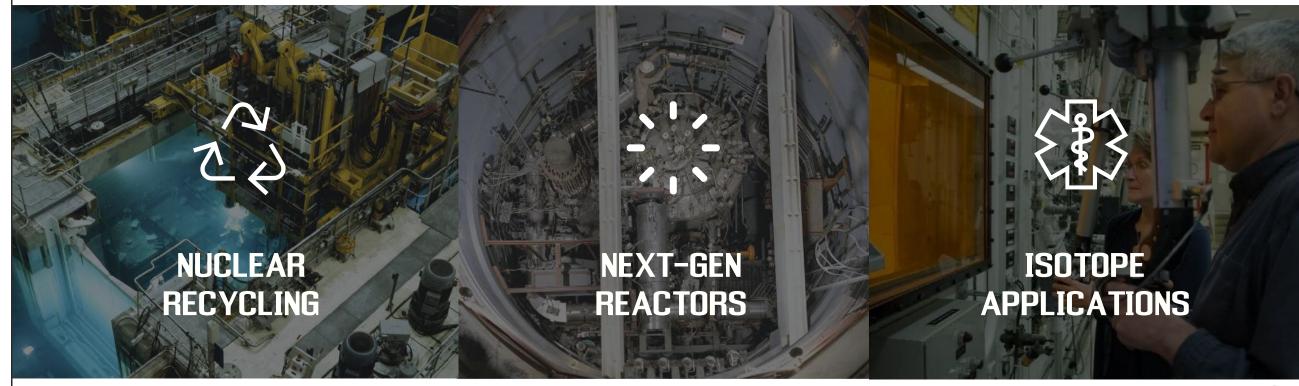
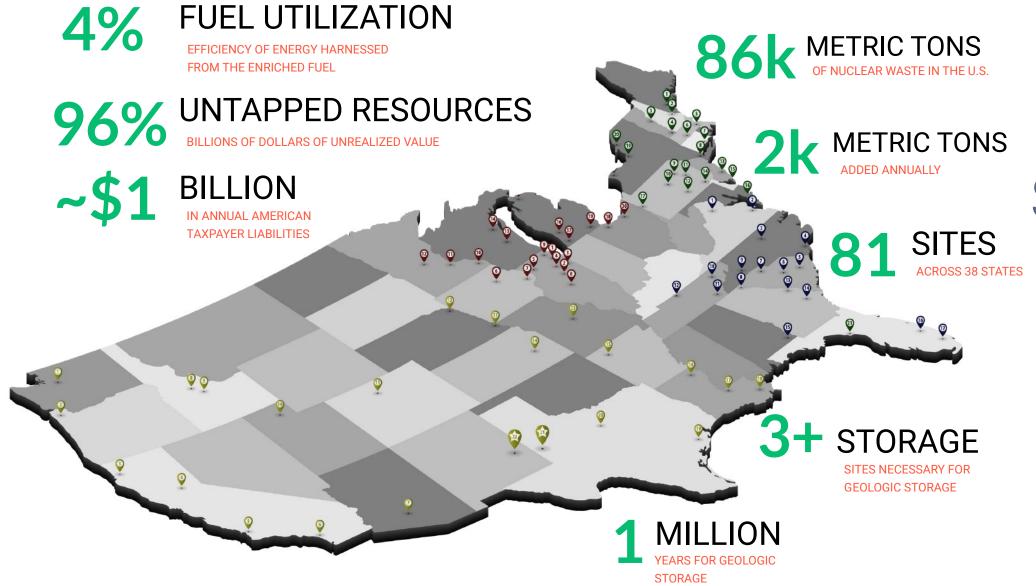


## A Holistic Vision for Nuclear

With a perspective on that extends beyond energy applications, Curio's vision is to lead a Second Nuclear Era dedicated to fostering prosperity for humanity. Our innovative approach to nuclear technology development revolves around a closed fuel cycle solution, incorporating UNF recycling, Gen-IV reactors, and radioisotopes. We are creating a sustainable and comprehensive system that goes beyond traditional nuclear energy paradigms.



# THE UNF INVENTORY & NUCLEAR'S PR PROBLEM



12 STATES

> have moratoria on new nuclear power, with six tied directly to demonstration of UNF disposal or reprocessing

National Conference of State
Legislatures: States Restrictions
on New Nuclear Power Facility
Construction, Sep 2023

# THE CURIO SOLUTION

#### **PROVEN TECHNOLOGIES**

- OXIDATION
- FLUORIDE VOLATILITY

MCycle. · ELECTROLYSIS



MODULAR

- INTEGRATED
- VERSATILE
- PROLIFERATION-**HARDENED**

4000 METRIC TONS

ANNUAL FACILITY THROUGHPUT

MT 800

**URANIUM 3.5 WT% EQUIVALENT** 

MT

TRANSURANIC FUEL

10+

**PRODUCTS** 

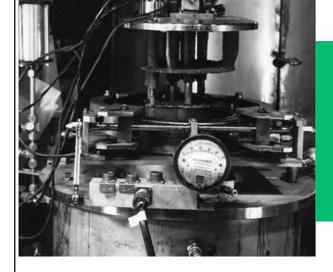
**INDUSTRIAL & MEDICAL** 

**40+** HOPE REACTORS

Curio's vision for a Second Nuclear Era demands a rethinking of nuclear technology to enable groundbreaking leaps forward in safety, efficiency, and economics.

