

# Overview

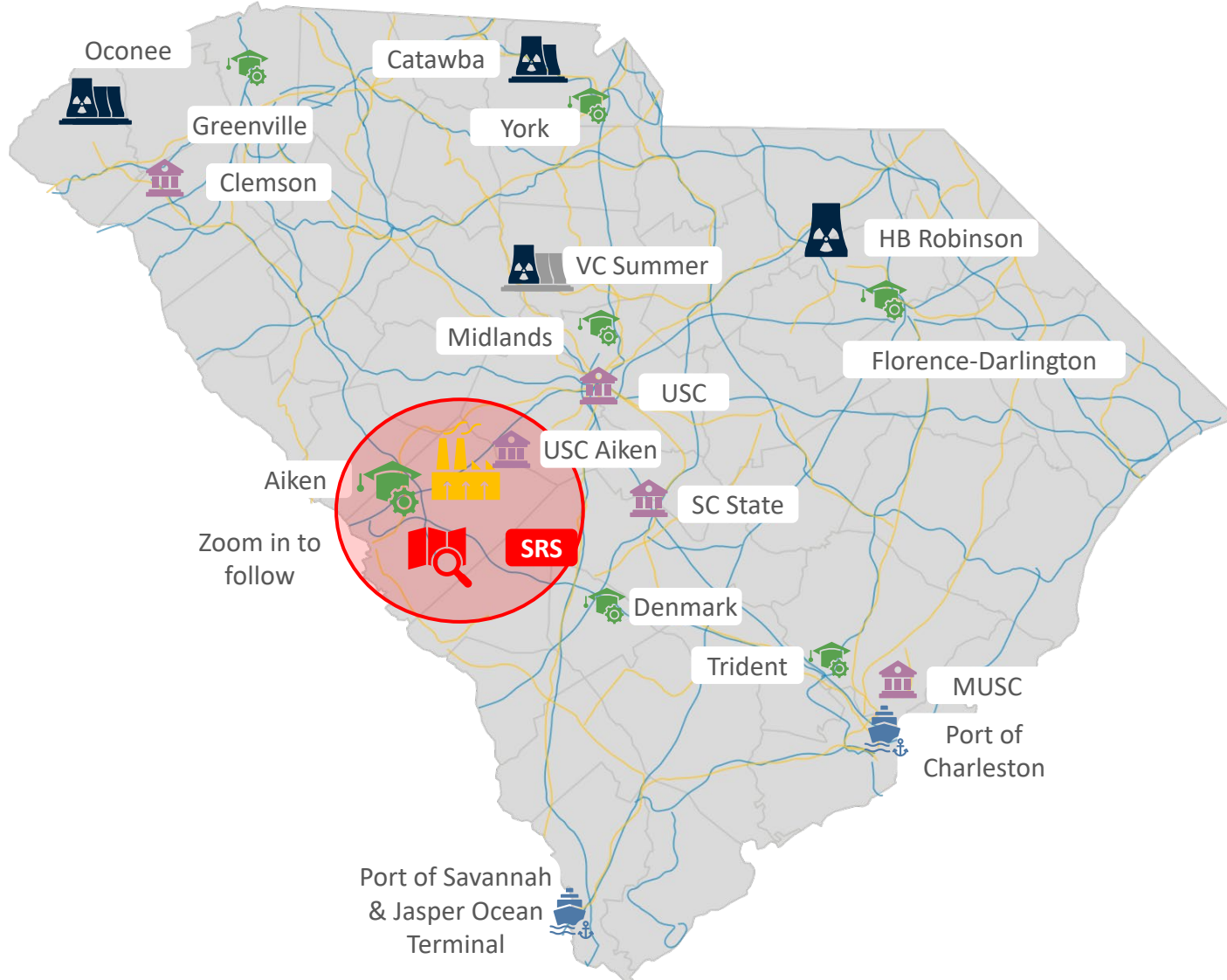
**South Carolina's Response**

**United States Department of Energy's Nuclear Lifecycle  
Innovation Campus Request for Information**

Presentation to the Governor's Nuclear Advisory Council  
April 13, 2026



# Existing Assets & Transportation Corridors



Potential site location



Nuclear power generation  
*Number of stacks is the number of reactors  
Grey is a planned expansion*



