Oklahoma Nuclear Innovation Campus Response

Q1 State Interest and Strategic Vision

> *What level of interest does your state have in hosting a comprehensive Nuclear Lifecycle Innovation Campus? Provide a detailed description of your state's strategic vision and approach to developing an Innovation Campus that integrates all functions outlined in Section II of this RFI, or, if not all functions are integrated, please specify why. Additionally, please identify what your state requires from the federal government in order to be a host for an Innovation Campus, or what private resources may be required, and what resources the state would plan to contribute.*

Oklahoma has a strong and committed interest in hosting a Nuclear Lifecycle Innovation Campus. The state's strategic vision is to establish the Oklahoma Nuclear Innovation Campus (ONIC) as an integrated, full-lifecycle nuclear enterprise that applies Oklahoma's century of oil and gas expertise to one of the most urgent challenges in American energy: closing the domestic nuclear fuel cycle.

Oklahoma proposes to integrate the full scope of NLIC functions across five coordinated components, that collectively deliver an integrated system of advanced reactor deployment, spent fuel recycling and waste reduction, and permanent disposal of residual wastes:

- A **Front-End Fuel Cycle Complex** for uranium conversion/deconversion, enrichment, and fuel fabrication.
- A **Back-End Fuel Cycle System** for used fuel recycling, interim storage, and permanent waste disposition.
- A **Power and Innovation Zone** for advanced reactor deployment and isotope production.
- An **Environmental Stewardship, Safety, and Public Engagement Program**
- A **Workforce and Research Hub** anchored by Oklahoma's universities and CareerTech system.

Our vision for ONIC is founded on two core principles: partnership between the private and public sectors; and waste disposal as key enabler, not an afterthought. Each of these are strongly aligned with DOE’s overall vision for NLICs and are described in more detail below.

ONIC: private-sector led, state-enabled, federally-supported

The private sector coalition supporting this response is prepared to commit significant private capital to Oklahoma, contingent on the state's selection as an NLIC host:

- **Oklo** is seeking to deploy private investment to establish fuel cycle and reactor operations in Oklahoma. Oklo is exploring the opportunity to invest approximately $5-10 billion to integrate advanced reactor deployment, used fuel recycling, fuel fabrication and radioisotope production on a single site or set of sites within Oklahoma. These investments are intended to be deployed in a state that is interested in hosting the full nuclear lifecycle, enabling efficiencies across the fuel cycle while delivering reliable, carbon-free baseload energy to meet growing demand.
- **Deep Isolation**, with their Oklahoma-based subsurface engineering partner Occlusion Nuclear Solutions, will anchor the waste disposition infrastructure. They have already proven their ability to mobilize private capital and are committed to working with the state and DOE to establish ONIC as a testbed not only for technology innovation but for the innovation in financial models for disposal that the U.S. needs in order to break from the decades-long pattern of deferred action and mounting taxpayer liability.

- **Oklahoma's state government** will contribute through streamlined regulatory processes, state tax incentives and enterprise zone designations, infrastructure investment coordination through the Department of Commerce, and the institutional infrastructure being established through HB3175, which would create the Oklahoma Advanced Nuclear Energy Office within the Office of the Governor. [1]
- **Federal partnership:** ONIC requests federal partnership in the form of a Cooperative Agreement with DOE, targeted cost-sharing for high-risk early-stage functions, close collaboration in fulfilment of DOE's statutory responsibilities for the nation's spent nuclear fuel (SNF) and high-level radioactive waste (HMW), and regulatory coordination support through the NRC licensing process.

Waste disposal: a central enabler of the ONIC vision

Oklahoma's proposal is grounded in a principle that is as much about national responsibility as it is about state leadership. The United States cannot achieve true energy dominance or energy security while it lacks a permanent, domestically controlled solution for its nuclear waste. The Executive Orders signed in May 2025 on reinvigorating the nuclear industrial base, deploying advanced reactor technologies for national security, reforming the NRC, and reforming nuclear reactor testing at DOE collectively underscore the urgency of this challenge. Oklahoma proposes to answer it.

Oklahoma proposes to become the first U.S. state to establish a permanent disposal solution before it begins commercial nuclear deployment. No country in the world has done this. ONIC therefore represents a fundamental shift in how nuclear energy systems are developed: disposal is designed in from the outset rather than deferred, it is co-located with recycling and power generation, and it is integral to the overall economic model. Our disposal solution (see Q10 for details) uses deep borehole disposal to ensure that the final radioactive residues from Oklo's recycling processes are disposed permanently, thousands of feet under rock in stable, isolated lithological formations that ensure exceptionally high levels of passive safety. The solution is grounded in Oklahoma's existing subsurface data and workforce rather than built on a theoretical foundation. This is Oklahoma industry, Oklahoma expertise, and Oklahoma commitment applied to a national challenge.

Summary

In summary, ONIC will create low-cost clean energy, jobs, growth and exports for Oklahoma, while leading the way nationally to reduce long-term federal liability for spent nuclear fuel, strengthen domestic fuel cycle independence, and support U.S. energy and national security objectives. As explored in more detail in the rest of this proposal, Oklahoma offers a unique and differentiated approach we believe no other state can match:

- A willingness to lead on permanent disposal as a core element of the campus.
- An integrated private-sector coalition with demonstrated collaboration across reactor, recycling, and disposal systems.
- Unmatched subsurface data and drilling capability from our oil and gas sector.
- The ability to move at pace, leveraging existing infrastructure, workforce, and institutional alignment.

Q2 Proposed Sites Within the State

> *What specific sites within your state would you propose for hosting a Nuclear Lifecycle Innovation Campus, and why are they viable and suitable for the necessary functions? Please consider existing nuclear infrastructure, proximity to DOE sites, land availability, zoning, and environmental suitability. Include details on site characteristics, such as maps, geologic stability, access to utilities, and transportation networks.*

Oklahoma will propose multiple candidate sites for ONIC components. We understand and are exploring the value of co-locating key parts of the lifecycle, including recycling of spent fuel, interim storage, and permanent storage. We also believe there are many sites across the state that could host elements of the campus outside of the contiguous site for the backend of the fuel cycle. Oklahoma plans to use Deep Isolation's published site evaluation framework for deep borehole disposal, grounded in IAEA Safety Standard SSG-14 [2]. This framework evaluates sites against three target outcomes: the site must be **Isolated**, meaning isotopic testing demonstrates that pore fluids at disposal depth have been out of contact with the biosphere over geological timescales, with saline brine concentrations above 10 grams per liter preferred to resist upward transport; **Stable**, meaning host rocks are not subject to significant geothermal, volcanic, or seismic disruption, with performance modeling supporting a safety case for one million years or more; and **Deliverable**, meaning host rocks can be characterized and accessed using existing drilling technology in a cost-effective manner.

Oklahoma scores favorably against the national screening criteria applied at the earliest evaluation stage:

- **Transportability:** Oklahoma's transportation infrastructure is among the strongest in the country for this application. Union Pacific and BNSF rail lines, the interstate highway system, and the Port of Catoosa provide multimodal access. This national screening criterion is clearly met. [3]
- **Geothermal gradient:** Oklahoma's geothermal gradient is low, well below the 200 degrees Celsius threshold that limits deep borehole operations. Temperature data from existing oil and gas well records across the state is broadly available. [3]
- **Volcanic effects:** Oklahoma has no quaternary volcanism. The state is well beyond the 15-kilometer exclusion zone from any volcanic activity. This criterion is fully met. [3]
- **Seismic events:** Oklahoma's seismic history is primarily associated with wastewater injection from oil and gas operations, which is manageable and distinct from tectonic seismicity. The sedimentary layers and deep basement rocks targeted for borehole disposal are not in active fault zones. Site-specific seismic assessment will confirm compliance with design standards. [3]
- **Drillability:** Oklahoma has more active drilling rigs, more trained directional drilling crews, and more subsurface engineering expertise per capita than virtually any other state. In-situ stress fields, host rock properties, and pore fluid pressures across Oklahoma's sedimentary basins are well characterized from decades of oil and gas operations. Oklahoma arguably satisfies this criterion better than any other state in the country. [3]

Final siting decisions will be based on site-specific characterization and regulatory review (see Q12 for our proposed process of phased site selection and site licensing), and extensive, collaborative engagement with Oklahoman communities to ensure that ONIC is co-created with - not imposed on - its potential host communities (see Q8 and Q9).

Oklahoma's existing oil and gas well record provides a subsurface data baseline that can accelerate the site characterization process significantly compared to states without this foundation. [3] Our oil and gas industry has generated one of the most comprehensive subsurface data sets in the world. Thousands of deep wells across the state have produced detailed borehole logs, formation characterization data, lithological and stratigraphic records, geophysical surveys, and hydrogeological testing results that directly inform safe disposal system design. Where other states would need years of new data collection before they could responsibly evaluate a disposal site, Oklahoma can draw on an

existing baseline that is already among the richest available anywhere on earth. This is not a theoretical advantage. It reduces risk, accelerates timelines, and strengthens the safety case from day one.

Taken together, these factors suggest that Oklahoma can identify and secure community and regulatory approval for suitable sites more quickly, with lower cost and lower uncertainty than many alternative locations — supporting DOE's objective of rapid, scalable deployment.

