



NASEO-NARUC Advanced Nuclear State Collaborative Webinar- Facilitating Equitable Community Engagement to Support the Deployment of Advanced Nuclear

August 17, 2023

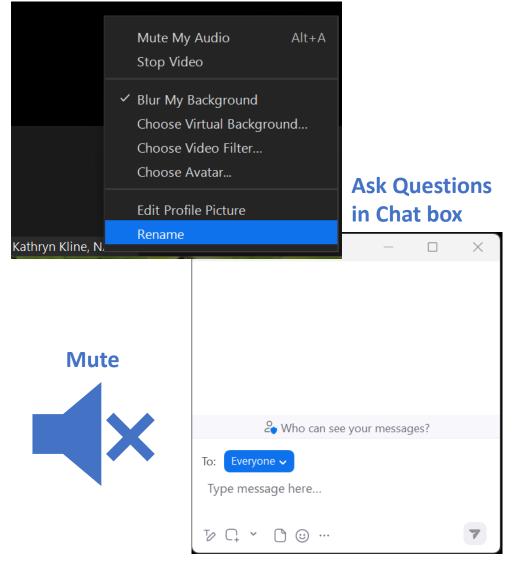
Thank you to the U.S. Department of Energy Office of Nuclear Energy for their support of this event.

Webinar Housekeeping

Please remain on mute during the webinar.

- 2 Ensure your zoom profile name includes your **name** and **affiliation** (ex. John Doe, OCC) You can do this by right clicking on your name and selecting "rename".
- 3 Enter questions into the chat box. The moderator will ask panelists questions from the chat box after the presentations.
 - Be respectful of other attendees.
- Disruptive participants will be removed from the meeting.

Update name in zoom



Moderator: Molly Cripps, Director, Office of Energy Programs, Tennessee Department of Environment and Conservation

Speakers:

- Christine King, Director, Gateway for Acceleration of Advanced Nuclear Initiative, Idaho National Laboratory
- Kara Colton, Director of Nuclear Energy, Energy Communities Alliance
- Jackie Toth, Deputy Director, Good Energy Collective

State Engagement Overview

August 17, 2023 Christine King, Director GAIN

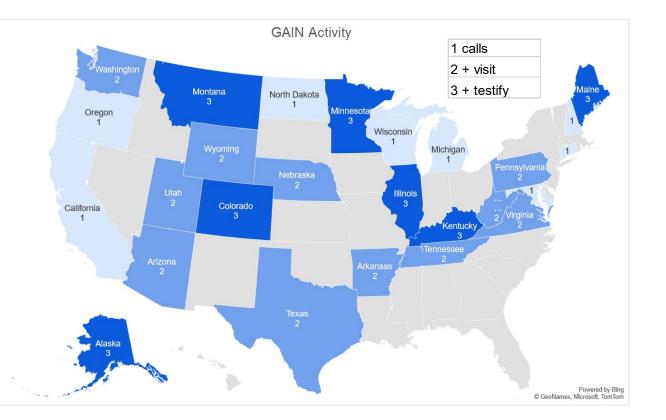
NARUC-NASEO Advanced Nuclear Webinar





GAIN Approach

- Primary objectives:
 - Bridge the gap
 - Help introduce and demystify nuclear
 - Provide technical support
 - Share what we have learned
- Principles
 - Only go where we are invited
 - Show up and listen
 - Customized support
 - Be committed to multiple engagements
 - Informing, not educating, not selling

