

PURPOSE

On April 26, 2016, the Department of Energy's consent-based siting initiative hosted a public meeting in Sacramento, California at the Holiday Inn Capitol Plaza. The purpose of this meeting was to hear from the public and stakeholders on important elements in the design of a consent-based siting process. A consent-based siting process will support the development of facilities needed to manage spent nuclear fuel and high-level radioactive waste, including consolidated interim storage facilities and permanent geologic repositories.

During the public meeting, participants engaged in facilitated small group discussions on a variety of topics related to consent-based siting and integrated waste management. These small group discussions provided the opportunity for frank and open conversations on key topics that will inform the design of a consent-based process.

Leadership Strategies (LSI), an Atlanta-based facilitation company is a subcontractor of Allegheny Science and Technology in support of the Department of Energy (DOE) consent-based siting public meetings and provided professional facilitation of the small group discussions. The small group discussions are part of a broader effort by DOE to listen and gather input, and the summaries below are not DOE positions on any given topic, but a summary of what was discussed by the meeting participants.

SMALL GROUP DISCUSSION PROCESS

Leadership Strategies facilitators are impartial and objective third-party facilitators. Their role is to effectively facilitate a one-hour discussion with public meeting participants by:

- Establishing an open and candid conversational atmosphere to engage participants
- Asking the primary question to initiate the conversation: "What is most important for DOE to consider in designing a consent-based siting process?"
- Asking secondary questions to further engage, clarify and probe for the identification of consent-based siting process considerations important to the public:
 - How can the Department of Energy ensure that the process for selecting a site is fair?
 - What models and experience should the Department of Energy use in designing the process?
 - Who should be involved in the process for selecting a site, and what is their role?
 - What information and resources do you think would facilitate your participation?
 - What else should be considered?
- Responding effectively to ensure participants are heard and feel respected in the discussion
- Recording participants' summary responses, concerns and questions or comments pertaining to the primary and secondary questions on both chart paper and detailed notes
- Validating and prioritizing participants' input in preparation for small group discussion report out session
- Leading small group discussion report out session
- Writing session summary notes

SMALL GROUP DISCUSSION PARTICIPANTS

In Sacramento, public participants were randomly assigned to small groups in order to purposefully create diverse groups with representatives from state and local governments, advocacy and community groups, and the nuclear industry. There were no less than five public participants in each small group discussion. Not all session attendees chose to participate in small group discussions. Several participants joined the discussion in progress or left the group before the discussion ended.

In addition to public participants, select DOE staff listened to the small group discussions. The objective was to understand and appreciate public responses, concerns and questions or comments related to the consent-based siting process. Note takers were assigned to each small group and took hand written, detailed notes to supplement what LSI facilitators summarized on chart paper.

Responses, questions, and comments or concerns were not attributed to individual participants.

CONSIDERATIONS AND THEMES

Participants identified “considerations” in response to the primary and secondary questions. Responses were recorded and grouped with similar contributions in “themes.” Themes were identified by participants.

Participants’ responses were summarized during the small group discussions and, where possible, responses were recorded as stated. Facilitators also asked all participants to validate that the summary notes reflected the discussion and were inclusive of grouped themes at the end of the small group discussion.

Facilitators and small group note takers reviewed both summary comments recorded on chart paper and hand-written detailed notes to confirm that the notes were clear and complete. A few contributions listed below have been revised for clarity and readability.

At the end of the small group discussion, each small group reported out and identified the “most important” considerations that were identified in the discussion that the small group wanted to share with the larger group. The report out was led by an LSI facilitator to ensure adherence to scheduled time, but the most important considerations were identified by public participants.

Considerations and grouped themes identified by the meeting participants are listed below.

HOW CAN THE DEPARTMENT ENSURE THAT THE PROCESS FOR SELECTING A SITE IS FAIR?

- Levels of governance with multi-staged process of gaining consent. Levels of governance need to include each of several concentric circles of those whose input, or as appropriate, authority for a vote or veto, must be considered. These may include jurisdictional stakeholders (community, local, state, utility regions), representative stakeholders (tribal entities, zoning, waterways, etc.), private stakeholders (companies submitting their expertise) and technical authorities, etc. This should include the creation of a special district for the site, such as what is done for a utility district. Among these governance levels, whereas each level can have input through a variety of public and online forums, the community alone should have a formal hearing.
- The consent-based siting process should include three phases to equal informed consent. The first two phases will be non-binding, while the third phase will be binding.
 - The phases should be: 1) siting, 2) licensing, and 3) construction.
 - These phases should include the following actions: environmental impact statements, safety evaluations, and hearings on contentions.