Q3 Potential Private Sector Partners

> *Which private sector partners does your state anticipate working with to develop these Nuclear Lifecycle Innovation Campuses? What roles will those partners play? Provide details on the process and timeline for selecting and engaging these partners.*

Oklahoma's NLIC response is anchored by a deliberately assembled coalition of industry developers, technology companies, research institutions, and workforce partners. This coalition is distinguished by the integration of advanced reactor deployment, fuel recycling, and permanent disposal within a single coordinated partner ecosystem, with key partners already collaborating on technology development and deployment. Each partner has a defined role tied directly to a specific campus function:

- **Oklo:** Leads on advanced reactor deployment, fuel recycling, deconversion, enrichment, fuel fabrication, and isotope production. Currently in NRC licensing review for the Aurora powerhouse. Oklo will deploy advanced reactors at ONIC and lead development of an integrated fuel recycling capability, enabling the conversion of spent nuclear fuel into reusable fuel while producing a significantly reduced volume of residual high-level waste for permanent disposal. Oklo has an orderbook exceeding 20 GW through agreements with Meta, Department of War, and other industrial customers, ranging from data centers to advanced manufacturers. These partners serve as long-term off takers, providing demand signals that support reactor deployment and financing. Oklo is looking to continue expanding offtake partners, while also exploring Oklahoma-based customers with growing energy needs.

Oklo's is also eager to host recycling, deconversion and fuel fabrication with long term and interim storage upon a campus. This enables vertical integration, while also creating opportunities to provide fuel services to other advanced reactor developers. The campus may also support commercial partners involved in isotope production for medical and industrial application.

- **Deep Isolation:** Leads on disposal of residual high-level radioactive waste (HLW) from Oklo's recycling process, and other waste disposition requirements of ONIC. It will do this using an integrated disposal system that combines Deep Isolation's ARPA-E supported Universal Canister System (providing triple-purpose functionality across storage, transport, and disposal of radioactive waste) and its patented, safe, modular and scalable system for deep borehole disposal (see Q10 for details). Active ARPA-E relationship with DOE. [4]
- **Occlusion Nuclear Solutions:** Responsible for subsurface execution. Tulsa-based, Occlusion will leverage Oklahoma's oil and gas expertise and Deep Isolation's patent-protected systems to deliver borehole construction, waste emplacement, and long-term monitoring operations using proven subsurface engineering practices. Currently executing Phase I of Deep Isolation's demonstration program at Cameron, Texas. [4]
- **University of Oklahoma and Oklahoma State University:** The Universities will lead policy development, regulatory alignment, and public acceptance research for the campus, drawing on more than thirty years of peer-reviewed work on nuclear energy public opinion that directly informs the stakeholder engagement strategy. Both universities will support applied research,

energy policy communications, and workforce development coordination. The Hamm Institute's world-class laboratory, the only facility in the world with configurable wellbores, provides a directly relevant testing and research infrastructure for the subsurface technologies at the heart of ONIC's waste disposition capabilities. Both institutions were named contributors to the Oklahoma Corporation Commission's nuclear feasibility study completed in March 2026. Both universities will also offer additional faculty and institutional resources available to support ONIC's technical and academic programs. [5]

- **GKFF Good Jobs Initiative:** workforce coordination infrastructure, career pathway development, work-based learning programs, and credentialing alignment. Over 75-million-dollar commitment to Tulsa's workforce infrastructure.
- **Oklahoma Department of Career and Technology Education:** statewide technical training pipelines in nuclear operations, reactor maintenance, health physics, and fuel cycle technician roles, under the leadership of Director Brent Haken.

These partners are not coming together for the first time under ONIC. Deep Isolation and Oklo are already collaborating through ARPA-E–supported programs to develop integrated recycling and disposal solutions, while Deep Isolation and Occlusion are advancing a full-scale borehole repository demonstration in Texas. This combination of established industrial capability, existing cross-company collaboration, and integrated system design is unique among potential NLIC proposals, positioning Oklahoma to move rapidly and with low risk from concept to deployment.

Q4 Site Infrastructure Requirements

> *What infrastructure and resources can your state provide or support at the proposed site(s) to meet the requirements of all Innovation Campus functions? Detail availability of power, water, waste storage, secure transportation corridors, and physical/cyber security systems. Specify any state investments or upgrades needed.*

The siting requirements for ONIC are driven by two factors: OKLO’s infrastructure requirements on the surface, and the sub-surface footprint needed for Deep Isolation’s deep borehole repository.

Surface site: spatial requirements

ONIC needs sufficient space to house the **Front-End Fuel Cycle Complex**, the **Back-End Fuel Cycle System** for used fuel recycling, interim storage, and permanent waste disposition, and the **Power and Innovation Zone** for advanced reactor deployment and isotope production.

The waste disposal elements of the Back-end Fuel Cycle System at the surface are small. Deep Isolation's borehole repositories require approximately 20 acres of surface area for the first borehole, with marginal additional land use as additional boreholes are added. This small footprint is easily accommodated within Oklahoma's available industrial land, so spatial requirements at the surface are primarily driven by Oklo.

Oklo’s nuclear lifecycle campus model in Oklahoma begins with expanding capabilities in nuclear fuel recycling. A recycling facility would reduce long-term waste volumes, strengthen fuel security, and support advanced reactor deployment in the state. This campus would include fuel fabrication, converting recycled material into new fuel assemblies for Aurora powerhouses. Building on this foundation, the campus could expand to include additional fuel fabrication and isotope production capabilities. Fabrication facilities could convert deconverted uranium into reactor-ready fuel, further strengthening domestic fuel availability. Irradiation and radiochemistry facilities could support isotope production for medical, industrial, or research uses. Deploying reactors onsite would provide reliable, baseload power for recycling and fabrication operations, while also allowing for the exploration of power purchase agreements with customers in data centers, advanced manufacturing, oil and gas, and other

energy-intensive industries. Co-locating these capabilities would allow power generation, fuel-cycle services, and isotope production to reinforce one another. Thus, creating a vertically integrated nuclear hub that supports reactor deployment while generating additional high-value products from the same ecosystem.

Sub-surface spatial requirements

Q2 above addresses the characteristics of host rock needed for deep borehole disposal. Oklahoma offers multiple regions and potential sites that meet these criteria, giving Oklahoma significant siting flexibility and an ability to work with a wide number of communities that may be interested in hosting ONIC disposal. Here, we focus on the spatial requirements of the site.

ARPA-E-supported analyses indicate an eventual requirement of 70 to 94 boreholes for the full lifecycle waste output from Oklo's recycling facility. This represents an exceedingly small land footprint relative to conventionally mined repository concepts. Assuming 100-foot spacing between boreholes, the repository would have a total subsurface footprint of approximately 0.024 to 0.033 square miles.

Non-spatial site requirements

Oklahoma's existing energy infrastructure provides a strong foundation for ONIC's operational requirements. Deep Isolation's published site evaluation framework identifies deliverability as a core criterion alongside geological safety, and Oklahoma meets every deliverability requirement in that framework. [3]

- **Power:** Oklahoma has substantial generation capacity including natural gas, wind, and emerging solar resources. The Southwest Power Pool transmission network provides grid access across the state. On-site power generation through Oklo's advanced reactors is planned for ONIC, reducing grid dependence for high-demand functions including enrichment and data operations.
- **Water:** Oklahoma has significant water resources including reservoirs, river systems, and groundwater aquifers. Site-specific water rights and cooling water availability will be confirmed during site characterization. Borehole disposal operations require minimal water compared to reactor cooling systems, reducing total site-level water demand.
- **Transportation** (Deliverability Criterion: Met per [3]): Oklahoma's highway network, Union Pacific and BNSF rail lines, and the Port of Catoosa provide multimodal transportation access. The framework identifies transportability as a national screening criterion, specifically the ability to move waste to the repository in a cost-effective manner. Oklahoma's logistics infrastructure satisfies this criterion clearly, drawing on decades of transporting hazardous materials through the oil and gas supply chain.
- **Drillability** (Deliverability Criterion: Met per [3]): the framework identifies in-situ regional stress fields, host rock geomechanical properties, and pore fluid pressures as the key drillability factors. Oklahoma's oil and gas industry has characterized these properties across the state through thousands of deep wells. The same engineering teams, equipment, and operational knowledge used in Oklahoma's energy wells are directly available for borehole repository construction.
- **Operational safety infrastructure:** existing oil and gas well control equipment, blowout prevention systems, and downhole monitoring technology in Oklahoma's industrial base meets or exceeds the operational safety requirements for borehole emplacement operations.
- **Phased and modular deployment:** the borehole repository system is not constructed all at once. Each borehole can be drilled and brought into operation within weeks to months. ARPA-E-supported analyses indicate an eventual requirement of 70 to 94 boreholes for ONIC's full waste output, with an initial deployment of 1 to 3 boreholes, adding 2 to 5 per year in the ramp-up phase. This pay-as-you-grow model means capital is deployed progressively rather than upfront, capacity matches actual waste generation, and the infrastructure scales with the campus without requiring large upfront land commitments or capital outlays.

Q5 Regulatory Framework and Licensing Support

> *How would your state approach regulatory oversight for the Nuclear Lifecycle Innovation Campus? What regulatory streamlining and expedited permitting can your state offer, while ensuring compliance with federal standards? In areas where DOE assumes ultimate safety responsibility, how would your state partner with DOE to exercise oversight?*

Context

Oklahoma's oil and gas regulatory track record, including the Oklahoma Corporation Commission's management of thousands of active wells and its induced seismicity monitoring program, demonstrates the state's capacity to administer technically complex, safety-critical regulatory programs efficiently and credibly.

