



Public participation in nuclear waste storage and disposal: a comparative analysis of German and US approaches

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Abstract. The national nuclear waste management programs of Germany and the United States of America currently both find themselves at critical junctures. The US government is reviving its efforts for consent-based siting of a consolidated interim nuclear waste storage facility (Energy.gov), in the momentary absence of, but with future hope for, a viable permanent disposal solution for the nation's nuclear waste. Germany is in the process of implementing legal directives to find a final disposal site for its nuclear waste that meets high safety standards (BASE, 2022), while further developing its strategy for public participation in the process (Weißpflug et al., 2022). The two national contexts exhibit significant differences in political systems, historical trajectories, institutional roles, and societal structure, as well as attitudes towards nuclear energy and radioactive waste disposal strategies (Richter et al., 2022; Saraç-Lesavre, 2021; Joppke, 1993; Blattmann et al., 2023). However, respective approaches to public participation in managing and disposing of nuclear waste exhibit some commonalities in motivations, strategies, and goals. What can policy audiences in both countries learn from the respective national nuclear waste management programs, creating the potential for participatory processes to be more adaptive, responsive, and flexible to a diversity of values and social actors? How do the findings from the comparative analysis of US and German cases translate into policy-relevant lessons for other national waste management programs engaging with the design of participatory processes and nuclear waste governance frameworks?

We offer a systematic comparative analysis of the foundations and rationale of the US and German programs for nuclear waste disposal. We aim to illuminate conceptual and empirical contrasts and comparisons between the two nations' engagement of the public in the storage and disposal of spent nuclear fuel, leading to nationally appropriate policy-relevant insights. Categories for analysis include national disposal goals, historical trajectories, institutional setup, and definition of partners in participation processes. Through comparison and contrast of these categories across the two nations, we allow for deeper insight into the conditions, frameworks, and assumptions in which policy makers operate and can draw from Hopkin (2010).

This discussion will identify and compare relevant knowledge, narratives, and legal frameworks in each nation's approach to incorporating public participation in the process of searching for a site to store or dispose of nuclear waste. We encourage reflection and learning through comparing and contrasting core principles of these two cases, with the aim of maximizing avenues of mutual learning towards responsible, safe, and democratic nuclear waste management.

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