- All of these actions will involve the applicant, the interveners, and independent, third party experts.
- Federal funds will need to be made available during the siting and licensing phases in order to provide communities with the resources they need to fully investigate the possibility of hosting nuclear waste.
- After the siting and licensing phases a community may choose not to continue with the process based upon things learned during these phases as well as from information obtained from independent, third party experts who will delineate the benefits and risks of hosting nuclear waste.
- In order to move forward to the final phase of construction, a binding contract will be established between the local community and the federal government that is ratified by the state legislature.
- Each stage in the process should have clearly identified milestones when consent is established prior to proceeding into the subsequent stage. As design proceeds, staging allows for inclusion of emerging information, concerns, etc. to be integrated into more detailed design in the next stage.
- A milestone-based process should include:
 - Stages of consent
 - Screening and prioritization of applicants
 - Defined criteria for passing through gates
 - Increased specificity as the process continues
 - Identified off ramps
 - An identified point at which the applicant/community cannot withdrawal
 - A general time frame associated with milestones
- The structure of the earned consent agreement must be explicitly defined, prior to earning or finalizing the consent. This may include:
 - The stakeholders, parties and/or signatories involved, their roles, authority, etc.
 - The structure of the agreement (e.g., a formal Memorandum of Understanding (MOU), Memorandum of Agreement (MOA), binding legal document, a contract, binding or non-binding legislation, insurance, etc.)
 - Terms of the agreement including the ability to renew, renegotiate or alter the agreement at pre-defined points (e.g., time-based or milestone-based)
 - The terms of stewardship
- The consent-based siting process, criteria being considered, and agreement document must address the long-term operational stewardship of the site, in perpetuity. This may include the identification of performance standards, and may include what, as well as how, they will be monitored. Stewardship also includes the operation or monitoring of the site being maintained as the other factors change with time, such as when jurisdictions are altered, political administrations change, the private company monitoring the site changes, and other factors from the original agreement.
- Establish criteria for consent at each layer, and whether each stakeholder has:
 - Input
 - Vote (for consent)
 - Veto (to withhold consent)
 - Other type of technical or jurisdictional authority
 - Each of these layers should be weighted, with each having an input, whereas the local community having the greatest weight.
- Define how dissenting views will be reported, addressed and or managed.
- Criteria to be included in any consent-based siting process:
 - Different process depending on it being interim storage or permanent repository.

- Stages of the process that are immune or independent from DOE involvement. This allows a community or private company to proceed in advance, and when they have satisfied their own interim stages, then open the conversation to regional, state and other governance entities, including DOE, NRC and/or an independent agency.
- Create a new, special district (like a utility district) that would be specifically applicable for the nuclear waste storage site under consideration. This would be designed to cover the applicable community and the appropriate levels of governance. The size of the district should be a minimum 50 miles lateral radius, plus a larger area to encompass weather patterns (downwind), topography (downstream), groundwater (aquifer extent), etc. This district would be analogous to how pesticides applied to one targeted area, are carried downwind and unintentionally affect other areas. This area (50 miles plus) should be used as the basis for defining the community that has a right to a formal hearing, and has right for the final vote for consent.
- The process naturally reflects the demographic of the time. Process should have means for re-opening the discussion, for example, when demographic changes. It is reasonable to mandate reconsideration of the process, especially when something changes. Allow for reexamining just that part of process that is affected.
- Do not trust this consent-based siting process.
- Need to establish a timeline for interim site selection so all contributors can disseminate information.
- Go to impacted (consenting) populations:
 - Look at the impacted populations and be proactive in interacting with them.
 - Reach as many people as possible.
 - Publicize to all geographical/relevant populations.
 - This must include those populations that are impacted beyond a local or state boundaries. For example: water tables/underground water ignores political boundaries.
 - This needs to be an inclusive process.
 - Accept that portions of population will disagree and be disappointed with the outcome. Need to define an acceptable level of disagreement for consent. Each community, Tribe, and state might define its own acceptable level of disagreement and still have “consent.”
 - Provide an advocate for each site in consideration to avoid whitewashing. Corporate interests representing the interim storage facilities may not be perceived as honest brokers.
 - Educate population on the pros and cons of nuclear waste management.
 - Continue to get back to people along the process.
 - Engage and educate the younger generations to help ensure ongoing generational equity.
 - Determine and communicate in advance how much training local responders will get if the site is selected.
 - Provide a list of economic benefits.
- Stewardship: Knowing that the long-term monitoring and management site will be effective, and will follow clearly-stated performance standards.
- This is all about transparency.
- Siting an interim storage facility (ISF) cannot be a deterrent to siting the same waste’s long term repository. This is an issue of linkage. Need to push siting of both the ISF and long term repository at the same time for the same nuclear waste. Possibly require long term storage to be determined before interim agreement finalized.

