

U.S. Department of Energy (DOE) Response to the Nuclear Waste Technical Review Board (NWTRB) Report from the NWTRB 2023 International Workshop and Summer Meeting

NWTRB findings and recommendations, and DOE responses:

Board Comment #1:

The Board recommends that consent-based siting-related information that will be produced by DOE and the consent-based siting consortia be made available to the public in as timely a manner as practicable.

DOE Response #1:

There are currently 2150 public documents available in CURIE. DOE is actively working to ensure that fact sheets and document summaries in support of DOE documents will be made available in the future. The initial insights on the consortia work will also be included in the next revision to the consent-based siting process, which is expected to be issued before the period of performance ends. DOE also plans to issue a public document that captures the consortia lessons learned, approximately 6 months after the period of performance ends, around September 2025.

Board Comment #2:

The Board recommends that DOE use successful siting cases for radioactive waste facilities in other countries, results from research, and best practices to explore what training or other efforts would be most helpful in preparing various scientists and engineers associated with the U.S. consolidated interim storage program to be able to engage in sustained and effective dialog with members of the public.

DOE Response #2:

To prepare DOE staff (e.g., scientists, engineers) working on the U.S. consolidated interim storage program better engage in sustained and effective dialog with members of the public, DOE has provided specific communication skills training. For example, a training class titled “Preparing and Delivering Powerful Public Messaging” was delivered to eight (8) non-supervisory staff members in February 2024. The above-mentioned staff included both technical staff and social scientists. In addition, a training session was also provided to two (2) supervisory staff members. It is important to note that both non-supervisory and supervisory staff also a series of other trainings and development opportunities available to them beyond this example.

Board Comment #3:

As DOE continues to assemble needed expertise and information related to consent based siting, the Board recommends that DOE take steps to broaden its approach, such as: a) ensuring a high level of expertise and experience in such areas as risk communication, and b) systematically including technical literature and research from the disciplines of public health, medicine, emergency management, and health physics. Likewise, the Board recommends that when DOE gives public presentations on its consent-based siting activities, insights from these fields and publications describing key sources of information informing project efforts be included in slides.

DOE Response #3:

To broaden DOE's approach and ensure a high level of expertise and experience in areas such as risk communication, DOE has added three social scientists and an engineer to help cover the area of risk communications. DOE plans to fold in relevant work/experiences from other disciplines as additional full time equivalent (FTE) staff become available to the organization. DOE agrees including insights from other disciplines in public presentations on its consent-based siting activities would be beneficial and strengthen the process.

Board Comment #4:

As DOE's consent-based siting effort continues to develop, the Board recommends that DOE identify state-of-the-art evaluation approaches, methods, indicators, and metrics that can be utilized to gauge the extent to which key aims are being achieved.

DOE Response #4:

DOE's Office of Consent-Based Siting is leveraging data collected using diverse methodologies to inform program-related activities, including but limited to communications and outreach efforts. Data from social science research are providing a holistic analysis of both the quantity and quality of DOE's public engagement. For example, DOE has plans to quantitatively analyze written text data (e.g., newspapers) to provide a regional snapshot of public sentiment for different states. DOE plans to also use public opinions gathered from an annual national survey on nuclear energy to gauge changing sentiments on a state-level basis. Moreover, social science work conducted by the national laboratories provide a qualitative examination of a variety of communities, such as current host communities at or near shutdown reactor sites. Other bodies of work include in-depth analyses of domestic and international case studies to yield lessons learned to inform revisions and adjustments to the consent-based siting process. Together, these diverse bodies of work allow DOE to analyze how program-related activities may be shaping shifting attitudes related to spent nuclear fuel over time.

DOE is acutely aware of the role that communication has and will continue to have on its efforts to engage with diverse audiences. To that end, the Office of Consent-Based Siting supports teams of interdisciplinary subject matter experts in the timely creation of communication materials that meet the needs of diverse audiences. For example, the first installation of the Integrated Waste Management (IWM) StoryMaps includes content presented in a digestible manner to audiences with varying interest in nuclear energy

and/or a wide range of expertise in spent nuclear fuel management. DOE also recognizes the importance of removing barriers to information sharing, such that initial formal assessments of web content accessibility scored the StoryMaps to be at 85%, with continual improvements. To date, this first StoryMap has received thousands of website visits. Finally, DOE will continue to leverage different evaluation approaches, methodologies, and metrics to inform its consent-based siting process to manage the nation's spent nuclear fuel.

Board Comment #5:

Consent-based siting issues have important implications not only for the present but also for the future (siting could take a decade or more and the transportation of SNF and storage at a sited facility could last decades). Thus, it will be important to understand key intergenerational issues and include the perspectives of younger people in the process. The Board finds that as DOE develops its own consent-based siting process, it would be valuable to further explore the idea of youth advisory boards, intergenerational councils, and other similar mechanisms more fully as ways to include young persons in the process and gain a better understanding of intergenerational aspects of siting decisions.

DOE Response #5:

As part of DOE's commitment to integrating environmental justice and equity, the consent-based siting program has taken significant steps to recognize, understand, and address key intergenerational justice and equity considerations of siting a federal consolidated interim storage facility. This includes examining potential mechanisms to recognize the perspectives of younger generations and identifying ways to address and mitigate intergenerational justice issues. DOE has multiple activities to support these efforts on intergenerational justice.

The national laboratories developed an internal report (September 2023) to overview the concept of intergenerational equity, describe perspectives on intergenerational equity and nuclear waste, identify best practices for understanding intergenerational justice and equity, and offer draft recommendations for integrating intergenerational equity into the consent-based siting process. In addition, the national laboratories also provided a report providing draft guidance to DOE for addressing intergenerational justice by providing draft recommendations on exploring an intergenerational justice council, including the practicalities of including youth in the council (e.g., structure of the council, recruitment, etc.). To encourage youth engagement and obtain youth perspectives in the consent-based siting process, DOE is funding several youth-focused workforce development initiatives including a high school literacy initiative and an internship program. Finally, the consent-based siting consortia have developed initiatives that address intergenerational justice in different ways, including future-focused engagements (e.g., Future Narratives Hackathon), engagements with Tribal entities (e.g., future looking values presentations), future focused non-governmental organizations (e.g., Mothers for Nuclear), and youth-focused engagements (e.g., high school mentoring, movie screenings).