Oklahoma brings an existing and active regulatory foundation for radioactive materials oversight that most states do not have. Oklahoma became an NRC Agreement State in 2000, making it one of thirty-nine states authorized by the NRC to license, inspect, and enforce safety regulations over radioactive materials within its borders. That agreement, administered through the Oklahoma Department of Environmental Quality's Radiation Management Program, has been in continuous operation for more than two decades and governs approximately 220 active radioactive materials licenses across the state. Oklahoma's radiation management regulations are codified in the Oklahoma Administrative Code under Sections 252:410-1-1 through 410-23-1 and have been determined by the NRC to be consistent with federal standards. Oklahoma's relationship with the NRC goes further still. In September 2023, Governor Stitt formally appointed Keisha Cornelius, manager of Oklahoma's Agreement State radiation program and a seventeen-year member of the Radiation Management Section, as Oklahoma's State Liaison Officer to the NRC under 10 C.F.R. § 73.59(e). In that role Ms. Cornelius serves as the state's designated representative for receipt of Safeguards Information and Safeguards Information-Modified Handling transmitted by the NRC, and she is positioned to keep the NRC informed of regulatory, legislative, and public interest developments in Oklahoma as they occur. This is not a state building a nuclear regulatory relationship from scratch. It is a state with an established, Governor-designated federal liaison already embedded in the NRC framework. Oklahoma is a state with an established regulatory infrastructure that is ready to scale.

Overview of our approach to regulatory oversight of ONIC

Oklahoma is committed to providing a streamlined, coordinated, and investment-ready regulatory environment for the ONIC, while maintaining the highest standards of public safety, environmental protection, and compliance with federal law.

The State recognizes that nuclear safety regulation in the United States is fundamentally a federal responsibility, with the Nuclear Regulatory Commission (NRC), the Environmental Protection Agency (EPA), and the Department of Energy (DOE) each playing distinct and essential roles. Oklahoma’s approach is therefore to act as an enabling and coordinating partner, ensuring efficient alignment between state processes and federal regulatory requirements across all ONIC components, including reactor deployment, fuel cycle facilities, and geologic disposal.

State Coordination and Streamlining

Oklahoma will establish a clear, centralized interface for ONIC regulatory engagement:

- The Oklahoma Department of Environmental Quality will serve as the state's primary radioactive materials regulatory authority, building on its Agreement State role.

- The Secretary of Energy and Environment's office will serve as the state's policy and intergovernmental coordination lead, providing the federal engagement and regulatory alignment function that a project of this scope requires.
- The Oklahoma Advanced Nuclear Energy Office, currently being established through HB3175, will serve as the permanent institutional home for nuclear energy strategy, regulatory coordination, and federal partnership management. [1]

In areas where DOE assumes ultimate safety and stewardship responsibility — particularly for SNF and HLW — Oklahoma will:

- Designate a formal state liaison through the Secretary of Energy and Environment's office to coordinate with DOE's oversight functions.
- Ensure alignment between state environmental and land use requirements with federal nuclear safety oversight
- Support efficient integration of ONIC activities within the federal regulatory framework.

Federal Regulatory Framework

ONIC facilities will be licensed and regulated under existing federal authorities, including:

- **NRC licensing frameworks** for reactors, fuel cycle facilities, storage systems, and (as applicable) geologic disposal facilities
- **EPA environmental protection standards**, including 40 CFR Part 191 for disposal of SNF and HLW
- **DOE responsibilities** for ownership, stewardship, and long-term management of SNF and HLW

For geologic disposal, Oklahoma (and our industrial partners Deep Isolation and Occlusion Nuclear Solutions) understands that deep borehole disposal can be licensed now under existing federal regulations, including EPA’s technology-neutral protection standards and NRC licensing frameworks, subject to appropriate interpretation and coordination between agencies. Our aim will be to start early work on disposal under these existing regulatory frameworks, while in parallel supporting efforts to modernize those frameworks.

Link to Legislative and Compliance Framework

The approach described above is supported by:

- **Targeted federal legislative updates**, particularly to enable additional repository pathways and clarify licensing structures (addressed in Q6); and
- A **comprehensive, lifecycle-based compliance strategy**, including phased licensing, safety case development, and environmental monitoring (addressed in Q12).

Together, these elements ensure that ONIC can be delivered in a manner that is fully compliant, regulatorily credible, and capable of supporting both near-term deployment and long-term system evolution.

Q6 Legislative and Policy Requirements

> *Are there any federal or state statutes, regulations, or policies that need to be amended or enacted to facilitate the development and operation of a Nuclear Lifecycle Innovation Campus in your state? Provide specific examples of legislative barriers and propose strategies to address them, including timelines for legislative changes.*

State-level policy and regulation

Oklahoma has reviewed its state-level statutory and regulatory framework and does not identify any fundamental barriers to the development and operation of ONIC:

- Oklahoma statutes do not mirror the moratorium language found in several other states that restrict nuclear development pending resolution of the federal waste management program.
- Existing state authorities are sufficient to support siting, permitting, and operation of advanced nuclear facilities, fuel cycle infrastructure, and associated industrial activities, subject to coordination with federal regulators.

Just as importantly, Oklahoma's legislative posture is actively supportive of nuclear energy development. The barriers that do exist are primarily institutional gaps rather than legal prohibitions, and legislative and executive actions are already underway to close them.

House Bill 3175, authored by Representative Nick Archer and sponsored in the Senate by Senator Dossett, passed the Oklahoma House of Representatives on March 16, 2026 with 58-31 votes in favor. The bill would establish the Oklahoma Advanced Nuclear Energy Office within the Office of the Governor and assign it to the Secretary of Energy and Environment, creating the permanent institutional infrastructure to coordinate Oklahoma's nuclear energy strategy. It is advancing through the Senate and is expected to pass before the May 29, 2026 legislative deadline. This legislation directly addresses the most significant structural gap in Oklahoma's nuclear readiness: the absence of a dedicated state coordinating office for nuclear energy policy and regulation. [1]

The Oklahoma Energy Initiative Act, passed in 2025, directed the Oklahoma Corporation Commission to conduct a comprehensive nuclear energy feasibility study, which was completed and delivered to state leaders in March 2026. That study concluded that nuclear development in Oklahoma is feasible and identified no statutory prohibitions that would block development. It did identify areas where clarifying legislation or regulatory guidance could reduce uncertainty, which the Secretary's office and the Oklahoma Advanced Nuclear Energy Office would be positioned to address as the ONIC development process advances. [5]

Evolution at the Federal Level: Overview

At the federal level, however, certain statutory and regulatory constraints limit the ability to deploy integrated, modern nuclear lifecycle infrastructure at scale. These constraints are not blockers to our ONIC plans but reflect legacy assumptions that can be addressed through targeted, incremental reforms in parallel with ONIC implementation. Below we look at the changes needed at both the legislative and regulatory levels, then set out how ONIC will work with DOE and Congress to address these in a phased process that enables both early progress and longer-term evolution.

Evolution at the Federal Level: NWPA

The Nuclear Waste Policy Act (NWPA) establishes the current framework for management and disposal of spent nuclear fuel and high-level waste. While this framework provides important clarity on federal responsibility, it also introduces constraints that are directly relevant to ONIC:

- DOE is currently designated as the only repository developer and license holder.
- The statute is closely tied to a single repository program at a single site.
- DOE's ability to advance additional repository pathways is constrained under current interpretations.

These provisions limit flexibility to deploy additional disposal capacity, including regional or technology-specific solutions such as the deep borehole disposal planned at ONIC. To enable ONIC and similar initiatives, targeted amendments or clarifications to the NWPA would be beneficial, including:

- Explicit authorization for development of **additional repository pathways** beyond a single site
- Clarification of the role of **private sector participation in repository development and operations**, under DOE oversight; and
- Flexibility for DOE to **contract for disposal services** using a range of delivery models.

These changes would not alter the federal government's responsibility for waste management, but would enable more efficient and timely fulfillment of that responsibility.

Evolution at the Federal Level: NRC and EPA

At the regulatory level, existing frameworks provide a viable basis for near-term deployment, but would benefit from clarification and modernization:

- **EPA standards (40 CFR Part 191)** are technology-neutral and provide an appropriate performance-based foundation for geologic disposal.
- **NRC regulations (including 10 CFR Part 60 and Part 72)** can, in principle, support licensing of disposal systems and interim deployment pathways.

However, these regulations were developed primarily for mined repositories and do not explicitly address alternative concepts such as deep borehole disposal. As a result, deployment would benefit from:

- **Interpretive guidance** confirming applicability of existing regulations to borehole-based systems.
- Clarification of **licensing pathways** (including potential use of staged or phased licensing approaches)
- Development, over time, of a more **technology-neutral, outcomes-based regulatory framework** aligned with modern disposal concepts.

There is strong industry consensus on the shape of this modernized regulatory framework, across the American Nuclear Society [16][17], the Nuclear Energy Institute [18][19], and the U.S. Nuclear Industry Council [20][21], so ONIC and DOE can move quickly and with wide support.

A Twin-Track Approach to Reform

In summary, ONIC does not depend on wholesale regulatory reform to proceed. However, targeted updates to the federal statutory and regulatory framework—particularly under the NWPA—would significantly enhance the ability to deploy scalable, cost-effective, and innovative disposal solutions.

Oklahoma therefore proposes that ONIC serve as a platform for implementing a twin-track approach:

- **Near-term deployment under existing authorities**, using current EPA and NRC frameworks with appropriate interpretation and coordination; and

- **Parallel development of targeted legislative and regulatory updates**, informed by real-world experience from ONIC deployment.

Oklahoma stands ready to work with DOE, NRC, EPA, and Congress to deliver this approach, using ONIC as a practical platform to inform and accelerate their development. This approach enables Oklahoma and the United States as a whole to move forward immediately, while developing a more durable and flexible regulatory framework for the future.

Q7 Timeline for State Support

> *What is your state's proposed timeline for providing regulatory approvals, infrastructure development, and community agreements to support the Nuclear Lifecycle Innovation Campus? Include key milestones.*

Oklahoma is prepared to move on an aggressive timeline consistent with DOE's stated preference for early action and the urgency of the national energy security challenge.

