



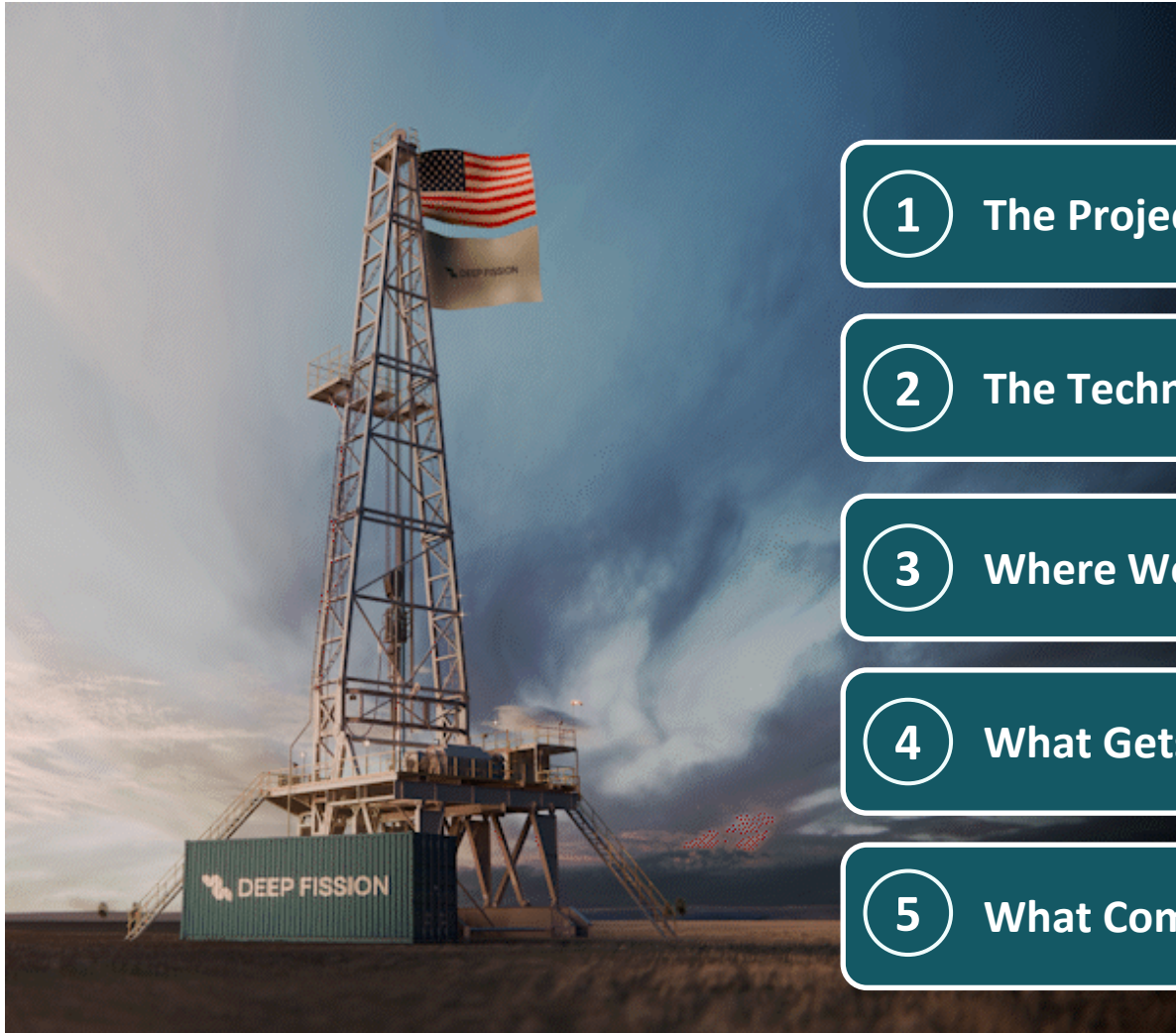
The Deep Fission Pilot Project in Parsons, Kansas

Powering Humanity from a **Mile
Underground**

29 September 2026 | Tim Gnadt, Deep Fission



What I'll Cover Today



1 The Project

Who Deep Fission is, and what is being built at the Great Plains Industrial Park in Parsons, Kansas.

