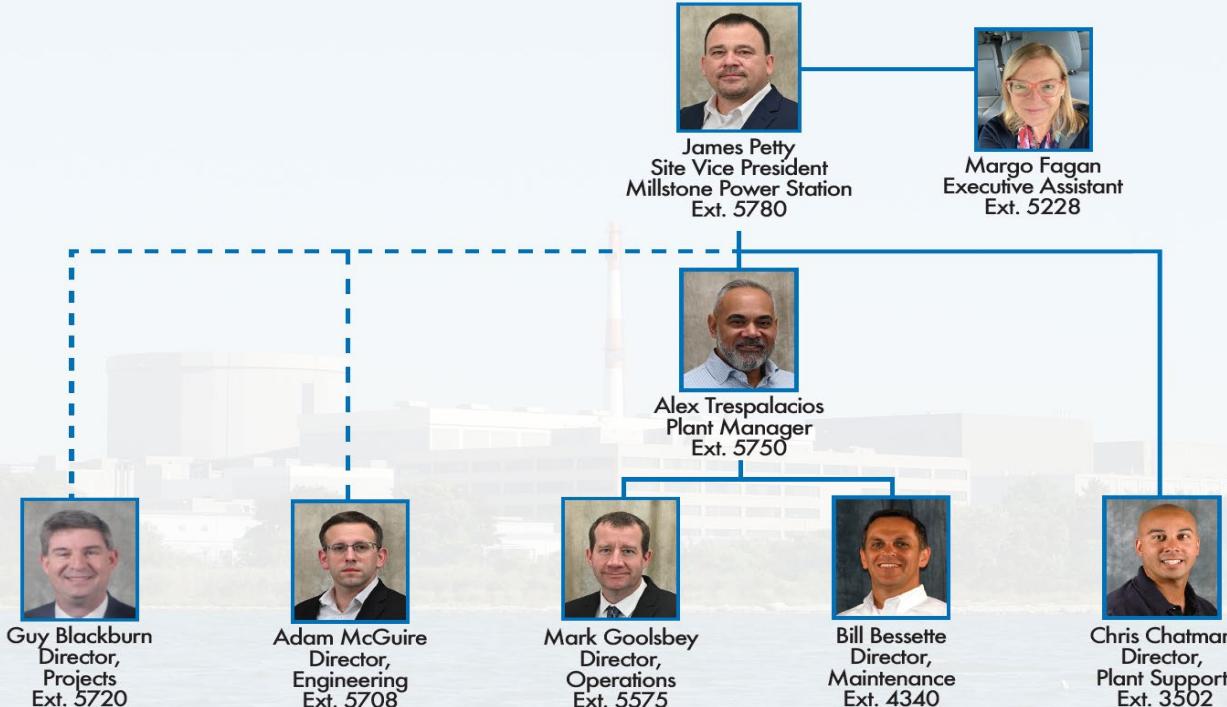
Millstone Unit 2



Millstone Unit 3



Millstone Senior Leadership Team



NRC Findings

Significant reduction in numbers of NCVs in 2025

- First half 2025 - 1 NCV
- Second half 2024 - 8 NCVs

Nine Green Non-cited violations/findings identified since Sept 2024

- All are very low risk significance
- 4 are Licensee identified.
- All are in our corrective action system

License Amendment Requests

- **License Amendment Requests Approved by the NRC**
 - Millstone Unit 3 – GAIA Fuel for Reload (November 2024)
 - Millstone Unit 3 – TSTF-427 RCP Flywheel Inspection Frequency Extension (December 2024)