- 2026 Q2: HB3175 signed into law, establishing the Oklahoma Advanced Nuclear Energy Office. DOE-State agreement framework negotiated. [1]
- 2026 Q3: Site characterization initiated for proposed ONIC locations. Environmental baseline studies commenced.
- 2026 Q4: Site selection finalized. Community engagement program launched. University workforce pipeline programs activated.
- 2027: Cameron, Texas deep borehole demonstration Phase I completed, providing first full-scale validation of emplacement and retrieval operations at depth. State regulatory coordination framework fully operational. [4]
- 2027 to 2028: ONIC facility design and permitting advanced for initial components. Deep Isolation full end-to-end system demonstration completed at Cameron. [4]
- 2028 to 2030: Initial ONIC facilities operational. Oklo Aurora powerhouse construction underway at Idaho National Laboratory as precedent for Oklahoma deployment.

Oklahoma is well positioned to pursue nuclear fuel recycling due to its central location and robust transportation infrastructure, including rail and highway, and existing energy infrastructure. If selected as a Nuclear Lifecycle Innovation Campus, Oklo would be interested in siting recycling capabilities in Oklahoma. This pathway would begin with feasibility studies and environmental review, followed by phased NRC licensing and modular construction. While Oklahoma does not have in-state used nuclear fuel, its proximity to states such as Texas, Kansas, Arkansas, and Missouri positions it well to source initial material for recycling. Oklo's used nuclear fuel recycling facility in Oak Ridge, Tennessee, is currently in the NRC pre-application phase, with aims to begin processing fuel in the early 2030s.

Oklo's first deployment of the Aurora powerhouse model, the Aurora-INL is currently undergoing DOE authorization under the Reactor Pilot Program and will be converted to a commercial NRC license in the future. The Aurora-INL broke ground September 22, 2025 and is targeted to reach criticality in early 2028. Prior to being selected under the Reactor Pilot Program, Oklo completed the NRC's Phase 1 pre-application readiness assessment and reported no significant gaps that would prevent the NRC from accepting a future application. The NRC would regulate Aurora-INL and future commercial plants through the Part 52 licensing process, and if approved through operating oversight.

Oklo's subsidiary, Atomic Alchemy, has progressed significantly toward criticality of its demonstration reactor facility in Texas, anticipated to go critical on July 4, 2026.

Q8 Anticipated Public and Stakeholder Concerns

> *What challenges do you anticipate within your state to any of the Nuclear Lifecycle Innovation Campus functions, particularly for sensitive activities such as reprocessing, plutonium handling, or waste disposal?*

Public acceptance is a critical factor across all elements of the ONIC, including reactor deployment, fuel recycling, and waste management. Large-scale nuclear infrastructure projects require sustained community trust, transparent governance, and meaningful stakeholder participation.

Key stakeholder groups that may raise concerns about the ONIC approach include:

- **Local communities near proposed sites:** potential concerns about property values, safety, and long-term liability must be addressed through transparent and sustained communications about:
  - Safety (underpinned by the strength of scientific evidence for the high levels of passive safety ensured by Deep Isolation's deep borehole system)
  - Community benefits, including highly-skilled jobs, underpinned by community benefit agreements.
- **Tribal nations:** Oklahoma has 39 federally recognized tribal nations, more than any other state. Tribal consultation is a required element of the engagement strategy and must begin before site selection. Engagement must respect sovereignty, cultural values, and land-use considerations.
- **Environmental groups:** concerns about waste disposal, water contamination, and long-term liability must be addressed through transparent monitoring programs, independent oversight, and deep borehole disposal's passive safety case.

Within this overall context, geologic disposal in particular is likely to present the most acute challenge. U.S. and international experience shows that many technically sound disposal programs have failed or been delayed due to lack of community trust, insufficient early engagement, or perceptions of inequitable burden-sharing.

ONIC is grounded in a clear understanding of these risks across the full nuclear lifecycle, with particular attention to the lessons learned from past disposal programs.

ONIC is also grounded in Oklahoma's specific nuclear history, that will shape public dialogue around ONIC and must be addressed directly. The Kerr-McGee Corporation operated nuclear fuel processing facilities in Oklahoma from the 1960s through the 1970s that negatively shaped public perception of nuclear industry safety. Any public engagement strategy for ONIC must acknowledge this history honestly and demonstrate how ONIC's safety standards and transparency practices differ from that era.

Our community and stakeholder engagement strategy (as described at Q9) is designed to do precisely this, integrating lessons from Oklahoma with international best practices to establish durable trust, transparency, independent oversight, and demonstrable safety performance as foundational elements of ONIC's approach.

More broadly, we believe that the whole ONIC vision is aligned with the priorities and values of Oklahomans:

- Independent public opinion research conducted by the University of Oklahoma's Institute for Public Policy Research and Analysis, which has tracked nuclear energy sentiment since the

1990s, indicates that public support for nuclear energy has grown as energy security concerns have increased. [5]

- Looking specifically at the disposal challenge, separate independent research shows that four out of five Americans prefer radioactive waste to be disposed of permanently underground rather than stored at the surface, and prefer disposal near the waste's origin rather than transport across communities. Our plan for co-located deep borehole disposal aligns directly with these preferences, offering deep geologic isolation, modular deployment that can be aligned with local consent, and reduced need for long-distance transport.. [6]

In summary, the ONIC consortium understands the challenges, will deploy a delivery model that mitigates many of the concerns communities have historically had about geologic disposal programs, and has designed a strategy for addressing these challenges — through early engagement, co-design, transparency, and long-term partnership — that is set out in Q9.

Q9 Stakeholder Engagement Strategy

> *What is your state's plan to engage stakeholders to ensure timely public acceptance and compliance with regulatory frameworks? Provide a conceptual strategy including community outreach programs, public hearings, Tribal consultations, and partnerships with local organizations.*

Oklahoma's approach to stakeholder engagement will be grounded in participatory governance, with co-design as a core operating principle rather than a supplementary activity. From the outset, the state will structure engagement so that community members, Tribal nations, local leaders, and workforce representatives are active participants in shaping the ONIC alongside scientists, engineers, and policymakers. This will include establishing formal co-design processes such as community advisory councils, facilitated design workshops, and iterative feedback loops that directly inform facility siting, safety systems, environmental monitoring, workforce pathways, and community benefit agreements. These processes will be embedded at each major project milestone and tied to key decision points from application and site screening through siting, permitting, design, and early operations, ensuring that community input is documented, addressed, and incorporated into project outcomes.

By embedding stakeholders into decision-making early and continuously, Oklahoma will ensure that the design and operation of the campus reflect the lived experience, values, and identity of host communities. This approach will move beyond one-way communication toward shared ownership, where technical expertise and community knowledge are integrated to produce more resilient, trusted, and locally aligned outcomes. In doing so, Oklahoma will set a national model for how complex energy infrastructure can be developed in partnership with the communities it serves, delivering not only technical excellence, but long-term social legitimacy and durability.

ONIC's work on stakeholder and community engagement will be led by the state, with support from core partners such as the University of Oklahoma and Oklahoma State University, bringing to bear decades of research on nuclear public opinion and stakeholder engagement, together with extensive experience in development of consent-based siting and communication frameworks. The engagement efforts will also draw on extensive relevant experience from ONIC's key industrial partners:

- **Oklo** has a track record of working closely with stakeholders to build support for projects and navigate regulatory or legislative complexities. Of all companies in the U.S. advanced reactor sector, it has the most experience of navigating and working with the Nuclear Regulatory

Commission. Oklo also has six projects - three reactors and three fuel-related - in DOE licensing. Throughout these projects, Oklo's stakeholder engagement is designed to align with each local community's identity and to build durable trust through early, transparent, and sustained engagement.

- **Deep Isolation** integrates community and stakeholder engagement as a core component of its repository development process, with structured tools and processes informed by international best practice and experience advising governments on nuclear waste programs. In the U.S., Deep Isolation has demonstrated this approach through over eight years of sustained, transparent, and trusted engagement with local stakeholders in Cameron, Texas, where a full-scale non-radioactive demonstration program is being developed. This experience highlights the importance of early and continuous engagement in building community confidence—an area where previous federal demonstration efforts have faced challenges.

The stakeholder engagement process to be deployed for ONIC is summarized in the table below.

Overview of ONIC Stakeholder Engagement Program

Program Element	Key Activities	Purpose
Community Outreach & Public Engagement	Host regular community meetings; conduct open houses; maintain presence at regional events	Supports dialogue on siting, safety, and operations; enables community input into repository siting and monitoring
Engagement with Local & State Government	Coordinate with officials and economic bodies; participate in forums; integrate government and community relations	Aligns permitting, economic priorities, and disposal siting decisions
Environmental & Community Stakeholder Engagement	Engage stakeholders early; provide plain-language education; participate in environmental initiatives	Builds understanding of disposal safety case and environmental protection
Tribal Nation Consultation	Formal consultations; early engagement; ongoing dialogue	Ensures respect for sovereignty and inclusion in disposal siting decisions
Partnerships with Local Institutions & Industry	Build partnerships; workforce development; collaborate with universities and industry	Supports long-term expertise in nuclear and disposal systems
Education, Transparency & Public Understanding	Education programs; clear communication; reinforce safety and stewardship messages	Improves understanding of deep borehole disposal and differentiates modern practices
Long-Term Community Integration	Invest in workforce and community programs; establish benefits; measure success through trust	Supports long-term stewardship and community benefit

This structured, proactive approach directly addresses the concerns identified in Q8, ensuring that potential concerns such as safety, environmental protection, cultural considerations, and long-term community impact are addressed through continuous dialogue and shared decision-making.