WHAT MODELS AND EXPERIENCE SHOULD THE DEPARTMENT USE IN DESIGNING THE PROCESS?

- Consider the processes now in use for siting Nuclear Power Generating Stations & private companies' nuclear waste siting. The processes include technical review, consent issues, hearings, etc. Consider these processes as a template for consent-based siting.
- NRC is already engaged with the Eddy Lea group and WCS in considering unsolicited proposals for private company management of nuclear waste sites in New Mexico and Texas.
- The physician informed consent model should be used as a starting point to identify the necessary aspects of a consent-based process. However, instead of a single individual, the patient in consent-based siting is a “collective” of interests within a zone of influence. The zone of influence was cited as a one-half mile zone around the facility.
 - What information does the patient need to give consent?
 - What are the benefits and potential drawbacks of the medical “treatment”?
 - As an analogy to the issue of whether a new entity should be in charge of implementing the consent process, it was noted that sometimes you want to switch physicians because you trust another physician more.
 - However, participants also noted that there are important differences between physician informed consent and the consent-based siting process.
 - For example, in siting a waste disposal facility, security information or proprietary information may need to be withheld from public disclosure.
 - Although participants realized the need to keep some information from disclosure, such as security information, it would aid transparency to at least tell the public in advance that such information would be withheld and why.
- Local government, regional government and state government have advantages as they have done it before. Look at those examples.
- Non-profit Quincy Library Group is a really good example. It was a community group that worked to develop national policy. The group was made up of loggers, environmentalists and forestry and tribal people. The group presented a well-done bill to Congress to manage forestry sustainably. Unfortunately, it was squashed by a powerful senator in California.
- WIPP.
- Fossil Fuel Industry. There are big concerns about this model. This model is about misinformation, not information. Not truthful about results of emissions.
- Experience: Western states Low Level Waste Compact. Couldn't come up with viable process. Included North Dakota, South Dakota, Arizona and California.
- Look at siting of hydro-electric projects as a model.
- Inter-government relationships.
- Cost sharing arrangements.
- Look at the Canadian process as a viable model to emulate.
- The Nuclear Guardianship Program is an example the DOE could use in designed the consent-based siting process. It holds frequent public forums in local communities to speak both for and against nuclear energy and is important to establish an informed citizenry.
- Oak Ridge National Labs has established a Local Control Board that is used to monitor the current state of a nuclear waste host community.

WHO SHOULD BE INVOLVED IN THE PROCESS FOR SELECTING A SITE, AND WHAT IS THEIR ROLE?

- Consent needs to be considered in governance layers, including:

- General public must be heard
- Layers of community, county, municipal utility authorities, tribal entities, state, etc.
- Create a new, special district, like a utility district, specifically for the nuclear waste storage site.
- Establish criteria for consent at each layer, and whether each stakeholder has:
 - Input
 - Vote (for consent)
 - Veto (to withhold consent)
 - Other type of technical or jurisdictional authority
- Each of these layers should be weighted, with each having an input, with the local community having the greatest weight.
- Include all affected unit of local government (AULG) state, country, Tribes as part of this consent based process.
- The process must also include those populations that are impacted beyond a local or state boundaries. For example: water tables/underground water ignores political boundaries.
- Future generations will vote with their feet.
- Future generations can choose to live near or move away from a site. This will deliver inter-generational equity.
- This would not be an option for to tribal members.
- The DOE public meeting effort is a good first step in establishing a new radioactive waste management process. However, more communities should be involved in the process. The information from these meetings, from communities, NGOs, and advocacy groups, should be transmitted to Congress for use in designing a new waste management process. For communities who are have chosen the option to “consent,” or are considering it, a community engagement panel should be established to advise them on the process. The “red team” approach cited by a panelist would also be useful to these communities.
- Experts outside DOE with backgrounds who know and speak about radiation.
- Physicians for Social Responsibility.
- Arnie Gunderson, Fair Winds.
- Dr. Gene Nelson, Californians for Green Nuclear Power and has Ph.D. in nuclear radiation and impacts on health.
- Dr. Helen Caldicott, long-term dedicated anti-nuclear activist.
- Beyond Nuclear.
- Tribes, counties, and states.
- Tribes have a legal claim to the land as well as a cultural claim to the land.
- Host counties along with surrounding counties.
- States will need to ratify any agreement that a local community makes with the federal government to host nuclear waste.
- Ensure wide spectrum of community is involved by research of DOE. Include all segments of the community, not just pro- and anti-nuclear.
- Who is involved and their roles are crucial. Tend to get silo-ed. Actively engage people who disagree to determine whether or not we are asking the right questions. Invite people who are not like DOE or aligned with DOE.
- When defining the people in the community that need to consent to the plan for getting rid of waste, you need to include anyone impacted by nuclear waste including the broader California community. Nuclear waste affects everyone along the transportation route.