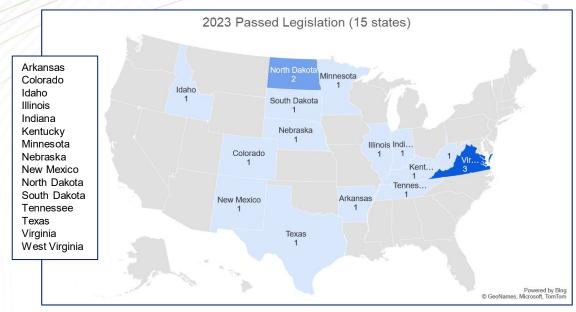


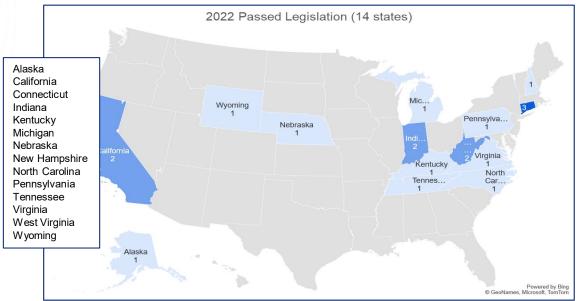
Successful Engagement: Our state/local partners... know the value of local/region assets become a better nuclear customer understand how to engage



U.S. SNAPSHOT







34 Bills in 23 States

- 13 Study/Task Forces
- 6 Regulatory/Permitting
- 2 Workforce (NE, VA)
- 5 Energy Targets
- 2 NRC Agreement (IN,CT)
- 2 Moratoria Lifted (CT, WV)
- 2 Existing Fleet (CA)
- 2 Waste/Interim Storage (AR, NM)

	2022 Legislation		2023 Legislation	
	# Bills	# States	# Bills	# States
Proposed	67	27	111	32
Passed	19	14*	18	15*

*TN, KY, NE, WV, IN, VA passed bills in both years





Ongoing State Level Studies

State	Bill #	Description	Milestones	\$ Allocated
Tennessee	Ex Order 101	Creates Tennessee Nuclear Energy Advisory Council to recommend legislative, policy, and budgetary changes to address existing barriers to new nuclear deployment, funding opportunities for both public and private entities, storage and waste practices, and federal actions Tennessee should pursue.	Oct-23	\$50 M
Pennsylvania	HR 238	Directs the Joint State Government Commission to conduct a study on the benefits of nuclear energy and small modular reactors and provide recommendations on how to maximize the benefits of nuclear energy and small modular reactors.	Nov-23	
Kentucky	SJR 79	Establishes the Nuclear Energy Development Working Group within the Energy and Environment Cabinet.	Dec-23	
New Hampshire	HB 543	Establishes a commission to study nuclear power and nuclear reactor technology in New Hampshire.	Dec-23	
North Dakota	HCR 3034	Directs the Legislative Management to consider studying sustainable energy policies to maximize the economic viability of existing energy sources, assess future demands on electricity in the state, and determine the feasibility of advanced nuclear energy development and transmission in the state	Dec-23	
Michigan	HB 6019	Provides for a feasibility study on building nuclear energy in State.	Feb-24	\$250K
Nebraska	LB 1014	Appropriates funding for a feasibility study to assess advanced reactor siting options and the compatibility of existing electric generation facilities in the state with advanced nuclear reactors.	May-24	\$1M
Colorado	HB23-1247	Requires the Colorado Energy Office to conduct a study for northwest Colorado and southeast Colorado in terms of advanced energy systems including advanced nuclear energy	Jul-25	\$50K State + \$166K Federal
Nebraska	LR178	Creates the "Small Modular Nuclear Reactor Study Committee" as an interim committee in the legislature to study the feasibility of constructing and operating small modular nuclear reactors at coal plants.	?	
South Dakota	SCR 601	Creates an interim legislative committee to study potential use of nuclear power in South Dakota	?	



Completed State Level Studies

State	Bill #	Description
Connecticut	HB 5200	Requires a study to be conducted on hydrogen power and include an examination of sources of clean hydrogen including (but not limited to) nuclear.
Virginia	HB 894	The bill establishes the Southwest Virginia Energy Research and Development Authority and creates a stakeholder working group to identify strategies and policies for (a) promoting the development of advanced small modular reactors in localities in the Commonwealth that formerly hosted fossil fuel electric generation facilities and (b) siting such reactors on brownfield sites or former military sites in such localities.
Kentucky	SCR 171	A Resolution requesting that the Legislative Research Commission examine funding sources and research institutions capable of conducting a feasibility study of advanced nuclear energy technology for electric power generation in the Commonwealth.
Maryland		Maryland Energy Authority Coal Transition Feasability Study
Virginia	SB1464/HB2386	Creates the Virginia Power Innovation Fund to be used for the research and development of innovative energy technologies including nuclear and establishing a Virginia nuclear innovation hub.