2 The Technology

A standard pressurized water reactor, emplaced one mile underground in a drilled borehole.

3 Where We Stand

First well drilled to roughly 6,000 feet. A commercial-scale proof-of-concept well is next.

4 What Gets Transported

Fresh fuel and reactor hardware in, low-level waste out.

5 What Comes Next

Announced milestones through commercial operation, and where state and tribal engagement matters most.

Key Milestones and Company History

Foundational Tech

Technology Validation

Commercial Deployment



1957

The first large-scale commercial PWR goes critical

1960

Purpose-built tools first reamed a 90" diameter borehole

July 2023

Liz Muller and Richard Muller founded Deep Fission in Berkeley, CA

The Company is the first to be developing a concept for a nuclear reactor designed for deployment one mile underground

December 2025

Announced the Great Plains Industrial Park in Parsons, Kansas, as the site of the Company's advanced reactor pilot project

Received first patent on deep subsurface reactor emplacement and borehole heat exchange architecture; 26 pending in various jurisdictions

June 2026

\$FISN began trading on Nasdaq Global Market, announced closing of \$40M public offering

Announces Customer Pipeline of Up to

18.5 GWe of Generation Capacity

Target: First Half of 2027

DOE Pilot Construction & NRC Licensing Submission

LEU fuel fabrication and loading, drilling and completion of pilot program well, delivery and assembly of reactor and components on-site.

Subject to DOE authorization, plan to demonstrate the pilot reactor and submit for NRC licensing

Target: 2027-2028

High-Volume License & Deployment

Targeting high-volume commercial licensing for deployment of multiple reactors at a single site through clustered boreholes, and subsequently across multiple sites

1958

Wairakei Power Station, the first geothermal power station for commercial use was built

August 2025

Selected to be part of the Department of Energy's novel reactor pilot program

U.S. aiming to expand nuclear energy capacity to 400GW by 2050. Currently, there is 100GW of capacity, of which 64GW come from PWRs

March 2026

Commenced drilling of first data acquisition well at Parsons, Kansas pilot site, marking the Company's transition from concept to construction

Target: Second Half of 2026

Commercial Borehole Proof of Concept

Commercial-sized wellbore construction, emplacement and retrieval, mechanical assembly and thermal testing. Delivery of key components for full system integration

Target: Second Half of 2027

Convert to Commercial Operation

Pilot reactor expected to transition from demonstration to commercial operation following regulatory approval, surface construction, and aligning testing and licensing pathways in parallel



DEEP FISSION

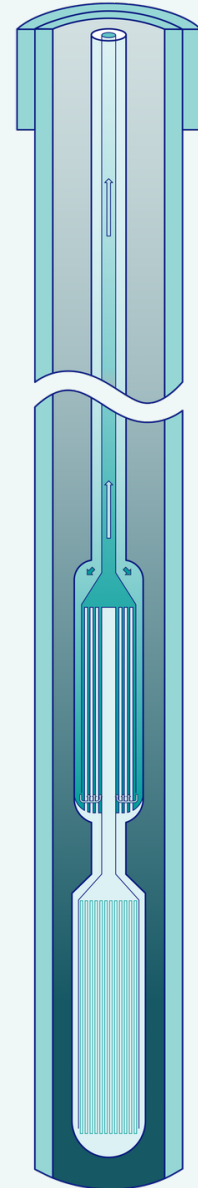
Empire State Building
for scale (1,454 ft tall)