Q10 HLW Management, Treatment, Storage and Disposal

> *How would your state implement the management of material requiring long term management? Describe proposed infrastructure (e.g., interim storage facilities, reprocessing options, deep geologic disposal facilities including boreholes) and compliance with state and federal environmental regulations. Specify any existing capabilities.*

ONIC will implement an integrated waste management system in which fuel recycling minimizes waste volumes and hazard, and deep borehole disposal provides a permanent, scalable endpoint for residual high-level waste.

We believe that this waste management approach is likely to be the most technically differentiated element of our NLIC proposal. ONIC's Back-End Fuel Cycle System addresses the full spectrum of waste management functions through an integrated system:

- **Recycling:** significantly reduces both the volume and heat load of waste requiring disposal, enabling more efficient use of disposal capacity, and reducing the number of required boreholes.
- **Interim Storage:** Deep Isolation's supply chain will design and operate interim storage infrastructure on site using a licensed dry cask storage system compatible with Deep Isolation's Universal Canister System. This enables a seamless transition from interim storage to permanent disposal without costly repackaging.
- **Permanent Disposal:** Deep Isolation will develop deep borehole disposal infrastructure for the campus using its Universal Canister System, developed with support from DOE's Advanced Research Projects Agency-Energy. Key features of critical importance to the ONIC mission are:
  - **Universal coverage of ONIC waste streams:** spent nuclear fuel from Oklo's advanced reactors, reprocessing-derived HLW from fuel recycling operations, GTCC waste. Also scalable to other legacy and advanced reactor SNF and selected DOE defense-related waste inventories if ONIC expands its target disposal inventory in future.
  - **Passive safety:** deep borehole disposal provides long-term isolation without active management or institutional controls. It relies on depth, geology, engineered barriers, and conservative design margins. Performance assessments show that even under pessimistic failure scenarios, such as extreme seismic events not experienced in Oklahoma, calculated dose impacts at the surface remain far below regulatory limits. [4][7][8]
  - **Strong fit with Oklahoma geology:** As discussed at Q3, Oklahoma meets all preliminary site-screening criteria in Deep Isolation's published site evaluation framework [3], providing wide siting flexibility. The Anadarko Basin and other Oklahoma sedimentary and basement rock formations provide suitable depth, low permeability consistent with the less than 10 to the negative 18 square meters threshold for host rocks, and hydrogeologic isolation characteristics consistent with the framework's palaeohydrology requirements. [3]
  - **Scalability:** ARPA-E-supported engineering analyses indicate an eventual requirement of approximately 70 to 94 boreholes to dispose of all residual high-level waste from Oklo's recycling facility over its full operating life, representing a total subsurface footprint of approximately 0.024 to 0.033 square miles. These boreholes are not constructed all at once. ONIC's phased deployment model envisages 1 to 3 initial boreholes to validate end-to-end integration, adding 2 to 5 per year through the ramp-up phase, and continuing incrementally over multi-decade steady-state operations. Capital is deployed progressively rather than upfront, and capacity is matched to actual waste generation at each stage.
  - **Mature technology:** Deep Isolation's repository system integrates mature technologies that are used on a daily basis in the oil and gas sector and the nuclear waste handling sector.

> The system as a whole is already at Level 6 on DOE's Technology Readiness Level scale [22], meaning it is ready to start a licensing process. And the full-scale demonstration program at Cameron, Texas, with Phase I underway since the January 2026 groundbreaking, will provide the regulatory proof point needed for licensing discussions. Phase I of the Texas demonstration targets a total vertical depth of over 4,000 feet. Full end-to-end system demonstration is targeted for 2028. [4]

In short, ONIC's integrated Back-End Fuel Cycle System operates as a closed loop. Integration of recycling and disposal within a single campus reduces the need for multiple transport steps and intermediate handling, simplifying logistics and reducing overall system risk. Used fuel from on-site reactors is received and fed into the recycling and separation facility, where usable materials including uranium and transuranics are recovered and prepared for reuse as fuel and in medical isotope production. Recovered materials are fabricated into new fuel and returned to reactors on-site. Remaining high-level waste is immobilized into stable forms and packaged into standardized Universal Canister System canisters. That waste is then emplaced in deep boreholes thousands of feet below ground and permanently sealed. The entire sequence from generation through permanent disposal occurs on a single coordinated campus. Recycling reduces waste volume, heat, and long-term radioactive hazard before disposal, which in turn means fewer boreholes are required and the safety case for each is stronger.

This integrated approach reduces long-term federal liability, accelerates availability of disposal capacity, and provides a practical pathway to resolving legacy and future waste streams. While initial deployment will focus on Oklahoma-generated waste streams, the system is inherently scalable to support additional regional or national waste management needs, subject to state policy decisions.

Q11 State-Specific Limitations

> *What state-specific limitations, regulatory, political, environmental, geologic, or community-based, might hinder the development of any NLIC functions? Provide a general assessment and propose strategies to address them.*

Oklahoma approaches this question with candor. An honest assessment of the state's limitations is more credible to DOE than a response that overstates readiness, and Oklahoma's genuine advantages are strong enough to withstand an honest accounting of the gaps.

The most significant limitation is institutional: Oklahoma does not have a dedicated state nuclear energy office, an NRC-licensed reactor operator workforce, or an established nuclear safety culture within the state's energy sector. No commercial nuclear power generation has operated in Oklahoma, which means there is no state-level precedent for the regulatory coordination, workforce training, or community engagement programs that a nuclear facility requires. These are real gaps. They are also the gaps that HB3175, the CareerTech and university workforce programs, and the ONIC consortium's operational experience from the Cameron, Texas demonstration program are specifically designed to close. [1][4]

Oklahoma's Agreement State status under the NRC provides a meaningful regulatory foundation, but that agreement covers radioactive materials licensing for medical and industrial uses, not reactor operations or fuel cycle facilities. The regulatory capacity required to support an NLIC campus is substantially greater than what the DEQ's current Radiation Management Program administers. Building that capacity will require investment, staffing, and time. Our plan for addressing this is summarized at Q6 above.

Oklahoma's tribal land complexity presents a siting consideration that requires early and sustained attention. The state has 39 federally recognized tribal nations, and tribal jurisdiction, cultural resource requirements, and government-to-government consultation obligations will affect the siting timeline for any ONIC components located on or near tribal land. This is manageable with early engagement but cannot be resolved quickly if it is not addressed from the outset. Our plan for doing so is summarized at Q9 above.

Q12 Environmental and Safety Stewardship

> *What strategies will your state employ to ensure environmental stewardship and radiological safety across all NLIC functions? Provide conceptual plans for environmental monitoring systems, safety protocols, emergency response capabilities, and compliance with federal and state regulations.*

Overview of our approach

ONIC's compliance strategy is grounded in existing U.S. regulatory frameworks and enhanced by a phased, lifecycle-based approach to licensing and safety assurance. We will:

- Ensure full and transparent compliance with all applicable federal and state regulatory requirements.

- Do so through an integrated, cross-campus, lifecycle-based compliance strategy covering siting, licensing, construction, operation, closure, and long-term stewardship of all campus facilities, including reactors, fuel cycle infrastructure, and disposal systems.

Regulatory Framework and Responsibilities

ONIC will operate within the established U.S. regulatory system:

- The **Nuclear Regulatory Commission (NRC)** will license and regulate reactors, fuel fabrication, recycling facilities, storage systems, and (as applicable) disposal facilities
- The **Environmental Protection Agency (EPA)** will provide environmental protection standards, including 40 CFR Part 191 for disposal of SNF and HLW
- The **Department of Energy (DOE)** will retain title to SNF and HLW and responsibility for long-term stewardship and post-closure performance
- The **State of Oklahoma** will support environmental permitting, infrastructure coordination, and regulatory alignment through DEQ and the Office of the Governor

This framework ensures that ONIC operates under **well-established, independent regulatory oversight**, with clear allocation of responsibilities.

Phased Licensing and Safety Case Development

ONIC will adopt a phased licensing approach, consistent with best practice for complex nuclear facilities and aligned with existing NRC and DOE processes.

This includes:

1. **Site Characterization and Early Engagement**

    a. Geological, hydrological, and environmental characterization
    b. Early engagement with NRC, EPA, DOE, and state regulators
    c. Identification of licensing pathway(s) for each facility type
2. **Construction Authorization**
    a. Submission of safety analyses and environmental reports
    b. Design certification (where applicable) for reactors and fuel cycle facilities
    c. Demonstration that siting and design meet regulatory requirements
3. **Operational Licensing**
    a. Authorization to operate based on verified compliance with safety systems, radiation protection, and environmental controls
    b. Implementation of monitoring and inspection programs
4. **Closure and Post-Closure**
    a. Demonstration that disposal systems meet long-term performance standards (e.g., EPA Part 191)
    b. Implementation of sealing, closure, and institutional controls
    c. Transition to DOE-led long-term stewardship

This phased approach allows progressive regulatory approval, reducing risk while maintaining safety at each stage.

Defense-in-Depth and Safety Case

ONIC facilities will be designed and operated using a defense-in-depth approach, combining:

- **Engineered barriers** (e.g., fuel forms, canisters, sealing systems)
- **Natural barriers** (e.g., geologic isolation at depth)
- **Operational controls** (e.g., radiation protection, monitoring, quality assurance)

For disposal systems, this will be supported by:

- performance assessment modeling;
- demonstration of compliance with long-term dose and release limits; and
- conservative design assumptions to ensure robustness over time.

This integrated safety case will be developed and updated throughout the project lifecycle.