COAL TO NUCLEAR ENERGY COMMUNITY TRANSITIONS COAL TO NUCLEAR ENERGY COMMUNITY TRANSITIONS

- Primarily rural under-resourced communities affected
- Utilities are small and don't have big enough balance sheet to carry large nuclear projects
- Mixed models of ownership and desires
- Who should move first? Community or State or Utility









Coronado Generating Station

Primary Objective: Assess the feasibility of transitioning from coal to nuclear; Learnings will help 6 other coal units within commuting distance

Partnered with Salt River Project and St Johns Mayor's Office

Plant is in same county as Navajo Nation



Owned/Operated by Louisville Gas and Electric Company and Kentucky Utilities Company Located in Carroll County, KY

Ghent Generating Station

Primary Objective: Assess the feasibility of transitioning from coal to nuclear to support nearby industrial customers

Station retirement is planned in 2040s.

Coronado Generating Station Studies will be published in September. Ghent Generating Station will be published by year end.

COAL TO NUCLEAR ENERGY COMMUNITY TRANSITIONS COAL TO NUCLEAR ENERGY COMMUNITY TRANSITIONS

Coal to Nuclear Research Group

Ensure that our work is coordinated across organizations such that it is timely and not duplicative to the needs of decision makers for fossil stations.

Upcoming Reports from: EPRI GAIN

Third Way







Adding Nuclear to the Mix Conference

November 14 & 15 Morgantown, West Virginia DAY 1 – What do we know? Conference

- Latest Research Recommendations
- Updates from Early Movers
- Utility Perspectives
- Community Perspectives

Expert Filled Reception (think science fair)

DAY 2 – What do you want to know? Workshop on various topics related to repurposing/repowering projects