500 ft

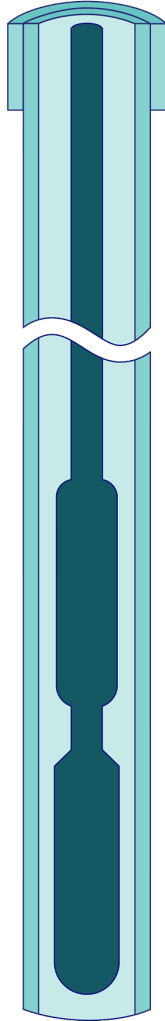
1500 ft

4500 ft

1 Mile

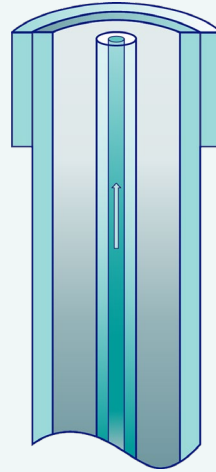


Integrating Three Mature Technologies



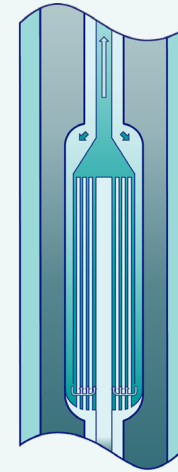
Deep Fission prioritizes deployment over invention. Our Gravity Nuclear Reactor™ design uses established reactor technology, leveraging existing capabilities in the oil, gas, and geothermal industries with the goal of reducing reliance on surface infrastructure, supporting faster deployment timelines, improving security, enhancing safety and lowering costs.

Deep Borehole Drilling



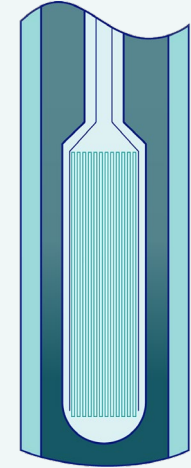
Optimized borehole design is intended to be drillable using proven oil & gas infrastructure for containment a mile underground.

Geothermal Technology



Novel deployment approach will apply established geothermal components and processes for energy transfer to the turbine generator at the surface.

Pressurized Water Reactor (PWR)

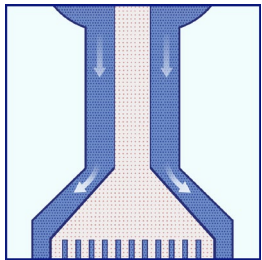


Hydrostatic pressure from one-mile-deep column of water expected to provide 160 atm of reliable pressure, safely and naturally. PWR design uses readily available low-enriched uranium (LEU) fuel.

Simplifying Standard PWR

Removing complexity typically required of surface PWRs, keeping just the core.

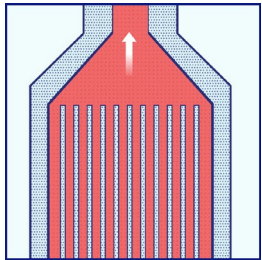
Primary System



1

Primary Coolant is a Closed System (160 Atm)

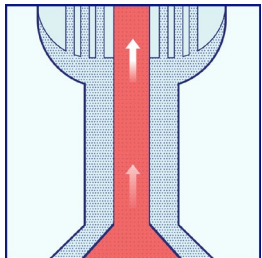
(160 Atm)