Operational Compliance and Monitoring

ONIC will implement comprehensive operational compliance systems, including:

- **Radiation protection programs** in accordance with 10 CFR Part 20
- **Transportation compliance** using certified packages and licensed operators
- **Safeguards and security requirements** consistent with NRC regulations
- **Environmental monitoring and reporting**, including groundwater, air, and surface conditions

Advanced monitoring technologies will be deployed to provide real-time data and long-term performance tracking, supporting both regulatory compliance and public transparency. This will include implementation of Deep Isolation's unique, patent-protected technologies for monitoring a deep borehole repository, including integrated downhole sensor systems deployed alongside disposal canisters, continuous tracking of environmental conditions (e.g., temperature, pressure, and fluid chemistry) within sealed borehole intervals, and verification of canister emplacement and integrity over time.

Integration Across Campus Facilities

ONIC's integrated design enables coordinated regulatory compliance across reactors, fuel cycle facilities, and disposal systems, including:

- Standardized waste characterization and packaging (UCS)
- Clear interfaces between recycling outputs and disposal inputs
- Alignment of licensing strategies across facility types

This reduces regulatory complexity and ensures consistency across the full nuclear lifecycle.

Transparency, Stakeholder Engagement, and Continuous Improvement

ONIC will invest in:

- Transparent reporting of environmental and safety performance;
- Engagement with local communities, Tribal Nations, and stakeholders; and
- Collaboration with Oklahoma universities to support independent review, research, and workforce development.

This ensures that ONIC's regulatory compliance is not only achieved, but **demonstrated and trusted**.

Q13 Transportation Corridors

> *What intrastate and interstate transportation corridor challenges exist in your state for the secure movement of nuclear materials? Identify existing infrastructure, regulatory requirements, and potential public acceptance challenges. Propose solutions.*

ONIC is designed not only to meet all applicable transportation safety and regulatory requirements, but to minimize the need for transportation of high-level waste through system integration and co-location of key facilities. This represents a departure from the current U.S. approach, which relies on multiple transport steps between generation, storage, and eventual disposal locations, increasing system complexity, cost, and cumulative risk.

Where transport is required — such as for receipt of external fuel for recycling or future regional waste streams — it will be conducted using established, NRC-certified systems and routes, always ensuring safety and regulatory compliance.

Oklahoma's transportation infrastructure is well suited to nuclear material movement, drawing on the state's experience transporting hazardous materials through its oil and gas supply chain.

- **Rail:** Union Pacific and BNSF both operate major rail lines through Oklahoma, providing connections to existing nuclear fuel cycle facilities nationally. Oklahoma's rail network has transported hazardous industrial materials safely for decades.
- **Highway:** Oklahoma's interstate highway system, including I-40, I-35, and I-44, provides major transportation corridors. The state DOT has existing hazardous materials transport protocols that will be adapted for nuclear material movement.
- **Port of Catoosa:** as the most inland port in the United States, located in the Tulsa metropolitan area, the Port of Catoosa provides barge transportation access to the Gulf of Mexico via the McClellan-Kerr Arkansas River Navigation System.

Through this combination of rigorous regulatory compliance and system-level transport minimization, ONIC enhances both the safety and public acceptability of nuclear material management.

Q14 Proposed Agreement Framework

> *What type of agreement should be employed to support the development and operation of the NLIC? Describe how these frameworks will facilitate partnerships and align with private funding and operational needs.*

Oklahoma proposes a layered agreement framework that aligns federal, state, and private sector roles while protecting taxpayer interests and enabling the private investment that is central to ONIC's financial model.

- **DOE-State Cooperative Agreement:** a legally binding agreement between DOE and the State of Oklahoma that provides the central governance framework for ONIC, establishing roles, responsibilities, financial commitments, risk allocation across federal, state, and private sector partners, and oversight mechanisms, grounded in the Atomic Energy Act of 1954, the Energy Policy Act of 2005, and relevant Executive Orders. In particular, the Agreement will:
  - Operationalize the financial responsibility and cost-sharing principles described in Q22, including the roles of private capital, state enabling support, and federal risk-sharing
  - Provide the framework through which revenue and cost recovery mechanisms described in Q23 (such as DOE contracting structures, generator-funded contributions, and phased commercial models) can be developed and implemented.
- **DOE Loan Program Office Guarantee:** Title XVII loan guarantees for eligible nuclear infrastructure components, reducing financing costs and improving project bankability for the commercial components of the campus.
- **Defense Production Act Voluntary Agreement:** for fuel cycle functions with national security applications, particularly HALEU production and defense-related waste management, a DPA voluntary agreement would provide advance purchase commitments and price support that reduce private investment risk.
- **Cost-sharing arrangements:** consistent with the Advanced Reactor Demonstration Program model, cost-sharing agreements for high-risk early-stage components including deep borehole disposal demonstration and advanced reactor deployment.

This structure is designed to translate ONIC’s partnership model into a clear, bankable, and implementable framework that supports rapid deployment while managing risk across all parties.

Q15 Technology and Industry Partnerships

> *What experience, interest, or concern does your state have regarding specific technologies for the NLIC? Describe existing nuclear industry collaborations, state incentives to attract private-sector partners, and proposed partnerships.*

Oklahoma's NLIC proposal is built on demonstrated, validated technology partnerships with a published technical track record. Each technology component has a committed partner with verifiable capabilities.

Integrated Fuel Cycle and Technology Partnerships: Oklo has verticalized our fuel cycle needs in-house, including fuel recycling and fuel fabrication. We do develop external partnerships where

necessary (e.g., selecting Siemens as the vendor for our power conversion system to gain the benefit of a proven, off-the-shelf solution; partnering with Centrus on deconversion); however, our focus is on developing a self-sufficient cycle of products and services to forward both our own deployment strategy and those of other advanced reactor developers. A major source of partnerships for Oklo is outside the commercial nuclear industry and focused on the national laboratory system. In the past 10 years, we have partnered on R&D and testing with Sandia National Laboratories, Argonne National Laboratory, Idaho National Laboratory, and Los Alamos National Laboratory to better our design and demonstrate viability of our chosen materials and processes.

Deep borehole disposal: Deep Isolation's Universal Canister System, developed with DOE ARPA-E support. Through their joint ARPA-E program, Oklo and Deep Isolation have conducted integrated engineering of disposal pathways for both Oklo's advanced reactor waste streams and commercial light water reactor spent nuclear fuel-derived waste. That already-developed system will directly inform ONIC's system design and deployment. Published peer-reviewed safety analyses include post-closure performance assessments [7][8], canister design progress papers [9][10][11][12], waste acceptance criteria development [13], gas generation modeling [14], glass degradation modeling [15], and a site evaluation framework grounded in IAEA SSG-14 with applications to national data in Australia, Estonia, Norway, the UK, and multinational initiatives [3]. Active demonstration at Cameron, Texas. [4]

Subsurface execution: OCNS provides the operational execution capability for borehole repository construction, drawing on Oklahoma’s oil and gas directional drilling and well construction expertise. OCNS also manages long-term life-of-well monitoring for each borehole and deploys a patented blockchain-based chain of custody system that provides an immutable, auditable record of all nuclear waste movement from receipt through permanent emplacement. [4]

University research: the Hamm Institute's configurable wellbore laboratory provides subsurface technology testing infrastructure directly relevant to borehole disposal. OU's thirty years of nuclear public acceptance research provides the public engagement foundation. Both institutions were named contributors to the OCC nuclear feasibility study, March 2026. [5]

Q16 Secondary Waste Management

> *How would your state assist in managing, storing, and disposing of secondary waste streams generated by NLIC activities? Describe compliance with state environmental regulations, access to existing commercial LLW disposal sites, and any proposed state investments.*

ONIC will generate secondary waste streams including low-level radioactive waste from operations and maintenance, mixed waste from fuel cycle activities, and non-radioactive hazardous waste. Oklahoma has existing regulatory infrastructure for hazardous waste management through the Oklahoma Department of Environmental Quality.

ONIC is being designed from the outset as an integrated campus in which waste management — including disposal — is co-located with generation. Deep Isolation’s Universal Canister System and deep borehole disposal capability provide a pathway to manage a broad spectrum of radioactive wastes on-site, reducing reliance on offsite transport, simplifying regulatory interfaces, and enabling a closed, highly controlled waste management system. This means ONIC will both minimize all forms of waste (both primary and secondary), and then manage them with efficiency and effectiveness:

- **Low-level waste:** Routine operations are expected to generate LLW typical of nuclear facilities, including contaminated consumables such as wipes, rags, personal protective equipment, filters, and maintenance materials, as well as activated components and process residues. These wastes will be

characterized, packaged, and disposed of in accordance with NRC and state requirements. Oklahoma has access to commercial LLW disposal sites through the compact system, including the Texas disposal facility operated by Waste Control Specialists in Andrews, Texas, which provides a proven offsite pathway. In parallel, ONIC will evaluate the use of on-campus disposal via UCS/DBD for suitable LLW streams, particularly sealed or containerized forms that benefit from deep geologic isolation. This dual-path approach provides both near-term certainty and long-term system optimization.