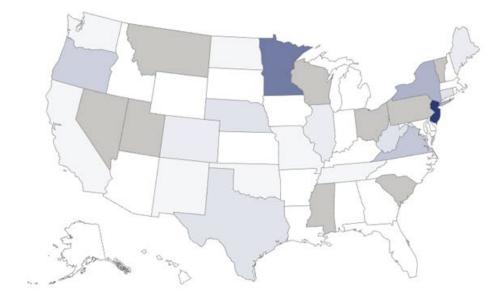
Additional Resources

Reg Dashboard – No Analysis, Just one stop



GAIN ENVOY PUBLIC LABS*

(i) More Information



About

State Nuclear 2022 Proposed Statutes Nuclear Legislation

2023 Proposed Nuclear Legislation

Proposed Legislation		egislation		Updated on: 06/0	
State	Bill Link	Status	Topics	Overview	
NY	A 1787	Pending	Energy Targets	Establishes a plan to meet 100% clean energy system by 2032 with renewables; phases out nuclear power by 2029	
NJ	A 3361	Pending	Waste / Fees	Requires owners of decommissioned nuclear power plant where spent nuclea fuel is stored to make community service payment instead of property taxes every year before August 1	
NJ	A 3362	Pending	Waste / Fees	Subjects spent nuclear fuel located in a decommissioned nuclear power plant to taxation as business personal property.	
NJ	A 3363	Pending	Nuclear Finance / Waste	Deems spent nuclear fuel from a decommissioned nuclear power plant as rea property subject to taxation	
NJ	A 3364	Pending	Waste / Fees	Permits the governing body of a municipality that houses a decommissioned nuclear power plant containing spent nuclear fuel to levy a stranded nuclear waste fee on the plant owner for every year the fuel remains within the facility	
NY	A 3449	Pending	Nuclear Finance / Existing Nuclear Fleet	Prohibits public utility companies to charge residents more than 25 cents per month to purchase the zero emissions credits	
NY	A 3592	Pending	Waste / Fees	"Provides for funding for emergency management services for certain countie with non-operational nuclear power plants"	
NJ	A 4064	Pending	SMRs / Finance	Defines small modular reactor; directs the Board of Public Utilities to establish rules and regulations pertaining to building and operating SMRs in the state; authorizes the New Jersey Economic Development Authority (EDA) to provide incentives for construction and operation of small modular nuclear reactors utilizing funds from the "Global Warming Solutions Fund"	
NJ	A 4561	Pending	Nuclear Workforce	Establishes Wind and Nuclear Production Apprenticeship Grant Program, which would provide funds to newly-established apprenticeship programs in the wind and nuclear power industries within the state	
NJ	A 4592	Pending	Nuclear Finance / Advanced Nuclear	"Establishes two tax credits and a financial grant related to the construction and operation of advanced nuclear energy facilities"; creates "New Jersey Advanced Nuclear Energy Development Program" within NJ Economic Development Authority to incentivize construction of advanced nuclear energy facilities and developers will be eligible for tax credit inventives for constructing and producing energy at the facilities.	
NJ	A 4658	Pending	Energy Target / Regulatory /	Revises renewable energy portfolio standards so Class I renewable energy	

Milestones – Not everything, but balanced view

↓↑ Sorted by 2 fields



Milestones in Advanced Nuclear

Milestones

- 88 All Milestones
- 88 Newly Added

Informational Resources

Copy base



= Filter

US MARVEL Microreactor Protot... DATE 5/23/2023

DESCRIPTION

The full-scale replica of the US Department of Energy's MARVEL microreactor has relocated from Idaho National Laboratory (INL) to the Creative Engineers, Inc. facility ...



NANO Nuclear Energy to Build F ...



Oklo Announces Plans for Two N... DATE 5/22/2023

DESCRIPTION

...

Oklo, a company based in Santa Clara, California, has signed an agreement with the Southern Ohio Diversification Initiative (SODI) to develop two nuclear plants on a ...



NuScale Signs MOU with Nucor ...

....



Tennessee Governor Establishes Nuclear Advisory Council

Milestone

Date

Description

5/19/2023

Tennessee Governor Bill Lee signed Executive Order 101 which established the Tennessee Nuclear Energy Advisory Council. The order calls for a 15-member advisory council to deliver legislative and policy changes to overcome barriers to nuclear growth, address workforce and educational challenges, seek funding opportunities for various sectors, promote sustainable storage and waste practices, and advocate for federal collaboration to advance the state's objectives. The council will include members of the governor's administration, the General Assembly, the state's congressional delegation, and important stakeholders in the nuclear industry.

Why is this important?

A concerted effort by the Governor to assess potential barriers to advanced nuclear deployment in the state and recommend policy changes is a firm indication of Tennessee's readiness to explore nuclear energy. As well as creating the Nuclear Energy Advisory Council, Executive Order 101 allocates \$50 million to provide grants for nuclear power-related businesses that relocate or grow in Tennessee.

Hide 7 hidden fields ^

Web Resources

TN Governor Launches Nuclear Advisory Council URL

URL

Source

https://publications.tnsosfiles.com/pub/execorders...

Executive Order 101 TN

Source

https://publications.tnsosfiles.com/pub/execorders...

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What is SMR or Adv Rx or Gen IV? Taxonomy