2

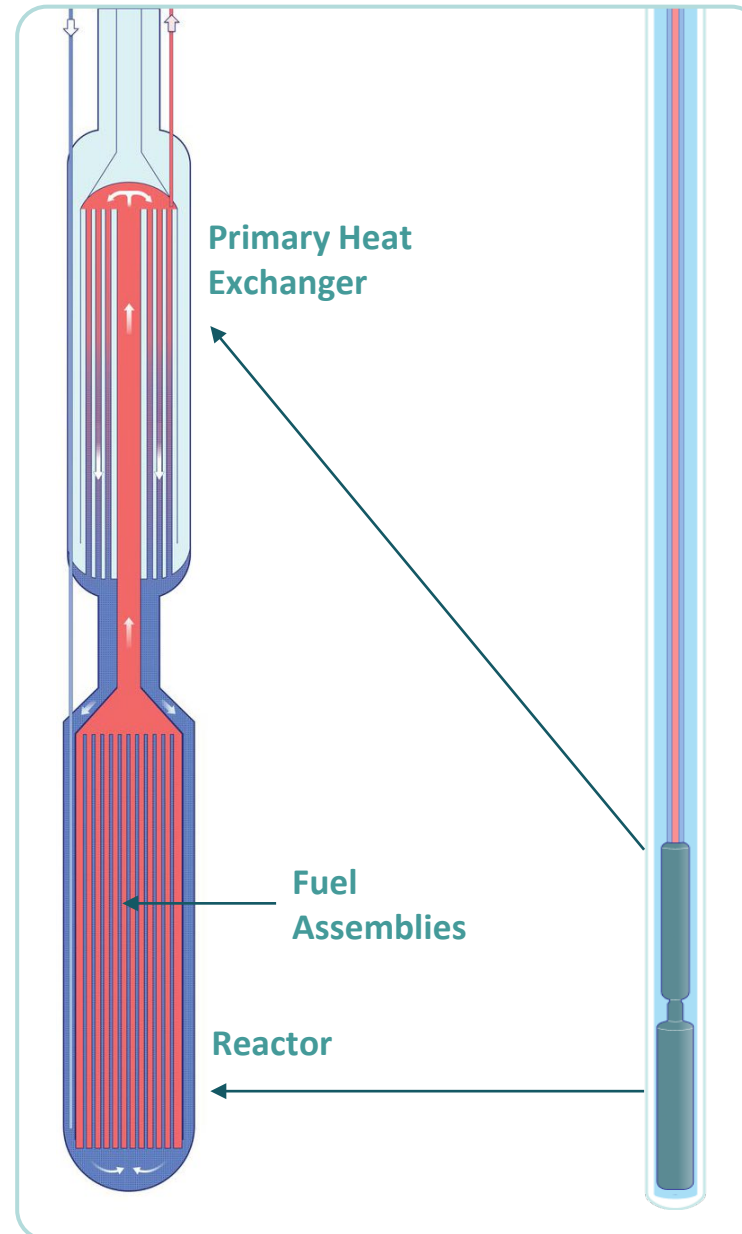
Natural Circulation Water Rises (Hot)

(Hot)



3

Transfers Heat to Secondary System in Primary Heat Exchanger



Highlights



Primary Coolant Pressurized by Gravity (160 Atm)



Heat Transferred to the Secondary System is Pumped to the Surface



DOE Authorizes Operation, NRC Regulates Safety of the Reactor

Established Technology:

Large-scale commercial PWR first went critical on December 2, 1957.¹ There are currently 64 operating PWRs producing 64GW in the U.S.^{2,3}

¹Library of Congress (loc.gov)

²Nuclear Regulatory Commission (nrc.gov)

³Energy Information Administration (eia.gov)

Why Parsons, Kansas

Strong Energy Legacy

Kansas has a long history of energy production and innovation, including Wolf Creek

Skilled Workforce

SE Kansas has deep industrial and energy experience: construction, manufacturing, plant operations

Great Plains Industrial Park

One of the largest in the U.S. at 14,000+ acres with existing infrastructure, rail, and transmission