Nuclear site



University



Technical college



Port



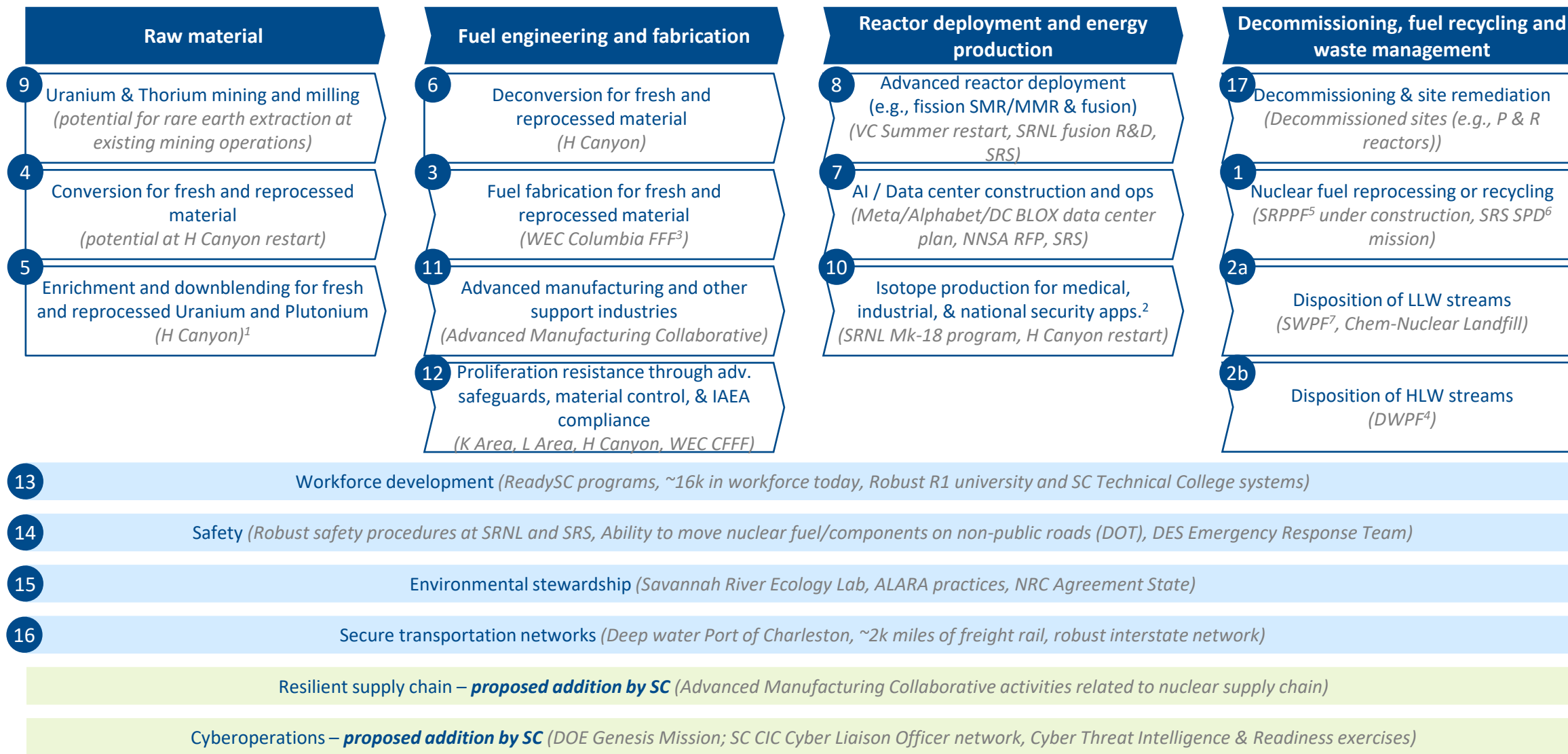
Railroads



Highways



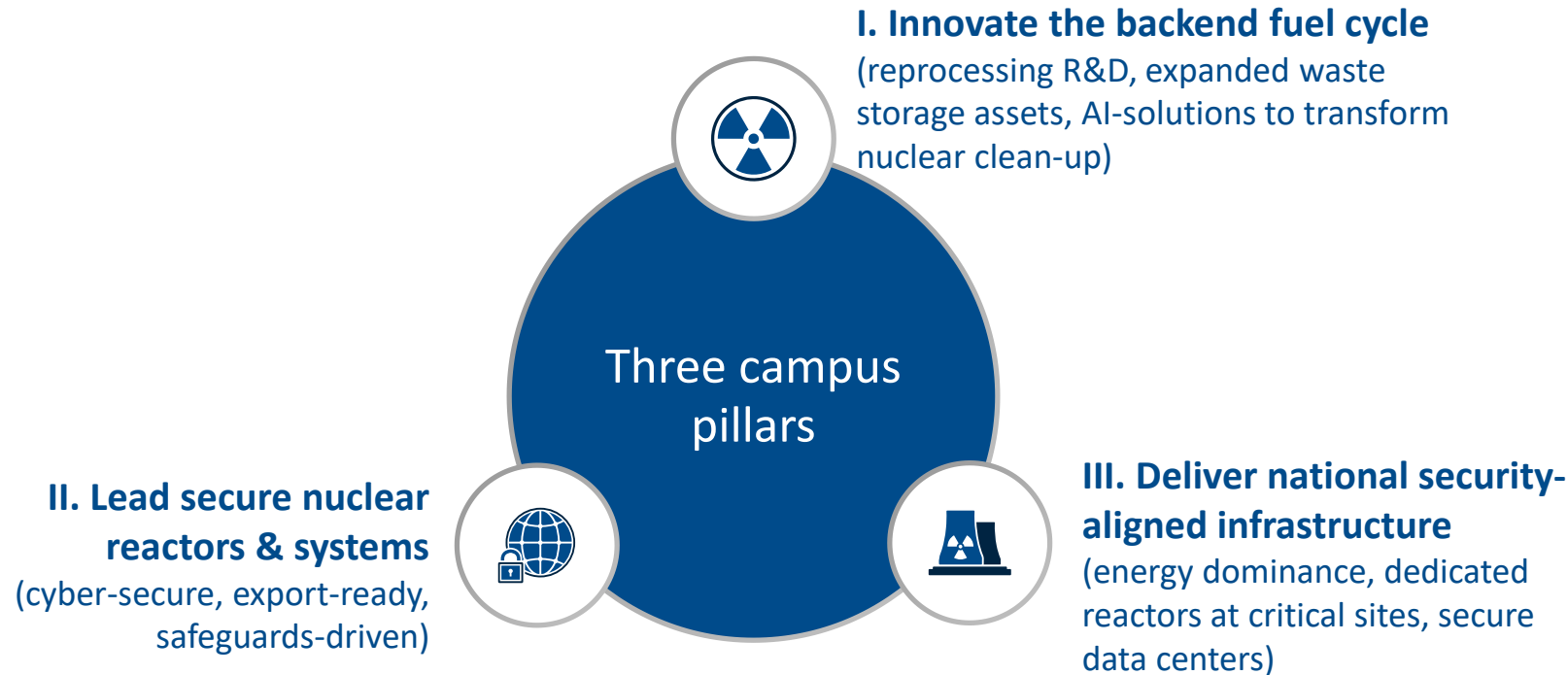
# Existing assets offer functionality across the nuclear lifecycle



1. Current activity limited to downblend, not enrichment 2. Depends on type of reactors built 3. Fuel Fabrication Facility 4. Defense Waste Processing Facility 5. Savannah River Plutonium Production Facility 6. Surplus Plutonium Disposition 7. Salt Waste Processing Facility



# South Carolina: America's First Fully Integrated Nuclear Lifecycle Campus



## Enabled by a foundation of:

Universities & Tech College System, workforce, supply chain, & applied R&D strength

Existing asset base (E2E lifecycle capability, 7 commercial reactors, SRS/SRNL, maritime, defense, & mfg capacity)

Coherence with DOE & DOW priorities (Genesis Mission, Janus Mission, industrial base growth)

## Target outcomes (Non-exhaustive)

- ✓ 2-5 GW of incremental nuclear power gen from advanced nuclear
- ✓ \$60B+ private sector investment to construct and operate
- ✓ ~40k construction workforce needed
- ✓ ~15k direct, on-site jobs at maturity, plus indirect impacts
- ✓ Industry growth vectors in adv. manufacturing, defense, shipbuilding, and medical innovation (e.g., isotopes)



# Deeper dive | Campus goals build beyond the existing foundation



## Innovate the backend fuel cycle

Strengthen South Carolina’s position as the **premier hub for nuclear waste reprocessing** (incl. R&D, assets) **while using AI to transform nuclear cleanup**