Code

						Added in 2023
State	Bill Reference	SMR/AR/Gen IV?	Time	Size Range	Features/Tech	Removed and amended
MO <mark>MO</mark>	HB 1684 HB 225	Clean baseload electric generating units Clean baseload electric generating units		Less than 200 MW 600 MW or less		
		Clear baseload electric generating drifts		OUD IVIVY OF IESS		
PA	<u>SB979</u>	Advanced Nuclear			х	
IL	<u>SB 0076</u>	Advanced nuclear reactor	After December 27, 2020			
MT	<u>SJ 3</u>	Advanced nuclear reactor		200 to 500 MW		
WA	<u>S5244</u>	Advanced nuclear reactor			x	
WY	<u>HB131</u>	Advanced nuclear reactor	After Jan 1, 2021			
KY	<u>SCR171</u>	Advanced nuclear reactor / technology				
MN	<u>SF4163</u>	Advanced Nuclear Reactors				
NE	<u>LB 1100</u>	Advanced Nuclear Reactors				
ОН	<u>HB434</u>	Advanced nuclear reactors				
AK	<u>SB177</u>	Microreactor		No more than 50MWe	х	
NJ	A3074	Advanced small modular reactor, Microreactors				
MI	HB6019	Small cell nuclear reactor				
NJ	S1384	Small-scale nuclear energy power plants				
MN	SF 4082	Small, nuclear-powered electric generating reactor		Less than 100 MW		
VA	HB894	Advanced small modular reactors				
WV	HR5	Advanced nuclear reactor, small modular nuclear reactors				
NJ	A 4064	Small modular nuclear reactor		No more than 300 MW		
ME	LD 1549	Small modular nuclear reactor or modular reactor		No more than 350 MW		
СО	SB22-073	SMR		No more than 300 MW		
IN	SB 271	SMR		No more than 350 MW		
IN	SB 176	SMR		No more than 470 MW		
OR	SB 832	SMR		300 MW or less	<u>×</u>	
PA	HR238	SMR			_	
WA	<u>S5244</u>	SMR		No greater than 350MW		
NH	HB543	Gen IV			x	
NH	H 543	Generation IV				
NH	HB 616	Class V: Generation IV	After January 1, 2024			



Engaging Local Leaders in Community Outreach to Build Support for Nuclear Development

NASEO-NARUC Advanced Nuclear State Collaborative Webinar Facilitating Equitable Community Engagement to Support the Deployment of Advanced Nuclear

August 17, 2023

Kara Colton Director of Nuclear Policy Energy Communities Alliance

Who is ECA?

- ECA was formed over 30 years ago by local governments.
- ECA communities currently host DOE's national laboratories, EM cleanup sites, nuclear weapons facilities, nuclear component manufacturing, nuclear energy sites, de facto interim storage sites, and are potential hosts for nuclear waste storage and disposal facilities.
- As local elected officials, ECA members are responsible for protecting the human health and environment in their communities in a way that offers community-drive and risk-based economic opportunity.
- ECA members are invested and already engaged in future new nuclear development.
- Many of our communities have been engaged in various forms of nuclear-related siting for over 40 years.



CHAIR	VICE CHAIR	SECRETARY	
BRENT GERRY	REBECCA CASPER	CHUCK HOPE	
Mayor/CEO	Mayor	Councilman	
West Richland, WA	Idaho Falis, ID	Oak Ridge, TN	





TREASURER	MEMBER AT	IMMEDIATE PAST
RANDALL RYTI	LARGE	CHAIR
Councilor	JASON CHAVEZ	RON WOODY
os Alamos County, NM	Councilman	former County Executive
	Carlsbad, NM	Roane County, TN



ECA Members

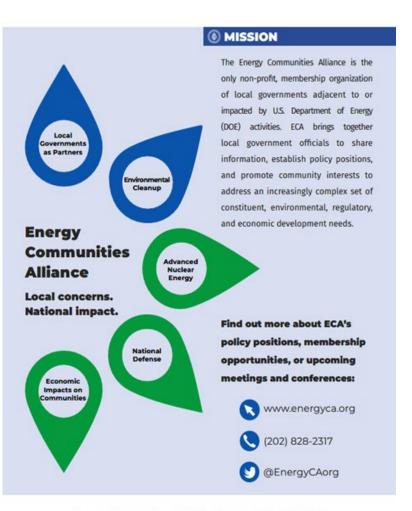
- Mayors
- Councilors
- Commissioners
- Chief Executives
- City/County Managers
- Port Authorities
- Economic development entities
- Community Reuse Organization
- Chambers of Commerce
- Universities
- School districts





ECA Mission

To share information, establish policy positions, and ensure that local governments are meaningfully engaged, and their environmental, safety, health, and economic priorities are considered in decision-making that directly impacts nuclear host communities.