Community Alignment

Local leadership supports new energy investment and job creation



Project Timeline

1

H1 2026

Data Acquisition and Analysis

2

TARGETING H2 2026

Proof of Concept Well

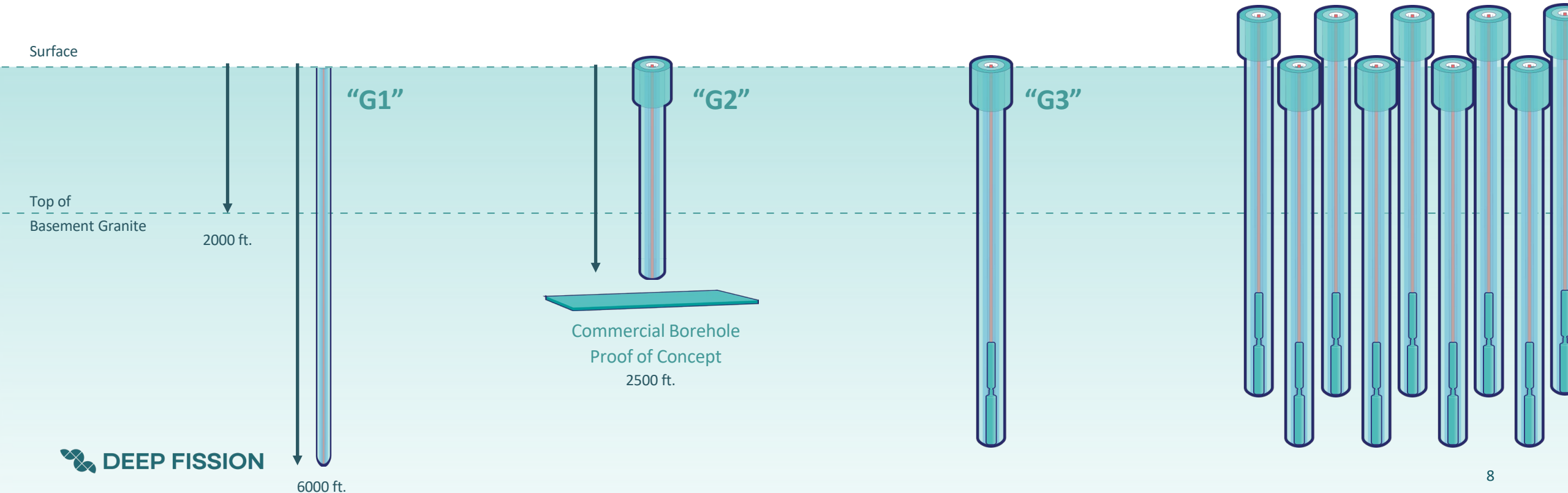
3

TARGETING 2027

**DOE Pilot Demonstration &
NRC License Application**

TARGETING 2027–
2028 AND BEYOND

**Potential Future
Commercial
Deployment Scale**



Next Milestone: ("G2" Well)



Why This Milestone is Important Important to Parsons

1. Is a focused proof-point
2. Ability to test the emplacement and retrieval process in a field setting
3. Ability to test the mechanical assembly and thermal hydraulics in a field setting

Proof of Concept: Commercial Drilling Program

Pursuing Multiple Checkpoints in Parallel



Next Checkpoints

1. Prototype installation
2. Casing integrity
3. Larger borehole execution
4. Thermal performance
5. Progressive depth drilling system
6. Instrumentation hardware integration
7. Operational tool and process development

Seeking to de-risk all aspects of our deployment model through a series of discrete non-nuclear tests.

Completed: Full-Scale Emplacement and Retrieval

Fort Myers, Florida | 3 September 2026

20 ft

Full-size prototype
reactor canister

34 in

Borehole diameter,
~2 in clearance per side

100 ft

Depth reached,
then retrieved

Zero

Tools invented or adapted
for nuclear service

What We Proved

1. Full-size prototype canister, 20 ft
2. 100 ft depth, 34-inch borehole
3. Aligned downhole, then retrieved
4. Standard commercial rig and rigging
5. Commercial drilling and rigging crew
6. No nuclear-specific equipment
7. No fuel or radioactive material

The emplacement and retrieval sequence our deployment model depends on, carried out with equipment available from commercial drilling contractors today.