Millstone NRC Performance Indicators

Performance Indicators							Performance Indicators						
Unplanned Scrams (G)	Safety System Functional Failures (G)	Reactor Coolant System Activity (G)	Drill/Exercise Performance (G)	Occupational Exposure Control Effectiveness (G)	RETS/OCDM Radiological Effluent (G)	Protected Area Equipment (G)	Unplanned Scrams (G)	Safety System Functional Failures (G)	Reactor Coolant System Activity (G)	Drill/Exercise Performance (G)	Occupational Exposure Control Effectiveness (G)	RETS/OCDM Radiological Effluent (G)	Protected Area Equipment (G)
Unplanned Power Changes(G)	Emergency AC Power Systems(G)	Reactor Coolant System Leakage(G)	ERO Drill Participation(G)				Unplanned Power Changes(G)	Emergency AC Power Systems(G)	Reactor Coolant System Leakage(G)	ERO Drill Participation(G)			
Unplanned Scrams with Complications(G)	High Pressure Injection Systems(G)		Emergency Response Facility and Equipment(G)				Unplanned Scrams with Complications(G)	High Pressure Injection Systems(G)		Emergency Response Facility and Equipment(G)			
Heat Removal Systems(G)							Heat Removal Systems(G)						
Residual Heat Removal Systems(G)							Residual Heat Removal Systems(G)						
Cooling Water Systems(G)							Cooling Water Systems(G)						

Unit 2 Second Quarter 2025 NRC Performance Indicators

Unit 3 Second Quarter 2025 NRC Performance Indicators

Millstone Nuclear Oversight Summary

- Performance
- Robust Fleet Operations & Training
 - Letter of Concern
 - Area of Concern
 - Elevation

Environmental Impacts

Date of Notification	Correspondence Number	Reason for Notification
Oct-24	D19339- Electronic 5-day	DSN 001-B11 Total Suspended Solid (TSS) permit exceedance while draining RBCCW sump
Feb-25	D19361 – Electronic 5-day	DSN 001-B Loss of continuous monitoring. Suspected faulty probe which was replaced
Feb-25	D19365 – Electronic 5-day	DSN 006-1 Loss of pH due to faulty probe outside of calibration specifications
Feb-25	D19367- Electronic 5-day	DSN 001-B –Loss of continuous monitoring for pH. The probe is operational but faulty communication cable to plant processing computer (PPC)
Jul-25	S19389 – Electronic 5-day	Observed oil sheen from diesel fuel release to Long Island Sound through stormwater outfall DSN 006-1

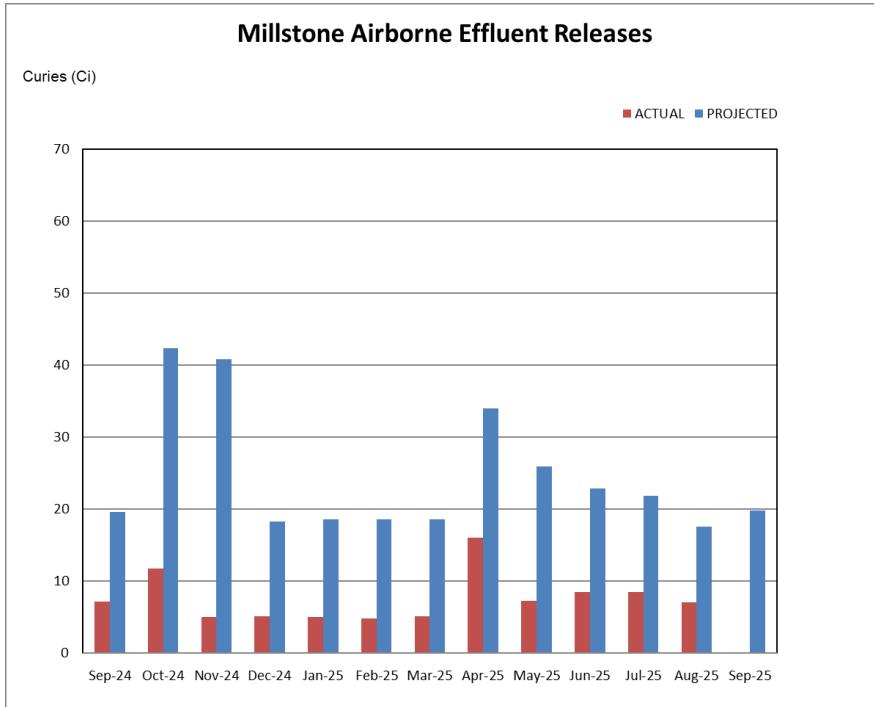
Emergency Plan Event Declarations

- No Emergency Plan Event Declarations in 2025

Offsite Emergency Plan Changes

- 1Q 2026 IPAWS implementation

Airborne Effluent Releases



- Releases continue to be below projections
- Data publicly available on our website