- **Greater-Than-Class-C waste:** Deep Isolation's borehole disposal system is specifically designed to accommodate higher-activity waste forms, including selected GTCC waste streams. ONIC will leverage the UCS and borehole disposal wherever possible as the primary pathway for GTCC waste generated on-site, enabling direct disposal without interim storage or transport and aligning disposal design with waste form from the outset. [4]
- **Intermediate-level waste (ILW) and advanced reactor waste streams:** Waste streams arising from advanced reactor operations (including Oklo's Aurora powerhouse) and associated fuel cycle activities may include ILW and other non-LLW radioactive materials. ONIC will evaluate these streams for direct compatibility with UCS/DBD, with the objective of establishing a fully integrated, on-campus disposal solution for reactor and fuel cycle wastes. Designing disposal capability into the campus from inception enables simplified handling, minimized waste transfers, and enhanced lifecycle accountability.
- **Mixed waste:** ONIC will establish a mixed waste management program in coordination with DOE and Oklahoma DEQ. Where treatment is required, existing permitted facilities will be utilized. Where feasible, treated waste forms will be conditioned for compatibility with UCS/DBD, reducing long-term reliance on offsite disposal pathways.
- **Waste generated by borehole operations:**
  Deep borehole operations themselves are expected to generate limited secondary waste streams, primarily consisting of drilling fluids, cuttings, decontamination materials, and small volumes of contaminated equipment or consumables. These wastes will be managed using established oilfield and radiological controls, with segregation between radioactive and non-radioactive fractions. Radioactive portions (e.g., contaminated fluids, filters, or handling materials) will be solidified or otherwise conditioned for disposal via LLW pathways or, where appropriate, UCS/DBD.

By integrating power generation, recycling, and disposal , ONIC reduces the number of processing, transport, and handling steps that typically generate secondary waste, resulting in a more efficient overall system. Standardization through the Universal Canister System (UCS) supports consistent handling, packaging, and disposition of both primary and secondary waste streams, further reducing operational complexity and regulatory burden.

Q17 Government Furnished Data / Technology / Equipment

> *What government-furnished data, technology, or equipment would your state require to support the NLIC functions? Specify whether your state currently holds rights or licenses for such data or technology.*

Oklahoma's NLIC coalition has significant existing access to government-funded technology through Deep Isolation and Oklo's ARPA-E program relationships. In addition, ONIC benefits from extensive existing geological and subsurface datasets derived from state agencies, federal open data, and decades of oil and gas activity. These resources provide a strong foundation for site screening and characterization, and DOE support is not required for access to baseline geological or geospatial data.

Instead, DOE engagement is expected to focus on areas where federal capabilities provide unique value, including:

- **Access to advanced or non-public subsurface datasets** and validated basin-scale models (such as DOE National Laboratory geophysical surveys and GIS constraint layers)
- **Access to national laboratory facilities** to validate emplacement, monitoring, and retrieval systems under representative conditions ahead of field implementation at the ONIC campus
- **Coordinated DOE–NRC engagement** to establish a clear regulatory pathway for deep borehole disposal (see Q12 above for details)
- **Safeguards technology:** advanced material control and accountability systems from DOE's safeguards programs, applicable to ONIC's fuel cycle facilities. Request: access through existing DOE cooperative agreement authorities.
- **Reactor design data:** DOE-held advanced reactor design data relevant to Oklo's Aurora powerhouse and fuel recycling systems. Deep Isolation's UCS was developed with ARPA-E support and existing rights are held by Deep Isolation. [4]

Details of these requirements will be further specified during initial planning and requested through the DOE-State Cooperative Agreement.

Q18 International Export Capabilities

> *How will your state support the development of infrastructure and policies to support international exports of advanced reactors, nuclear fuels, isotopes, and technologies from the NLIC? Describe existing or proposed export infrastructure and strategies to ensure compliance with export control laws and IAEA regulations.*

Oklahoma's NLIC coalition is actively engaged in international markets and positions the campus as a platform for exporting U.S. nuclear technology exports — including advanced reactors, fuel cycle services, and geologic disposal solutions — consistent with national security and export control requirements.

- **Deep Isolation international pipeline and partnerships:** Deep Isolation is actively engaged with multiple international programs addressing high-level waste disposal, including in Europe, the Middle East and Asia-Pacific, with countries that are pursuing nuclear energy but lack viable domestic disposal pathways. Deep Isolation’s Technology to Market Plan for the UCS, developed with ARPA-E, estimates a total addressable market for the system that the company will implement at OLIC that is today valued at approximately $155 billion, growing to approximately $295 billion by 2050. Deep Isolation collaborates closely with the key U.S. government agencies supporting international nuclear deployment — including FIRST, USTDA, and EXIM Bank — helping to align waste management solutions with reactor export programs and enabling project development, financing, and deployment of of an integrated, cradle-to-grave value proposition from the U.S. nuclear industry to overseas countries.
- **Oklo advanced reactor exports:** Oklo's Aurora powerhouse is designed for domestic and international deployment. As the first U.S. commercially-operated advanced fast reactor, an Oklahoma deployment creates a reference site that supports international licensing and export.
- **Port of Catoosa:** Oklahoma's inland port provides existing infrastructure for international cargo movement that can be adapted for nuclear fuel and equipment exports.
- **Export control compliance:** ONIC will establish a robust export control program in compliance with DOE and NRC export licensing requirements, IAEA safeguards obligations, and applicable 123 Agreements. Oklo's existing government affairs infrastructure provides the policy expertise to navigate this landscape. Note that Deep Isolation’s deep borehole disposal technology is not covered by export controls.

At this time, Oklo is prioritizing the U.S. market and does not have existing export requests in motion. Oklo is monitoring the international markets, including engaging with foreign governments, regulators, and the International Atomic Energy Agency. The Government has taken a more active role under the Trump Administration to support U.S. exports; however, more work can be done to support financing of advanced nuclear projects outside the United States.

Q19 Constraints and Inhibiting Factors

> *What potential barriers or impediments could affect the successful siting and operation of an NLIC in your state? What resources, information, or expert assistance would be necessary to ensure communities have adequate knowledge to address concerns?*

Each partner group has been asked to contribute an honest assessment of constraints. The following reflects the coalition's collective view:

- **Timeline:** the April 1 RFI deadline requires compressed mobilization. The coalition has moved with urgency and institutional momentum is strong, but some elements of this response will require follow-on development.
- **Regulatory pathway:** deep borehole disposal does not yet have a fully defined NRC licensing pathway. As described at Q6, we recommend a twin-track approach that will allow us to move forward under existing regulatory powers but would welcome DOE and NRC engagement to establish a modernized regulatory framework that would accelerate deployment within ONIC and support and accelerate scalability of the ONIC model to other states. [3]
- **Workforce gap:** Oklahoma does not have an existing nuclear-trained workforce. CareerTech, OU, OSU, and the Good Jobs Initiative address this gap, but building a nuclear workforce takes years. Early investment in training pipelines is critical. By contrast, in DOE’s high priority field of disposal, we have the skills and supply chain needed to move rapidly.
- **Public acceptance:** Oklahoma's Kerr-McGee legacy requires proactive, sustained community engagement. The OU public opinion research provides a credible foundation, but translating research into lasting public trust requires time and transparency. [5][6]
- **Site characterization:** specific Oklahoma sites have not yet been formally characterized for borehole disposal suitability. Desktop geology assessments are available, but site-specific subsurface data collection is needed. [3]

Q20 Unaddressed Considerations

> *What additional issues should DOE consider in implementing a successful NLIC in your state? Provide insights on state capabilities, policies, or prior experience that reinforce your state's suitability.*

The following considerations are not fully captured in the structured RFI questions but are material to Oklahoma's candidacy:

Job creation at scale: the Department of Energy's own RFI projects that a single Innovation Campus could support 50,000 direct workers and generate 100,000 to 150,000 indirect jobs in construction, supply chains, and community services, contributing billions annually in wages to the host state. Oklahoma's existing oil and gas workforce, the most directly transferable to this technology of any state's industrial base, positions the state to capture a disproportionate share of those roles. These are not entry-level positions. They are high-value roles in drilling and subsurface engineering, manufacturing and fabrication, nuclear operations, and logistics and monitoring, built on skills that Oklahoma workers already have.

- The GKFF Good Jobs Initiative: the George Kaiser Family Foundation's 75 million dollar-plus workforce infrastructure commitment in Tulsa creates a private workforce development resource for ONIC that no other state can match. DOE should weigh this as a material differentiator.
- Oil and gas to nuclear workforce transition: Oklahoma's oil and gas workforce, particularly in directional drilling, well construction, and subsurface monitoring, represents a direct skills transfer pathway to nuclear borehole operations. This workforce exists today and needs retraining rather than building from scratch, which dramatically reduces the development timeline and cost compared to other states.
- The Cameron, Texas demonstration: the active demonstration program, will provide empirical proof of concept for the technology that anchors Oklahoma's waste disposition proposal. Oklahoma's NLIC proposal is the natural next step. [4]
- First-mover economic advantage: states that move first on borehole disposal will capture a disproportionate share of the more than 12,000 jobs that Deep Isolation estimates will be created over 30 years of deployment. Oklahoma is positioned to be that first mover. [6]

Q21 Additional State Information

> *Please provide any additional information about your state's capabilities, policies, or prior experience with nuclear or related projects that supports its suitability to host an NLIC.*

Oklahoma's suitability as an NLIC host state rests on a convergence of industrial heritage, institutional momentum, and private sector commitment that is difficult to match elsewhere.

One detail worth noting explicitly - the leadership of our core partners is Oklahoman:

- Oklo, the advanced reactor company bringing the front-end fuel cycle to this proposal, was co-founded by an Oklahoman. This is not a company being recruited to Oklahoma. It is a company with Oklahoma roots applying its technology to an Oklahoma opportunity. That rootedness matters both symbolically and practically, as it signals a long-term commitment to the state that goes beyond the terms of any single agreement.
- Deep Isolation’s CEO was born and raised in Oklahoma
- Deep Isolation’s sub-surface engineering partner, Occlusion Nuclear Solutions, is headquartered in Tulsa with all employees in Oklahoma.

Oklahoma's subsurface data advantage deserves particular emphasis as a long-term state asset. The oil and gas industry has produced borehole logs, formation characterization data, lithological records, geophysical surveys, and hydrogeological testing results across the state for over a century. That data base does not exist in other states at the same scale or quality. For deep borehole disposal, it translates directly into a faster, lower-risk site characterization process that reduces the time and cost of moving from proposal to construction.