What Moves To and From the Site

- 1 Reactor Hardware and Surface Plant**

Reactor canister and internals, heat exchangers, turbine generator and controls. Fabricated off site and shipped as conventional oversize industrial freight. Non-radioactive.
- 2 Fresh Low-Enriched Uranium**

Standard commercial LEU assemblies enriched below 5 percent, the same fuel form already moving to the operating U.S. fleet. Not HALEU.
- 3 Drilling and Well Materials**

Casing, cement, rig equipment and completion tooling. Ordinary oil, gas and geothermal freight, already routine on Kansas roads.
- 4 Operational Low-Level Waste**

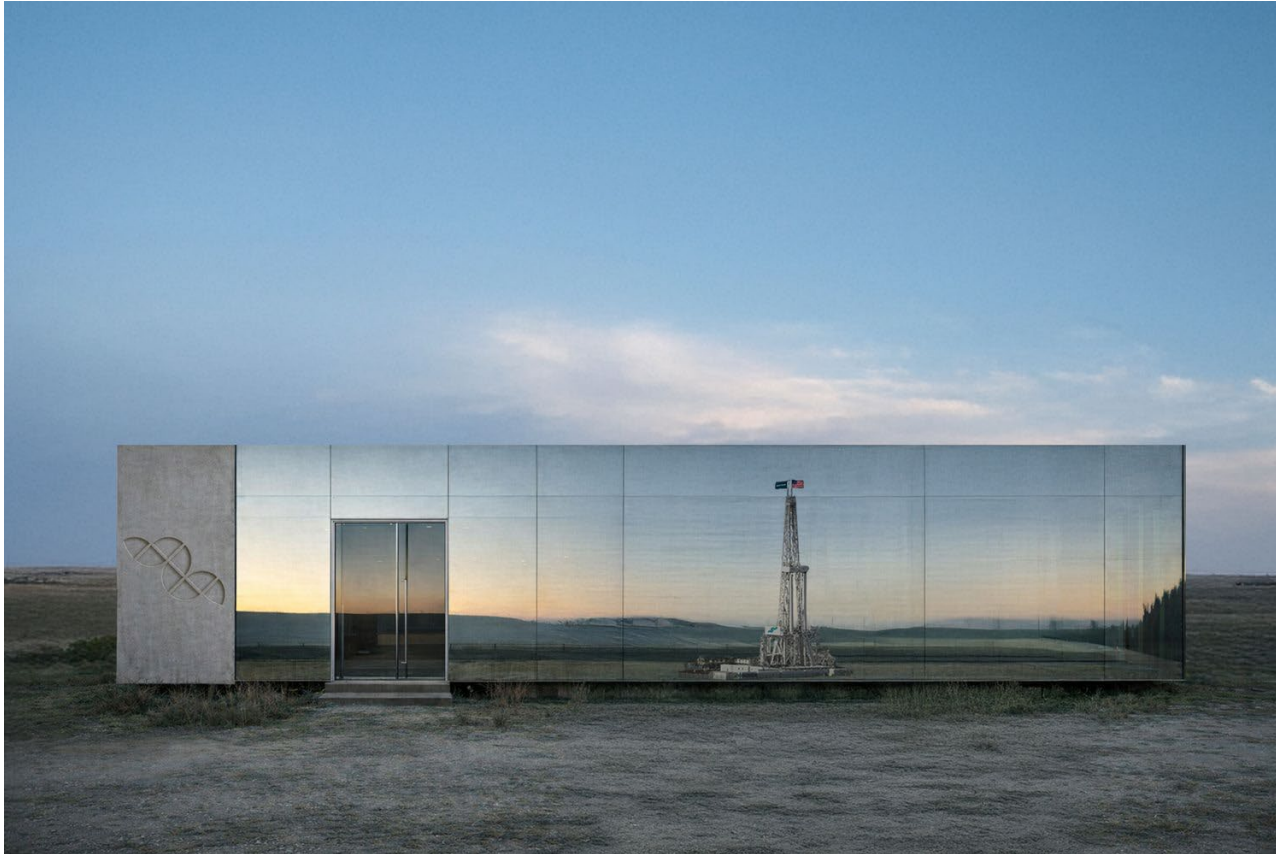
Dry active waste: anti-contamination clothing, gloves, filters, plastics. Plus, spent ion exchange resin. Shipped to a licensed processor or disposal facility.
- 5 Used Fuel Stays On Site**

Placed in on-site interim storage, monitored and retrievable. No disposal of radioactive material on site.
- 6 Shipment Scale**

A reactor of up to roughly 15 MWe holds a small fraction of a large PWR core, so individual shipments are small. Clustered sites mean more shipments, not larger ones.