Millstone Gaseous Radioactive Doses - August 2025				
Dose category	Unit	Limit	Actual	% of limit
Noble gas gamma	mrad	0.833	0.0000030	less than 0.0004
Noble gas beta	mrad	1.67	0.0000075	less than 0.0004
Iodine, particulates, tritium	mrem	1.25	0.0069	less than 0.553
Total, whole body	mrem	2.08	0.0051	less than 0.244

Improvements & Increased Safety and Reliability

Station Improvements since September 2024

- Replacement of 2 U3 MSVB dampers (SLCRS)
- Unit 1 345KV Tie Line Removal (Final Line)
- U2 Containment Integrated Leak Rate Test
- U3 C RPCCW Heat Exchanger replacement
- U3 Intake equipment / material condition improvements
- U3 Main Generator Output breaker replacement
- U2 CST Trench repairs

Improvements & Increased Safety and Reliability

Upcoming Unit 2 Improvements

- C Service Water Strainer replacement
- Intake equipment / material condition improvements
- A RCP Motor overhaul
- C and D RCP seal replacements

Impact of Recent Legislation

CT Public Act No. 25-173 (Senate Bill 4) - AN ACT CONCERNING ENERGY AFFORDABILITY, ACCESS AND ACCOUNTABILITY

- Allows new nuclear to be built throughout CT
 - Prior to this bill, new nuclear could only be built at existing generation plants (Millstone)
- Requires DEEP to establish an advanced nuclear reactor site readiness fund of \$5M
 - This is a competitive funding program to provide grants or loans to support early site permitting, regional infrastructure assessments, community engagement and other expenses to advance site readiness.

Impact of Recent Legislation, continued

Power Purchase Agreement – Expires in 2029

2024:

CT Public Act 24-38 (Senate Bill 385) This bill permits the Commissioner of DEEP to coordinate with two other New England states to procure nuclear power.

2025:

Clean Energy Bills were passed MA, ME and RI providing the necessary authority to join CT in a multi-state procurement agreement for nuclear power

We are currently in conversations with these NE states and hope to reach an agreement in early 2026.

Other Topics

- Unit 3 Reactor Coolant Pump seals
- Unit 1 Decommissioning
- Life Extension
- 2 Year Fuel Cycles

Contact Information

Chris Chatman– Director of Plant Support

Email: chris.s.chatman@dominionenergy.com

Phone: 860-692-2077

Alex Trespalacios– Plant Manager

Email: alexis.m.trespalacios@dominionenergy.com

Phone: 860-447-1791, ext. 5750

Susan Adams – State Policy Director • CT State-Local Affairs

Email: susan.adams@dominionenergy.com

Phone: 860-937-3763

NUCLEAR ENERGY ADVISORY COUNCIL
December 18, 2025, 7:00 PM
Waterford CT Town Hall

MINUTES

Members Present

Alternate Chair Mr. Jeffrey Semancik representing DEEP Commissioner Dykes	
Mr. Craig Salonia	Mr. J. McGunnigle
Dr. James Sherrard	Mr. Bill Sheehan
Mr. R. Woolrich	Dr. Michael Quinn
Mr. Hugh McKenney	

Members Not Present

Mr. A. Jordan	Rep A. Nolan
Sen. C. Osten	

1. Call to Order of Meeting

NEAC Alternate Chair Semancik called the meeting to order at 7:00 PM.

2. Moment of Silence

Mr. Semancik called for a moment of silence in memoriam of Kevin Ryan, Council Chair from 2015 through 2025, who passed in November.

3. Approval of Minutes of the September 18, 2025 NEAC meeting.

A motion was made to approve the minutes by Mr. Salonia and seconded by Dr. Sherrard. Minutes were approved without any corrections or objections. Mr. McKenney abstained.

4. Public Comment

There were no members of the public present.

