

# INCORPORATING SOCIAL SCIENCE INTO CONSENT-BASED SITING



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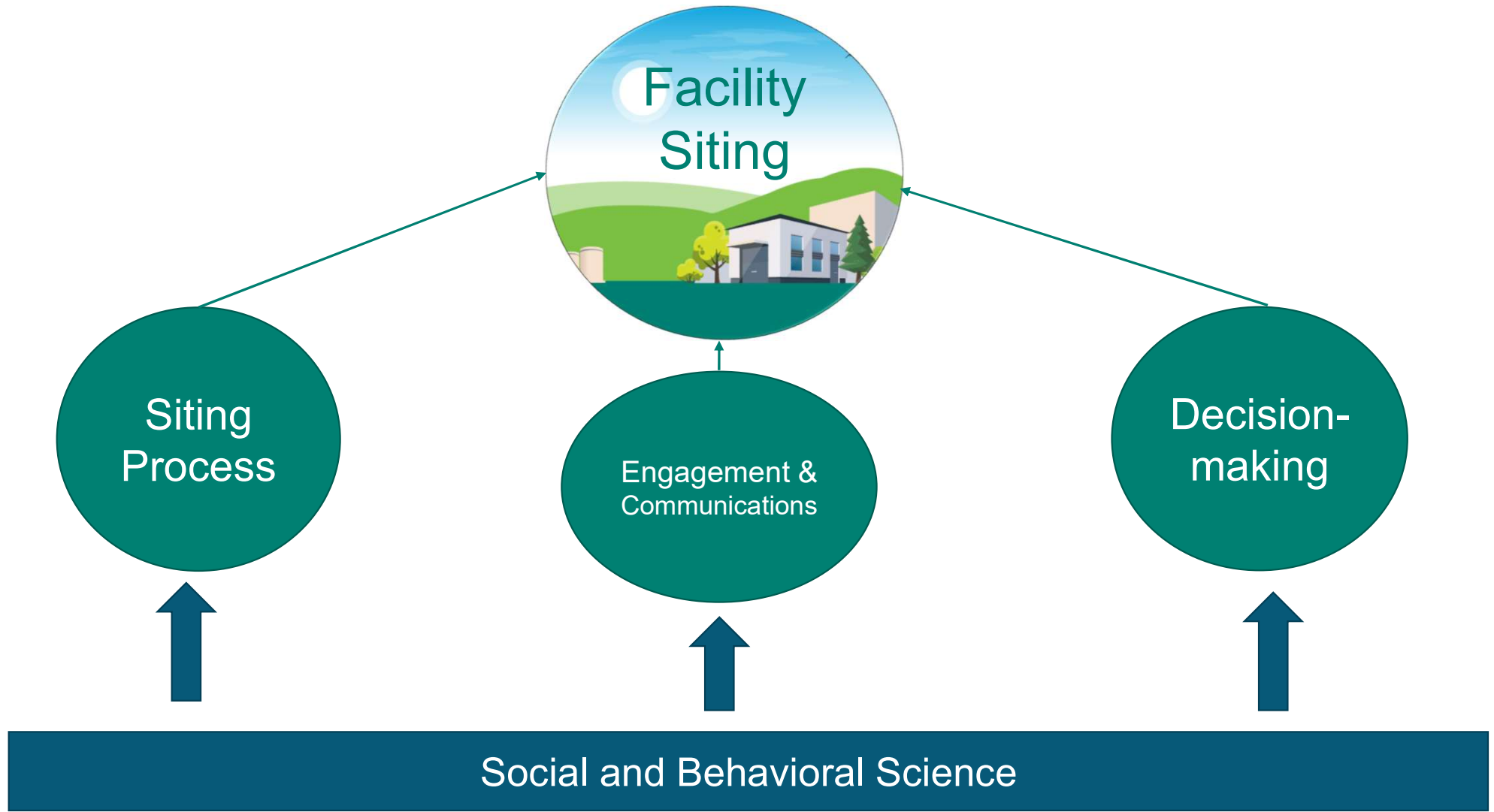
Office of Integrated Waste Management  
Office of Spent Fuel and Waste Disposition