Radioactive Material: What Arrives, What Leaves

Fresh fuel is the only radioactive material arriving. Used fuel stays on site in interim storage, so the routine outbound stream is operational low-level waste



Inbound: Fresh Fuel

Standard commercial LEU assemblies, enriched below 5 percent. Not HALEU, no novel fuel form, no new package class.

Ships unirradiated in certified fresh-fuel packagings under 10 CFR 71 and 49 CFR.

Outbound: Low-Level Waste

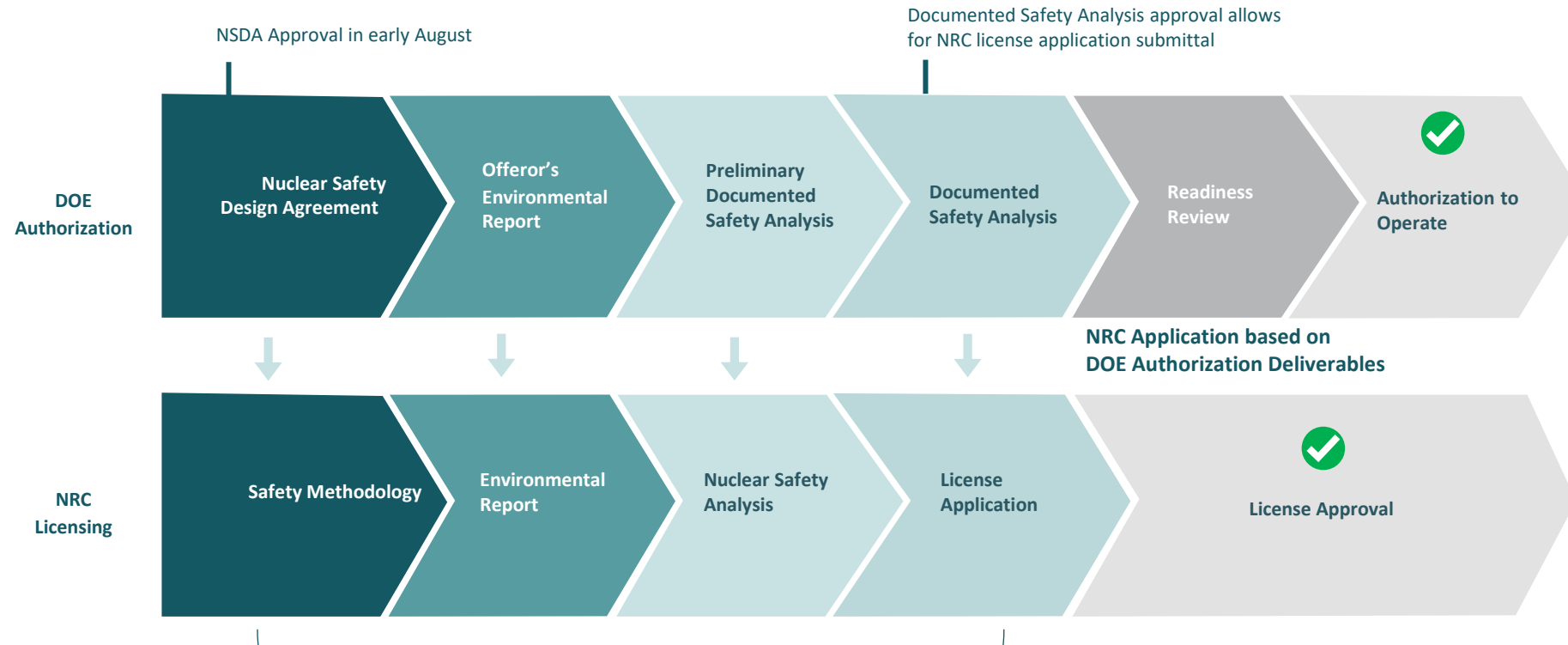
Dry active waste: anti-contamination clothing, gloves, filters, plastics and contaminated trash. Plus spent ion exchange resin.