WHAT INFORMATION AND RESOURCES DO YOU THINK WOULD FACILITATE YOUR PARTICIPATION?

- We have many communities that have waste and other communities that may receive that waste. There are many questions. How to get this people together? Need representatives from all affected parties. Could use webinars and related technology to bring these people together.
- Participants discussed “operational” definition of consent; where the types and location of risks should be identified; as well as vulnerable populations such as day care centers, nursing homes, as well as and psychological aspects, such as fear and perception of risk. The communication of risk to the community is the key factor in informed consent. In addition, more information to the “patient” is necessary, on the roles of federal agencies such as the NRC, on how many storage sites are actually needed.
- Information lets people know the truth of what is going on.
- Energy (generation) should be key topic and related to number one topic of the huge, current and future impacts of global warming.
- People need to know about “shine.” It is the radiation leaking out during transportation. It is emitting all the time.
- Regarding transport, there are measured values before cask is shipped to ensure compliance with DOT regulations. The regulations are low amounts of radiation; it’s not zero. Resource: DOT - Department of Transportation Standards in the large Code of Federal Regulations (CFR). Note: There are people who believe that there is a safe amount of radiation and those who do not.
- Pull up data on volume of waste: all nuclear waste in US is a football field piled up.
- Scientifically, per reviewed research is highly important.
- Find data on radiation injuries that have actually happened. However, need to be careful with this data. It can be misleading regarding safety as it cannot always be proven that actually caused a person’s disease.
- Recommendations for additional questions/issues to be addressed:
 - Is it safe to move?
 - What protocols are put in place for long term storage?
 - Teach the people the hazards and safety involved before discussing where to put it. Ensure that people have real knowledge. Bring evidence to the process.
- Establishing a local control board to educate and oversee the consent-based siting process would provide citizens the opportunity to be a part of the process.
- Have frequent public forums would encourage true engagement in the process.

WHAT ELSE SHOULD BE CONSIDERED?

- Technical review, and the inclusion of evolving technology or other solutions to address emerging issues in the design.
- The site and its potential impact area & dead zones need to be considered in depth. Because of the potential risk of release (explosion, leakage, fire, damage, etc.) a minimum of 50 miles and to an unspecified underground depth and no fly zone above, should be defined for the site. This zone should be expanded further beyond 50 miles based on weather patterns (downwind), topography (downstream), groundwater (aquifer extent), etc. This is analogous to how pesticides applied to one targeted area, and yet be carried downwind and unintentionally affect other farms, livestock, schools, etc. This larger area (50 miles plus) should be used as the basis for defining the community that has a right to a formal hearing, and has right for the final vote for consent.
- A prioritization process based on safety considerations should be used as the criteria for selecting those existing spent fuel storage sites from which spent fuel should be moved to any interim

storage facility; otherwise leave the waste in place, and upgrade the safety of the existing site (HOSS), until a repository for disposal is available. The safety considerations would include such things as seismic hazards, the SONGS and Diablo Canyon sites in California being an example of where waste should be re-located. Other factors in re-locating waste were the availability of safer transportation options, for example, if infrastructure such as an accessible rail line was not available, don't move the waste. It's safer to keep the waste on site in most cases because of the transportation hazards. Just because fuel is "stranded", e.g., at a site where the reactor is no longer operating, doesn't give it priority for movement to an interim storage site. The desire of existing communities to have a "clean" site for economic development did not receive a warm welcome from the group, noting that those sites have already received lots of economic benefits. However, others noted the ethical responsibilities to future generations of removing the waste at existing sites.

- Should give a physical, local presence at potential host site.
- Must predetermine how much to invest before and after suitability is determined.
- Financial resources needed for research from independent sources to gain trust and confidence in the information.
- Have a general yet realistic timeframe associated with milestones. Counter argument: be careful with perception of "ramming this down" the community's throat.
- Understand this is a long process, but establish a reasonable timeline and expectations for achieving the milestones. Example: Finland took 27 years.
- A community needs to take an off ramp if they are taking too long. There are consequences for the taxpayers if the process timeline is not managed.
- This milestone and timeline based process is needed for budget planning. Will need to consider politics and costs when creating this milestone process timeline.
- Simultaneous screening and prioritizing of possible sites. Assessing multiple prospects avoids "all eggs in one basket" (and results in) a diverse set of prospective sites.
- Release results to impacted populations.
- Begin investing and engaging in community based orientation.
- Simultaneous siting of interim and long term repository for the same nuclear waste. Possibly require long term storage to be determined before interim agreement finalized.
- The "do nothing" option is the worst for generational equity.