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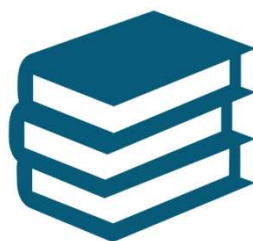
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August 30, 2023

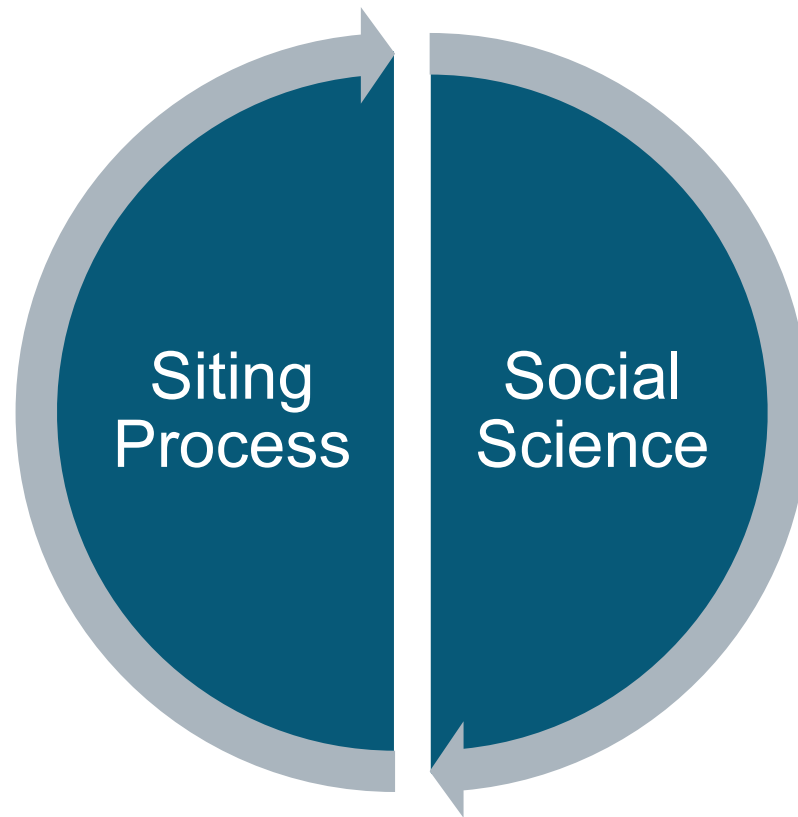


# SOCIAL SCIENCE EXPERTISE



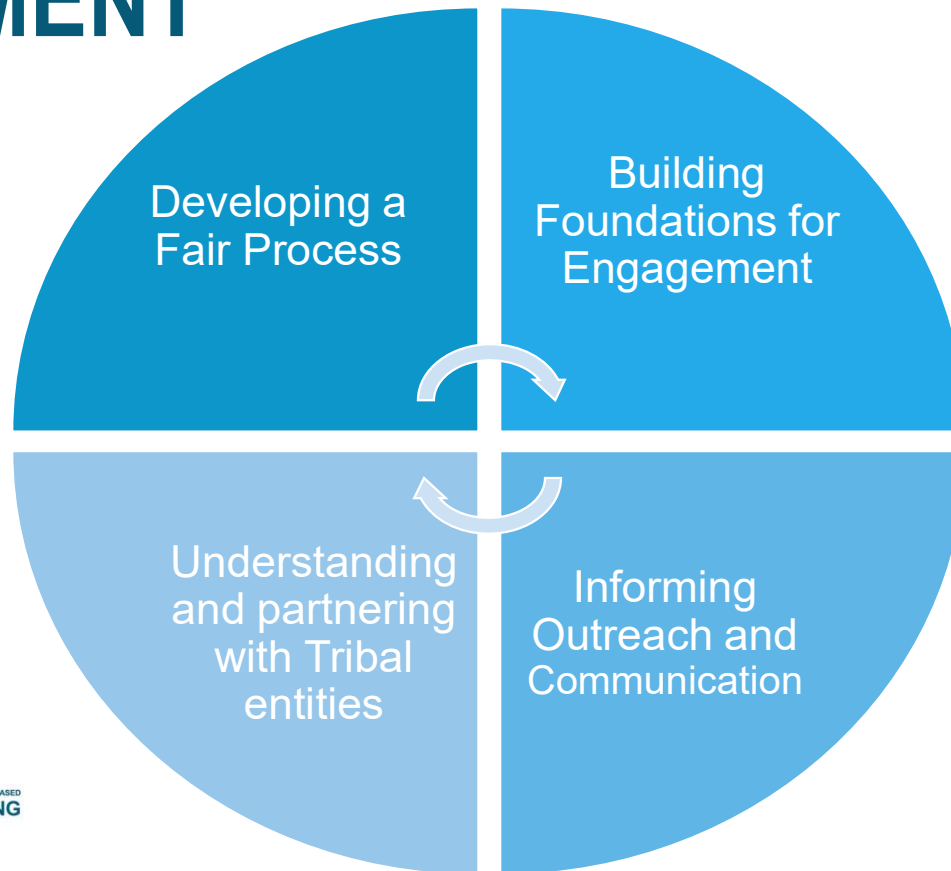
- Social science expertise at DOE and national laboratories
- Including: anthropology, science and technology studies, geography, psychology and behavioral science, science and risk communication
- Including: political science, economics, sustainability, sociology, engineering education