Shipped to a licensed processor or disposal facility.

Deep Fission Operates in a Market with Rigorous Nuclear Requirements

Proactive engagement with Regulators allows for parallel path - technology development and commercial approval

DOE Authorization & NRC Application Process



Pre-Application NRC Engagements

- Technical & administrative meetings
- Commissioner and Exec meetings (if needed)
- Document submittals: white papers, topical reports, etc.
- Review of Safety Analysis Report outlines or other drafted submittals
- Observation of DOE RPP authorization

Commercialization Pathway



Commercial operation of FOAK Reactor at Parsons, KS



License Amendment application for larger reactor up to 15 MWe for large scale commercialization



Establish corporate and project infrastructure to deliver the 18.5 GWe of non-binding LOI agreements



Continue development of customer pipeline

What Comes Next

Publicly announced milestones, and what each one means for materials movement in Kansas

Milestone	Target	What Moves
Commercial borehole proof of concept ("G2" well)	Targeting H2 2026	Drilling rig, casing and completion equipment. Prototype canister emplacement and retrieval. No nuclear material.
DOE pilot construction	Targeting H1 2027	Reactor components and surface plant delivered and assembled on site. LEU fuel fabrication begins.
Fuel fabrication and loading	Targeting H1 2027	First shipment of fresh low-enriched uranium fuel to the Parsons site, under DOE authorization.
NRC license application submittal	Targeting H1 2027	No material movement. Submittal builds on the DOE authorization deliverables.
Convert to commercial operation	Targeting H2 2027	Routine operation. Used fuel to on-site interim storage. Outbound radioactive shipments are operational low-level waste.
		Used fuel remains in on-site interim storage, monitored and retrievable. Deep Fission will not dispose of fuel or radioactive materials on site.

What to Take Away

- 1 Conventional Fuel and Transport**

Low-enriched uranium below 5 percent, in standard commercial assemblies. Not HALEU, no novel fuel form, no new transport package class.
- 2 Small Inventory Per Unit**

Up to roughly 15 MWe per reactor means a small core and small individual shipments relative to the operating fleet.
- 3 Used Fuel Stays On Site**

On-site interim storage at Parsons, monitored and retrievable. The borehole is a reactor emplacement, not a repository. No used fuel shipments.
- 4 Existing Regulatory Frameworks**

DOE authorizes and regulates the demonstration reactor; NRC licensing follows. Transport stays under NRC and DOT rules already in place.
- 5 Outbound Is Low-Level Waste**

Dry active waste and spent ion exchange resin. That is the routine radioactive shipment Kansas will see from Parsons.

Forward-Looking Statements

This document includes forward-looking statements within the meaning of federal securities laws, including the Private Securities Litigation Reform Act of 1995. Forward-looking statements describe future expectations, plans, results or strategies and can often be identified by the use of terminology such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "plan," "potential," "project," "seek," "should," "target," "will," "would," and similar expressions, although not all forward-looking statements contain these identifying words. These statements include statements regarding Deep Fission's technology development, regulatory activities, commercialization plans, anticipated reactor deployments, strategic partnerships, market opportunities, future operating performance, financing plans and growth strategy.

Forward-looking statements are based on current expectations and assumptions and involve risks and uncertainties that could cause actual results to differ materially from those expressed or implied. Important factors include Deep Fission's ability to obtain financing, secure regulatory approvals, develop and deploy its technology, achieve anticipated technical and economic performance, secure customers and commercial agreements, obtain fuel and critical supplies, manage costs and timelines, and other risks described in Deep Fission's filings with the Securities and Exchange Commission. Deep Fission's forward-looking statements are based on information available as of the date of publication. Except as required by law, Deep Fission does not undertake any obligation to update these statements.



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