5. Council Business:

- a. New Council member, Hugh McKenney, introduced himself and provided his background.
- b. Election of new Chairperson. Mr. Semancik called for nominations and volunteers for Chairperson. Dr. Quinn volunteered to serve as chair. There were no other nominations or volunteers. Mr. Salonia nominated Dr. Quinn. Dr. Sherrard seconded the nomination. Dr. Quinn was elected by unanimous vote of the members present.

6. Discussion of NRC Correspondence Reviewed since past meeting.

The list of U. S. Nuclear Regulatory Commission (NRC) Correspondence was reviewed.

- a. Millstone Power Station, Units 2 and 3 – Integrated Inspection Report 05000336/2025003 and 05000423/2025003 dated December 15, 2025.
- b. Millstone Power Station, Units 2 and 3 – Design Basis Assurance Inspection (Programs) Inspection Report 05000336/2025011 and 05000423/2025011 dated December 17, 2025.

7. Calendar Year (CY) 2025 Annual Report Discussion

- a. The Council discussed their observations of trends in safety and performance of Millstone Station during 2025. The Council agreed to highlight these in the annual report.
 - i. Dominion continues to operate Millstone Units 2 and 3 safely.
 - ii. Dominion and the Three Yankees continue to safely store spent nuclear fuel.
 - iii. The NRC continues to provide effective regulatory oversight.
 - iv. There was some improvement noted in reducing the number of operational events (forced outages, extended outages, and unplanned power changes). These events continue to challenge station performance. In particular, the Council noted challenges from Unit 3 Reactor Coolant Pump (RCP) seals at Unit 3. Mr. Salonia and Dr. Quinn also noted that continued leakage from the RCP seals has resulted in related challenges such as boric acid buildup and potential impact on other systems, structures, and/or component equipment.
 - v. The number of required Licensee event reports went down indicating management focus on resolving issues at lower levels prior to challenging safety systems.
 - vi. There continue to be some repeat issues.
 - 1. Some improvements were made to past repeat issues. Several key equipment challenges including Unit 3 RCP seals continue to occur and challenge operations.
 - vii. There continues to be a high level of staff turnover at the station. In 2025, Dominion also reorganized the management structure at its fleet nuclear stations including Millstone. The Council will monitor these changes to determine the extent to which these management changes improve station performance.
 - 1. Dr. Sherrard noted that while Millstone continues to hire graduates of the Connecticut State Community College system's Nuclear Technology program for positions in operations, recent trends indicate Dominion is not hiring for other positions at the station such as maintenance and health physics.
 - viii. Unit 3 entered its period of extended operations in 2025. The Council will continue to monitor for issues related to aging infrastructure at the site and the inspection and maintenance of those structures.
 - ix. The special September 2025 meeting organized by US Nuclear Regulatory Commission (NRC) to brief the Council on security-related issues was effective in providing visibility into the nature of these issues since publicly available reports contain no details. Based on this meeting, the Council believes that the security issues do not constitute an adverse trend.
 - x. The move from 18-month to 24-month fuel cycle will be monitored by the Council for potential impact of extending maintenance on structures, systems and components in the containment (and, thus, not accessible during operations), and for postponing preventive/preventive/predictive maintenance on safety-related structures, systems, and components outside containment.
- b. Council agreed that Mr. Semancik will draft the 2025 report and circulate it to Council members for review and comment. Subsequent approval will be by email vote.

8. Approval of Regular Meeting Schedule for CY 2026

The Council agreed to the following dates and topics for Council's regular 2025 public meetings.

- a. March 19, 2026 – Millstone Annual Performance Meeting (NRC Presentation)
- b. June 18, 2026 – Council tour and discussion with Independent System Operator – New England (ISO NE)
 - i. Mr. Semancik to request tour of ISO NE facility in MA.
- c. September 17, 2026 – Millstone Operations Update (Dominion Presentation)
- d. December 14, 2026 – Annual Report Writing Meeting

9. Adjournment

Motion was made to adjourn by Mr. Sheehan and seconded by Mr. McGunnigle; no objections; unanimous vote in favor; meeting adjourned at 8:12 PM.