- Industrial heritage: Oklahoma has been a top-five oil and gas producing state for over a century. The skills, infrastructure, regulatory culture, and private capital networks that built that industry are directly applicable to nuclear lifecycle campus operations.
- OCC feasibility study: the Oklahoma Corporation Commission's 350-page nuclear energy feasibility study, approved 3-0 and delivered to state leaders in March 2026, concluded that nuclear development in Oklahoma is feasible. This is the most comprehensive state-level nuclear readiness assessment completed in the country in recent years. [5]

- Legislative momentum: HB3175 passed the Oklahoma House 58-31 on March 16, 2026 and is advancing through the Senate. The state's Republican legislative supermajority and Governor Stitt's support for nuclear energy create a stable environment for long-term nuclear development. [1]
- Private capital commitment: the coalition supporting this response represents a credible private capital commitment to Oklahoma's nuclear future, anchored by Oklo's expressed interest in a multi-billion dollar private investment.
- University research infrastructure: the Hamm Institute's configurable wellbore laboratory, OU's nuclear public acceptance research program, and the combined engineering faculty of OU and OSU provide a research foundation that most states cannot match. [5]

Q22 Financial Responsibility, Cost Sharing and Assurances

> *Describe how your state would approach cost-sharing and risk allocation for the development, operation, and closure of an NLIC. How would your state expect private entities to fund capital costs, operations, decommissioning, and long-term waste management? What state or local contributions would be contemplated?*

ONIC's financial model is built on the principle that:

- private investment leads
- state support enables
- and federal partnership is focused on:
  - reducing first-of-a-kind investment risks
  - while at the same time implementing federal responsibilities for long-term stewardship of the nation's SNF and HLW.

Each component is structured to protect federal taxpayers from open-ended liability, to create the conditions for private capital to commit at scale, and to incubate, test, then scale up innovative commercial models between the private sector, state government and federal government.

Private Sector Leadership (Core Campus Investment)

The commercial components of the campus, including reactor deployment, fuel fabrication, and fuel recycling, will be funded by the private sector coalition. Oklo's multi-billion-dollar investment interest is contingent on the campus proceeding.

Private partners will also lead project development and execution and bring access to private capital markets to support phased deployment.

This establishes ONIC as a **private capital-led initiative**, consistent with DOE’s objective to catalyze rather than fully fund deployment.

Federal Role: Risk Reduction and Stewardship

The federal government plays two distinct roles:

1. **First-of-a-kind risk sharing**
   - Cost-sharing for demonstration and early deployment phases (as per ARDP-style programs)
   - Potential access to funding derived from waste generator contributions (e.g., Nuclear Waste Fund mechanisms)
   - Support for licensing, permitting, and regulatory coordination.
2. **Long-term stewardship and liability**

- DOE retains title to SNF and HLW disposal inventories, with responsibility for long-term stewardship, monitoring, and performance assurance.
- Federal responsibility ensures continuity and insurability beyond project lifetimes.

This structure reduces early-stage investment risk while preserving the federal government's established role in long-term waste management.

State Role: Enabling and Acceleration

State contributions will focus on enabling rapid deployment, reducing non-technical barriers, and improving investment conditions, including through:

- State tax incentives.
- Enterprise zone designations
- Infrastructure investment coordination through the Department of Commerce
- Streamlined regulator and permitting processes.

Specific financial commitments will be formalized through the DOE–State agreement process.

Cost Sharing Across Project Phases

ONIC adopts a phased approach to cost sharing:

- **Early phase (demonstration and initial deployment):**
  - Federal cost-sharing to reduce FOAK (First Of A Kind) risk.
  - Private co-investment.
  - State enabling support.
- **Scale-up phase:**
  - Increasing share of private capital.
  - Revenue-supported operations.
  - Continued alignment with DOE waste management funding mechanisms.
- **Mature operations:**
  - Predominantly private delivery supported by service-based revenues.
  - Federal funding aligned with statutory responsibilities for waste disposal.

More detail on our approach to this is described at Q23 below. Central to this approach is the insight that Oklahoma and its commercial partners cannot and should not specify a detailed commercial model for disposal at this stage without close engagement with DOE. This is because the current statutory framework under the Nuclear Waste Policy Act (NWPA) assigns key responsibilities — including title to spent nuclear fuel and the role of repository license holder — exclusively to the federal government. This means that any viable commercial model must be developed in partnership with DOE to ensure alignment with existing legal authorities, licensing pathways, and funding mechanisms. ONIC is therefore structured to begin within the constraints of the current framework, while providing a practical platform through which DOE, the State of Oklahoma, and private partners can collaboratively develop and test updated commercial and contractual models that increase private investment while maintaining federal responsibility for long-term stewardship

Decommissioning and Financial Assurance

Decommissioning and closure of ONIC facilities will be funded through a combination of private financial assurance mechanisms and federal responsibility for long-term waste management:

- **Private facility decommissioning funds**, established for each commercial facility (including reactors and recycling facilities), sized to projected end-of-life costs and maintained in accordance with NRC financial assurance requirements
- **Surety bonds, escrow arrangements, and other financial assurance instruments** to protect state and federal interests during operations and closure
- **DOE responsibility for long-term stewardship of SNF and HLW**, including holding title to the material, managing post-closure monitoring, and retaining perpetual liability for disposal performance
- **Potential DOE contractual or policy-based financial assurance mechanisms**, which could provide additional confidence to investors and stakeholders by clarifying the federal government's role in meeting long-term disposal obligations

This structure ensures that:

- All lifecycle costs are covered
- Liabilities are clearly and appropriately allocated between private operators and the federal government
- Private capital is enabled to participate with confidence
- No unfunded long-term obligations are created.

Q23 Revenue Sources and Cost Recovery

> *What approaches would your state consider to ensure that beneficiaries of the NLIC contribute appropriately to the costs of long-term waste management, decommissioning, and environmental monitoring?*

Overall approach

ONIC's approach to revenue and cost recovery builds on the framework described at Q22 above. Key revenue sources include:

- **Reactor power sales**: Oklo's advanced reactors will sell power to campus facilities, the Oklahoma grid, and potentially defense installations, generating revenue that supports campus operations.
- **Fuel cycle revenue:** uranium enrichment, fuel fabrication, and recycling operations will generate commercial revenue through contracts with domestic and international nuclear fuel buyers.
- **Isotope production:** medical and industrial isotope production from ONIC's reactor operations will generate revenue in a market projected to reach $21 billion by 2033.
- **Host community agreements:** Oklahoma communities hosting ONIC facilities will receive community benefit payments funded by campus revenues, consistent with the model used for other large energy infrastructure projects.

The commercial model for disposal

ONIC also sees significant scope for commercial revenue generation from disposal operations. Key principles underpinning our approach to the commercial model for disposal are:

- Those who generate waste must pay for long-term waste management, decommissioning, and environmental monitoring, consistent with the polluter-pays principle and the Nuclear Waste Policy Act's funding model.

- DOE retains long-term responsibility for disposal of SNF and HLW, including funding derived from waste generators (whether through the Nuclear Waste Fund or successor mechanisms).
- ONIC provides a pathway to deliver this responsibility more efficiently through partnership with private providers.

There are different pathways through which these principles can be implemented. As discussed at Q22, the ONIC consortium believes it is neither practical nor appropriate to define a single, fully specified commercial model for disposal at this stage. Key elements of the model (such as the structure of DOE contracting, the use of Nuclear Waste Fund–derived revenues, allocation of long-term liabilities, and insurability of risks) are inherently tied to federal policy, statutory authorities, and regulatory frameworks that require DOE participation and cannot be resolved unilaterally by project developers or the State.

ONIC is therefore designed not to presuppose a single financing structure for disposal, but to provide DOE with a **near-term, deployable platform to co-develop and test modern, capital-efficient approaches to waste management funding** — leveraging federal responsibility, generator contributions, private capital, and phased implementation to accelerate progress while managing risk.

Deep Isolation and Occlusion Nuclear Solutions are well positioned to work with DOE in co-designing a commercially-viable model to implement federal disposal responsibilities efficiently and effectively. This includes the ability to mobilize private capital and industrial capability, as demonstrated by:

- Deep Isolation's July 2025 capital raise;
- ongoing ARPA-E-supported co-investments with Oklo; and
- active demonstration activities advancing toward deployment.

Phased Development of Cost Recovery Models

ONIC will serve as a **test bed for modernizing disposal funding models**, developed jointly with DOE on a phased basis. Below we highlight some of the key potential mechanisms that could be used, linked to the phased approach described in Q22

Phase 1 – Demonstration and Initial Deployment

- DOE cost-sharing (including potential use of NWF-derived funding to avoid the need for new appropriations)
- Private co-investment
- State-supported enabling activities.

Phase 2 – Early Commercial Operations

Techno-economic analyses indicate that deep borehole disposal can be delivered at costs below historical NWF fee levels, supporting the feasibility of a pay-as-you-go model. Potential mechanisms may therefore include:

- Service-based payments (per canister or per MTHM)
- Milestone-based payments tied to capacity deployment
- Integration and cost-sharing with DOE-managed waste streams.

Phase 3 – Mature System Integration

Over time, ONIC could support a standardized model in which:

- DOE contracts for disposal services

- Private providers deliver infrastructure and operations
- Cost recovery is implemented through DOE contracting structures funded by waste generators, consistent with federal policy and statutory responsibilities.

This phased and flexible approach enables the United States to move from a deferred, fully federalized disposal model to a hybrid public–private delivery system — in a way that allows the transition to start, evolve and learn from experience, without being fully defined before deployment begins.

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