# INTEGRATION OF SOCIAL SCIENCE



# SOCIAL SCIENCE RESEARCH AND DEVELOPMENT

**FY2023 Social Science Scope**



# DEVELOPING A FAIR PROCESS



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# INFORMING DEVELOPMENT OF THE PROCESS



## Literature Reviews:

Energy and environmental justice review for spent nuclear fuel, energy siting, public engagement; social science on spent nuclear fuel; intergenerational justice



## Comment Analysis:

Analysis of requests for public comment (including focused analyses technical, longitudinal, Tribal comments)



## Exemplars:

Studying domestic and international siting processes



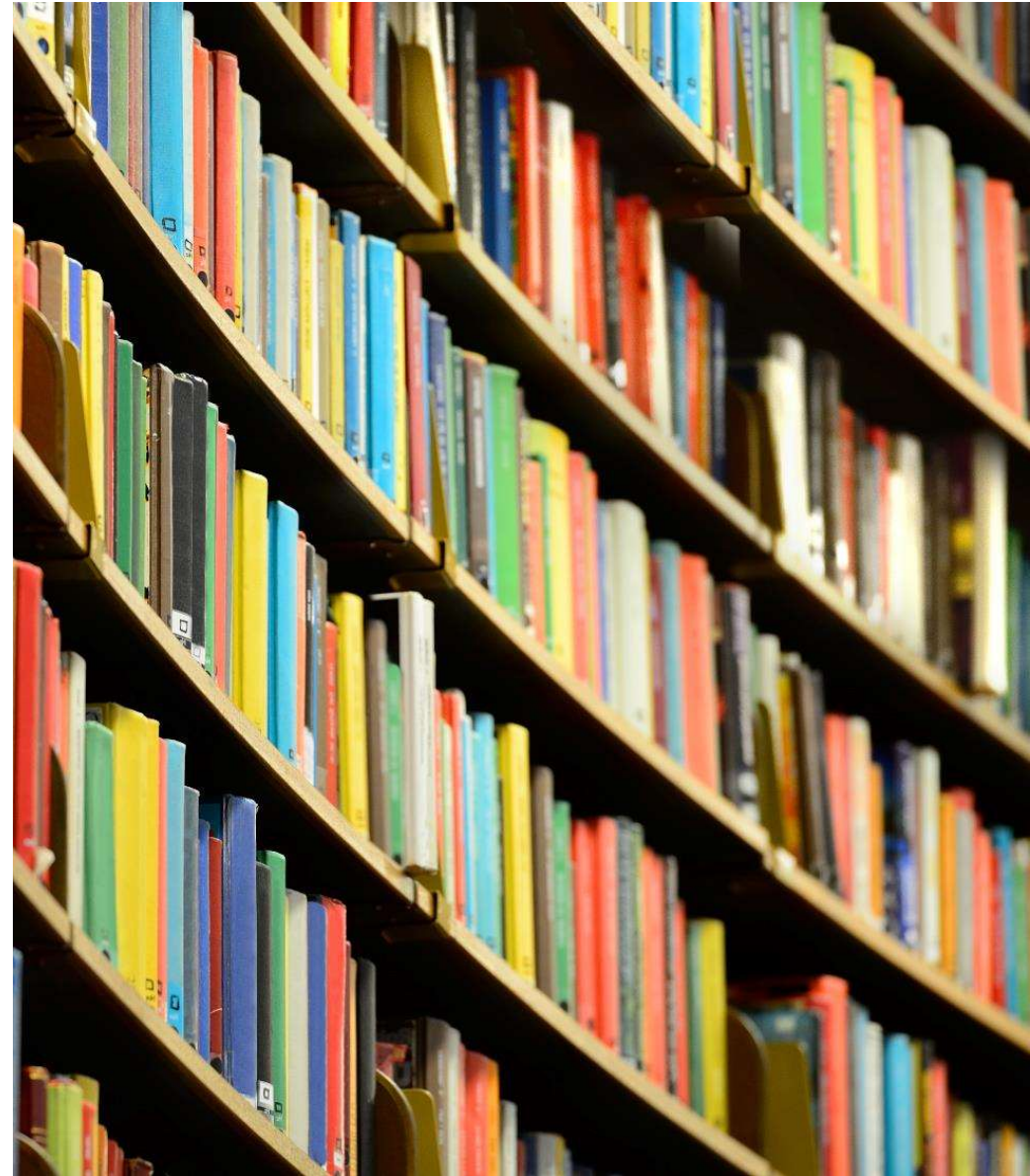
## Environmental Justice:

Operationalizing environmental justice executive orders, methodology for tracing benefits, identifying future environmental research needs



# ANALYSIS OF LITERATURE ON ENERGY SITING, PUBLIC ENGAGEMENT AND SOCIAL SCIENCE

- Lessons from infrastructure siting
- Participatory turn in nuclear waste management
- Stakeholder engagement, outreach, and communication
- Consent: meanings and applications
- Risk perceptions and nuclear technologies
- Social acceptance and “social license to operate”
- Community benefits packages and co-development
- Interdisciplinary collaboration







# BUILDING FOUNDATIONS FOR ENGAGEMENT

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# UNDERSTANDING DEMOGRAPHICS, PUBLIC PERCEPTION, AND ENGAGEMENT



**Broad public perception:** National surveys and social media research



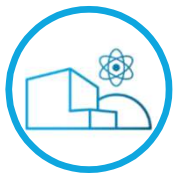
**Citizen science:** Partnering with minority serving institutions (MSIs) to develop citizen science



**Multi-stakeholder Interviews:** Broader public perspectives from community-level stakeholder groups



**Co-design:** Develop and evaluate engagement mechanisms to co-design facilities (partnering with MSIs)



**Current host communities:** Pilot study to compile knowledge of current hosts of spent nuclear fuel and DOE host communities



**Geospatial EJ analysis:** Creating data layers to identify communities with environmental justice concerns



# SOCIAL SCIENCE AND CONSORTIA DEVELOPMENT



- Informed framing of the Funding Opportunity Announcement, including encouragement for awardees to think creatively about how to meaningfully engage with diverse communities
- Theoretical and empirical application of participatory democratization of science and technology
- Defined capacity-building and incentivized behavioral strategies to develop capacity
- Conceptual underpinnings of mutual learning and facilitation of dialogue between diverse expertise
- Interdisciplinarity in integrating technical and social processes and expertise

# ANALYSIS OF INTERGENERATIONAL EQUITY

- Identifying best practices for understanding intergenerational justice and equity
- Examining mechanisms for achieving restorative justice for past generations while ensuring wellbeing of future generations
- Guidance and draft recommendations for addressing intergenerational justice and for the creation of intergenerational council



# INFORMING OUTREACH AND COMMUNICATION



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# OUTREACH AND COMMUNICATION



**Communication Research:** Natural language processing (deep learning), analysis of public traditional and social media discourse



**Communications Support:** Talking point development, testing of communications materials, development of educational resources



**Accessibility & Outreach:** Best practices for reaching people with limited internet access, methods to engage multiple audiences



**Restorative Justice:** Outreach, education and restorative justice through art showcase



# SOCIAL SCIENCE SUPPORTING DIGITAL TOOLS



User experience is a key component of the development and deployment of DOE Office of Nuclear Energy's Office Integrated Waste Management digital tools, including CURIE (resource management database).