For more information, please visit ECA's web page at www.energyca.org

ECA's New Nuclear Initiative

- To define the role of local governments in supporting the development of the new nuclear technologies.
- Chaired by Rebecca Casper, Mayor of the City of Idaho Falls, ID
- Focused around three core questions:
 - 1. What do communities need to know to attract and support new nuclear development/missions?
 - 2. What and how should communities communicate to industry, national laboratories, state and federal governments about local resources and development opportunities?
 - 3. What hurdles and challenges will communities face and who can we work with to overcome them?



Expanding ECA Membership

- Recognizing the opportunity to amplify the voice of local leaders, ECA is expanding to include communities that host or are interested in hosting future public or private nuclear facilities.
 - Private or public nuclear facilities include:
 - Existing and potential nuclear energy, nuclear fuel production or manufacturing facilities and projects;
 - Advanced nuclear projects;
 - Nuclear storage or nuclear disposal facilities;
 - Decommissioned and decommissioning nuclear facilities;
 - National Laboratories;
 - Science and Defense facilities;
 - Ancillary facilities related to nuclear missions.



Stakeholder Engagement Impacts

- Trust
- **Capacity** Necessary to build enduring, informed decisions
- Partnership around/support for a project
- How decisions are perceived "Risk" (real or perceived) must be addressed, seen as based on sound science, and there must be transparency at each step.
- How to address environmental justice and equity There should be no "one- size-fits-all approach. Stakeholders around potential new nuclear development must be engaged in defining, evaluating and determining how to mitigate environmental justice and equity issues.



How to Approach Communication and Engagement

Company/Federal Government/Regulator must engage the community (and vice a versa). Announcements are not engagement	Build a working relationship and provide outreach opportunities through various channels	Definitions matter – everyone needs to be on the same page
Know and understand all goals (developer, regulator, regional/state/local government, stakeholders)	Communities need resources and experts to engage	Define opportunities, risks, timelines – be truthful and realistic
Failure to make decisions leads to failures	Be Organized	Repeat, Repeat, Repeat



Stakeholder Engagement and Consent-Based Siting

- **Terms of CBS agreement –** There is no "one-size-fits-all" agreement: The conditions under which a specific community will take on a nuclear mission needs to reflect the priorities and vision of that community.
- **Informed consent yields enduring "consent":** Local governments and states must be given resources to provide education and outreach on potential benefits and risks of a project.
- Stakeholder vs. interested party
- Opportunities for Federal/State/Local/Regional Wins with Advanced Nuclear
 - Coal-to-Nuclear
 - DOE's Cleanup to Clean Energy Initiative
 - Carbon Reduction Goals
 - Clean Energy Jobs



Lessons Learned: Successful Siting

WIPP

- Extended timeline for engagement (10+ years)
- Recognition of national need
- Existence of a "clear" benefit for citizens of the state and local jurisdiction in which the facility was sited
- Solid local support
- Competent technical oversight by the State of New Mexico
- Intense, iterative and early outreach
- Rigorous quality assurance from the earliest stages of the project
- Credibility



Lessons Learned Failed Siting

YUCCA MOUNTAIN/PFS

- Local government, Tribal and community support alone will not lead to successful siting and deployment of new nuclear projects – <u>support from</u> <u>the state government is necessary</u>
- Local governments and state governments need to work together
- Need federal alignment



New Global Partnership of Municipalities with Nuclear Facilities



WITH NUCLEAF







Joint Recommendations

- Engage early and often with host municipalities on all aspects of the nuclear project, ensuring safety and protection of human health and the environment.
- Provide resources to the host municipalities to create technical expertise in the community to be able to work cooperatively with the government/project owner.
- Create, expand, and cooperate with the host municipalities on socio-economic opportunities for the long-term sustainability of the region.
- Commit to short and long-term investment in the education, infrastructure and workforce of the host community (i.e., local purchasing from local businesses) as part of any new nuclear project.