## Lead secure nuclear reactors & systems

Position South Carolina as the **leader in secure nuclear systems** by **building reactors** with AI-enabled **cyber defense, adv. threat simulation, and grid resilience**



## Deliver national security-aligned infrastructure

Design **layered infrastructure model**, integrating **grid-connected SMRs, critical need MMRs, & secure microgrids**, to support energy dominance

Description

Potential location

Relevant lifecycle functions

Relevant existing asset base  
*Non-exhaustive*

Coherence with additional priorities  
*Non-exhaustive*

SRS / SRNL / AGNS / Barnwell facility

SRS / SRNL (GECO / EDGE synergy), with connection to the Army Cyber CoE

SRS / SRNL, with connection to statewide reactor sites and critical locations

- 1 Nuclear fuel reprocessing or recycling
- 2 Disposition of waste
- 3 Fuel fabrication
- 5 Enrichment and downblending
- 7 AI / Data center construction and ops.
- 10 Isotope production
- 17 Decommissioning and remediation

- 8 Advanced reactor deployment (e.g., coordination with Janus program)
- 12 Proliferation resistance (e.g., aligned to EO 14299)
- 14 Safety

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- SC Port network (incl. SRS access)
- Existing processing facilities such as Salt Waste Processing and Defense Waste Processing Facility (DWPF), Barnwell

- SC Center for Cybersecurity
- US Cyber Center of Excellence at Ford Gordon
- DOE investment in transmission line access

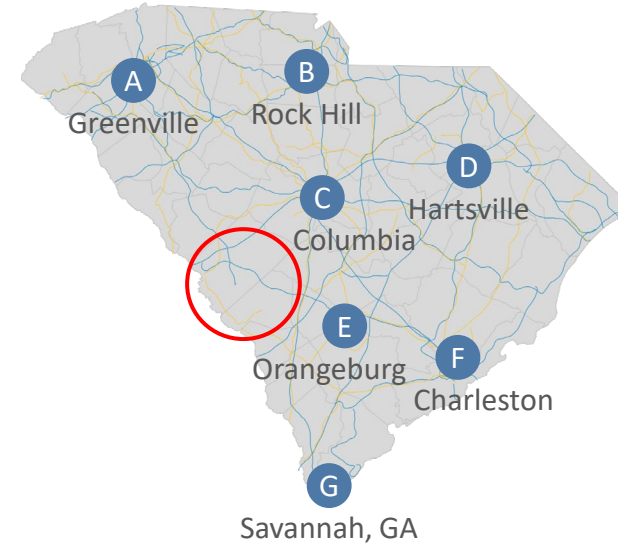
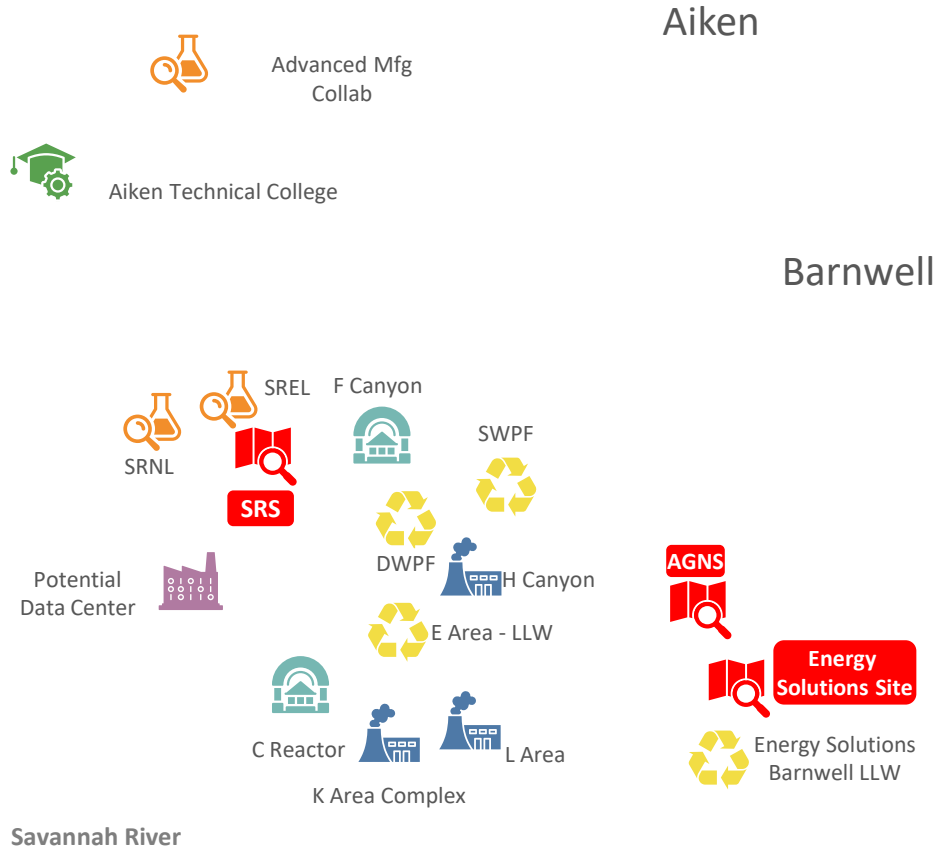
- Significant defense footprint, including Joint Base Charleston and Goose Creek Training Command
- 7 active reactors at 4 plants across SC

