




CHAIR

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

October 30, 2023

MEMORANDUM TO: Daniel H. Dorman
Executive Director for Operations

FROM: Christopher T. Hanson 

SUBJECT: ADVANCING USE OF ARTIFICIAL INTELLIGENCE AT THE
U.S. NUCLEAR REGULATORY COMMISSION

The nuclear industry has expressed a growing interest in using Artificial Intelligence (AI) technologies to improve their operations. As such, the NRC developed the [Artificial Intelligence Strategic Plan](#) to ensure the staff is ready to review and evaluate potential AI applications in NRC regulated activities. As we look ahead and prepare for the future, it's also crucial to evaluate the potential advantages of using AI internally to enhance our work. By harnessing AI's capabilities, we can empower staff to streamline operations, optimize processes, and make well-informed decisions while continuing to prioritize safety, consistent with our mission. Specifically, the automation of repetitive and time-consuming tasks could allow staff to concentrate on safety-significant activities. While I acknowledge that AI investments will have some cost, they have the potential to yield substantial long-term savings.

I direct the staff to undertake a review of how AI can be used internally to improve the NRC's licensing and oversight processes, including rulemaking, environmental reviews, and research activities. The NRC should prioritize AI applications that propel us towards being a forward-looking organization ready for the future. Specifically, the staff should evaluate how AI can be used to automate simple or repetitive tasks, reduce human error, save resources, process large datasets, make better data driven decisions, and reduce regulatory review time. The staff should also consider how AI applications could help with knowledge management, strategic workforce planning, and hiring initiatives to build and prepare the workforce of the future.

The staff should develop a list of recommended AI applications that would benefit the agency the most, and include a summary of the proposed effort, potential benefits and drawbacks, projected cost and savings, and timeframe for implementation. Additionally, proper AI usage, policy implications, and data privacy need to be considered to ensure responsible and sustainable AI implementation. The staff should provide all this information to the Commission within 6 months. The staff should ensure that ideas from all offices are represented and keep the Commission informed of the approach and progress towards the final deliverable.

cc: Commissioner Wright
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