Thank you!

Kara Colton Director of Nuclear Policy Energy Communities Alliance (703) 864-3520 kara.colton@energyca.org





Gollective **NARUC-NASEO Advanced Nuclear State Collaborative Facilitating Equitable Community Engagement to Support** the Deployment of Advanced Nuclear August 17, 2023

Jackie Toth, Deputy Director

Who We Are



Good Energy Collective is a women-led progressive nuclear energy policy nonprofit

We develops community-centered, social science-informed policies to enable advanced nuclear to support equitable energy outcomes



Crafting Community-Focused Policy

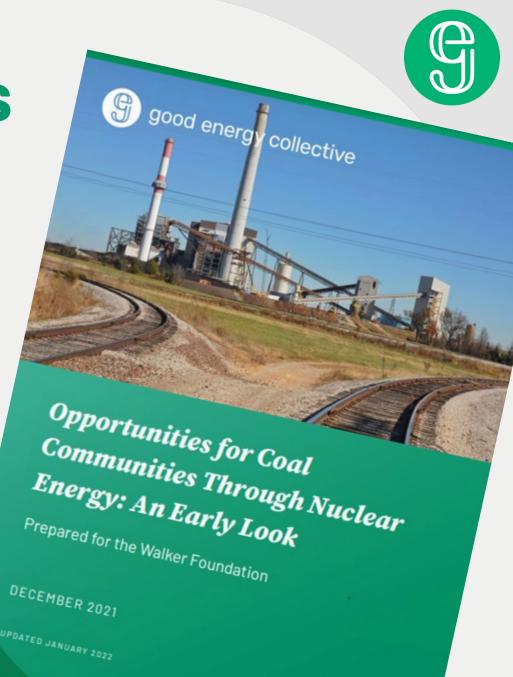
- Advance restorative justice in legacy areas
- Support social science research
- **Diversify** the nuclear workforce
- Empower community decision-making
- Solve the nuclear waste stalemate

Engagement Activities

Coal-to-Nuclear

Opportunities

 Capacity-Building for Interim Nuclear Waste Storage Facilities





NARUC Presentations

- Nuclear Provisions in the Inflation Reduction Act (Sept. 16, 2022)
- Nuclear Energy: What Does the Public Think? (Dec. 16, 2022)



Why This Matters

Todd Allen, University of Michigan, asked if panelists could point to any examples in which the community was actually empowered to proactively decide what energy technologies it wanted to support. Nobody could. Tuler said that the public usually is not asked what pathway it wants to pursue; instead, a developer typically has already chosen a site and an energy type before the public is invited to weigh in.

National Academies of the Sciences, Understanding the Societal Challenges Facing Nuclear Power: Proceedings of a Workshop (2022) https://nap.nationalacademies.org/catalog/26606/understanding-the-societal-challenges-facingnuclear-power-proceedings-of-a



Community Engagement 101

- Prioritize early relationship-building
- Incorporate local feedback
- Engage, not educate, on locals' terms
- Assume good faith
- Understand who locals listen to
- **Compensate** community members for time, analysis
- Incorporate Stakeholder Engagement Plans and Community Benefit Agreements



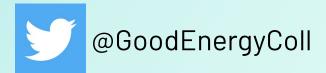
Evaluating Company Practices

- Clarity of purpose in public engagement
- Support of senior leadership
- Dedicated engagement specialists and resources
- **Opt-out options** agreed-upon early

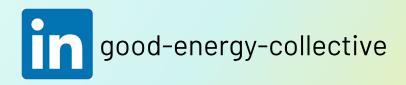
Goldenergy collective

jackie@goodenergycollective.org









Thank you for attending! At this time, we request all non-state attendees drop off the meeting for a dialogue between state utility regulators and State Energy Offices.