- Outstanding data center RFP
- Genesis Mission: Transform nuclear cleanup and restoration

- Genesis Mission: Safeguard nuclear materials from proliferation threats
- Alignment to EO 14299: Deploying adv. nuclear reactor tech. for national security

- Floating nuclear power plants
- Outstanding data center RFP
- Genesis Mission: Scale the grid & energy delivery

# Campus Network: Satellites across the state with Primary Cluster in Aiken/Barnwell



- Core campus
- A Oconee site & Clemson
- B Catawba site & York Tech College
- C VC Summer, WEC Columbia FFF, USC, & Midlands Tech College
- D HB Robinson & Florence-Darlington Tech College
- E SC State & Denmark Tech College
- F Port of Charleston & Trident Tech College
- G Port of Savannah & Jasper Ocean Terminal

	Potential site location		Legacy site
	Technical college		Fuel engineering/fabrication & storage
	Lab		Potential data center
	Waste management		Railroads
			Highways



# Alignment with DOE Timeframe & Milestones Targeted for Completion by EOY 2027

## Target Campus accomplishments



### Expand SC's existing foundation

*Owner: SC Technical College System and universities*

Launch additional nuclear-specific certification programs at SC universities and SC Technical College system (within 6 mo. of DOE authorization)



### Innovate the backend fuel cycle

*Owner: DOE*

Feasibility study on license extensions for SWPF and DWPF for an additional ~40 years beyond 2037 timeframe



### Lead secure nuclear reactors & systems

*Owner: South Carolina*

Launch a Nuclear AI & Cybersecurity Institute via collaboration among defense, universities, and SRNL



### Deliver national security-aligned infrastructure

*Owner: South Carolina & private sector partners*

Break ground on Campus Phase 1 (SMR/MMR siting and federal pre-licensing)

## Adjacent milestones in the SC nuclear ecosystem



### V.C. Summer Units 2 & 3

*Owner: Santee Cooper, Brookfield, & developer/EPC partners*

Feasibility study complete and project path forward defined



### SRS H-Canyon

*Owner: DOE, NNSA, SRS and SRNL*

Readiness to ship first HALEU offsite from H-Canyon to Commercial fuel fabricator



### Westinghouse Columbia Fuel Fabrication Facility

*Owner: Westinghouse*

Expansion underway to support traditional light water fuel & enriched versions to extend time between outages



### DOE AI Genesis Mission and SRS data center RFP

*Owner: DOE, SRS and selected private sector partners*

Selection of SRS as priority implementation site, alongside ongoing data center development



### Alignment with South Carolina's R1 & R2 universities

*Owner: SC universities*

Potential collaboration incl. planned Univ. of SC Nuclear Innovation Center, Clemson NEESRWM<sup>1</sup>, SC State Energy Exploration (E2) Center with NuScale, and MUSC's SC Burn Center and Hollings Cancer Center

1. Center for Nuclear Environmental Engineering Sciences and Radioactive Waste Management  
Note: Assumes federal selection occurs before Q3 2026 and quick identification of suitable private sector partners



**SOUTH** DEPT. OF  
COMMERCE  
**CAROLINA**  
LAUNCH TO LEGACY

Thank you