Geographic Information Systems (GIS) data layers in digital tools, such as Land-area Identification, Tagging, and Exploration (LITE) and Stakeholder Tool for Assessing Radioactive Transportation (START)



Integrated Waste Management StoryMaps are being developed with a broad audience in mind. For example, technical concepts (e.g., potential impacts of consolidated interim storage facilities) will be communicated using interactive content.



# UNDERSTAND AND PARTNER WITH TRIBAL ENTITIES

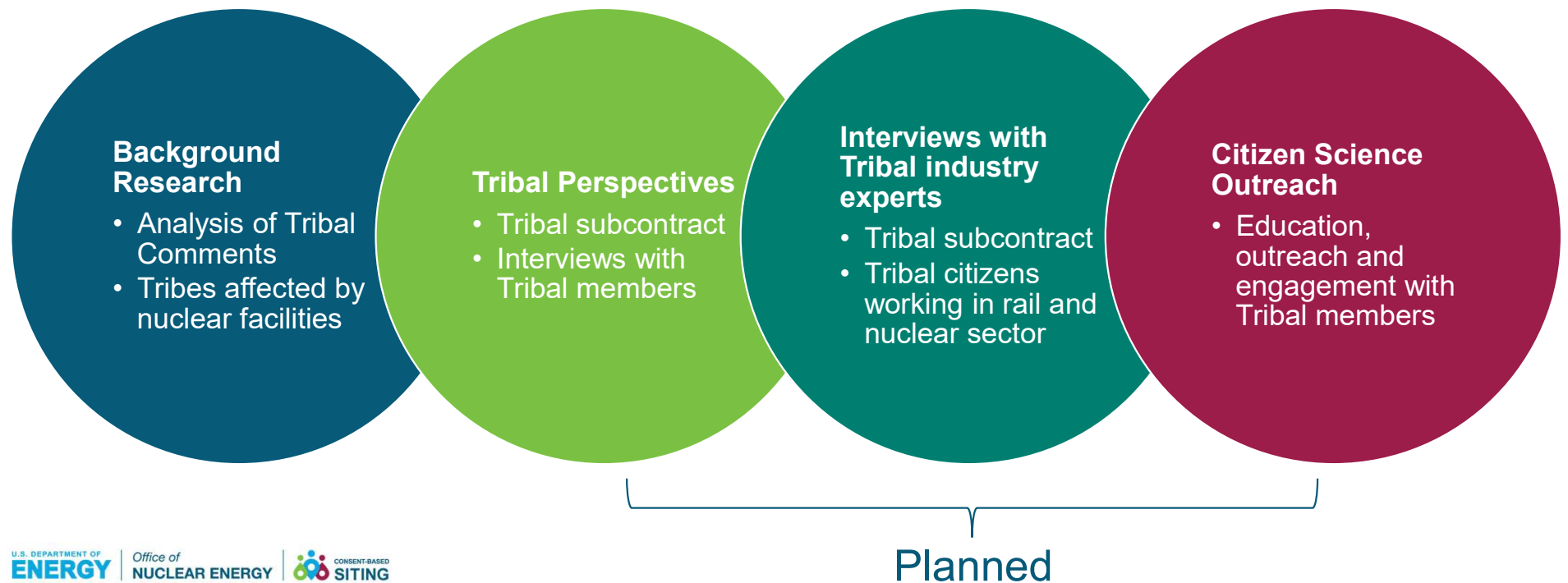
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# UNDERSTANDING AND PARTNERING WITH TRIBAL ENTITIES



# THANK YOU

For more information, visit us at  
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