96% REDUCTION ~300 YEAR MAXIMIM STOLEM





#### **LAB-SCALE (2025)**

Proof-of-concept at INL Actual UNF, 100-g scale TRL 4-5



### **PILOT-SCALE (2026-27)**

50kg/batch, validate designs Develop licensing basis TRL 6-7



### ENGR-SCALE (2029)

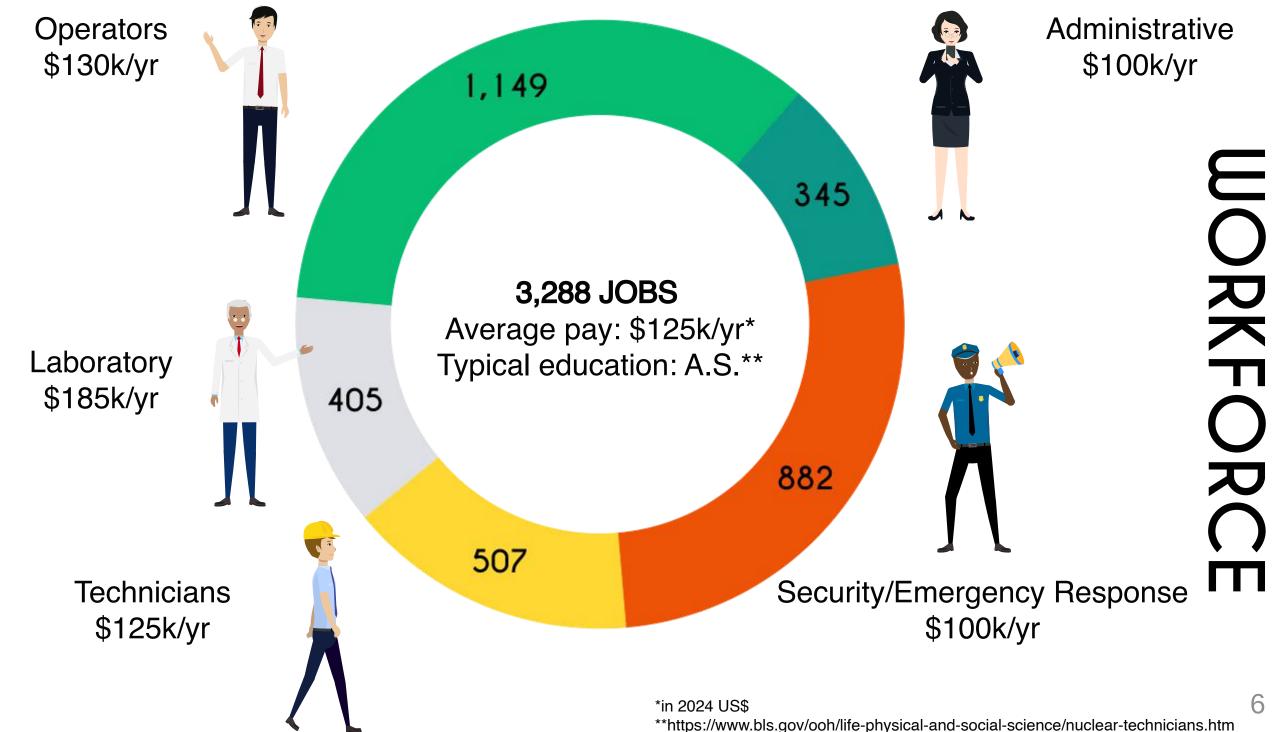
Scaled module > 1MT/batch Safeguards-by-design >96% HLW reduction TRL 8-9

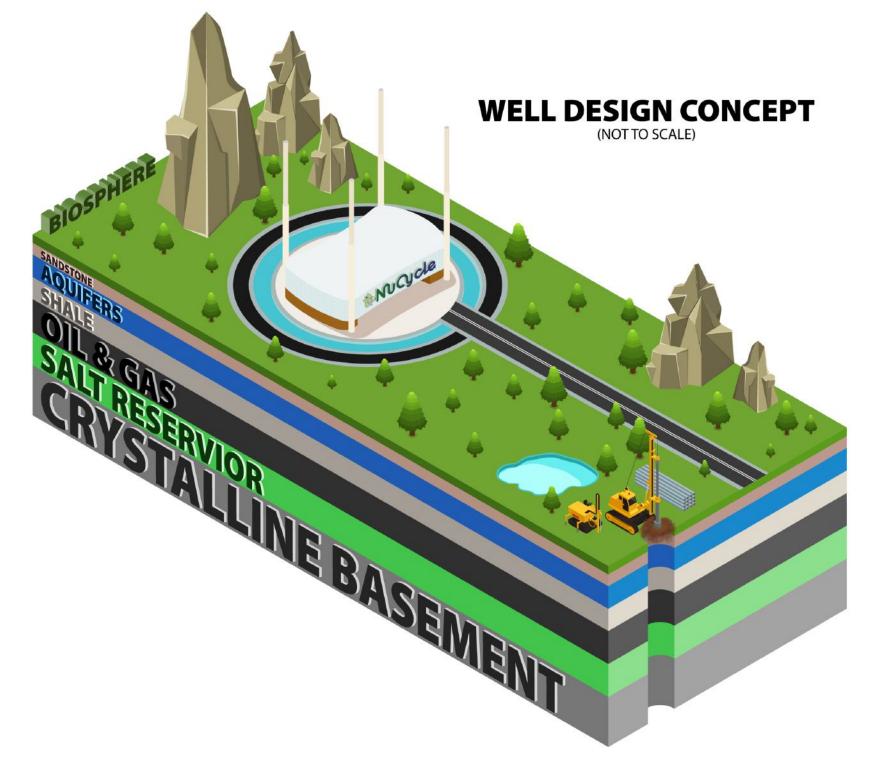




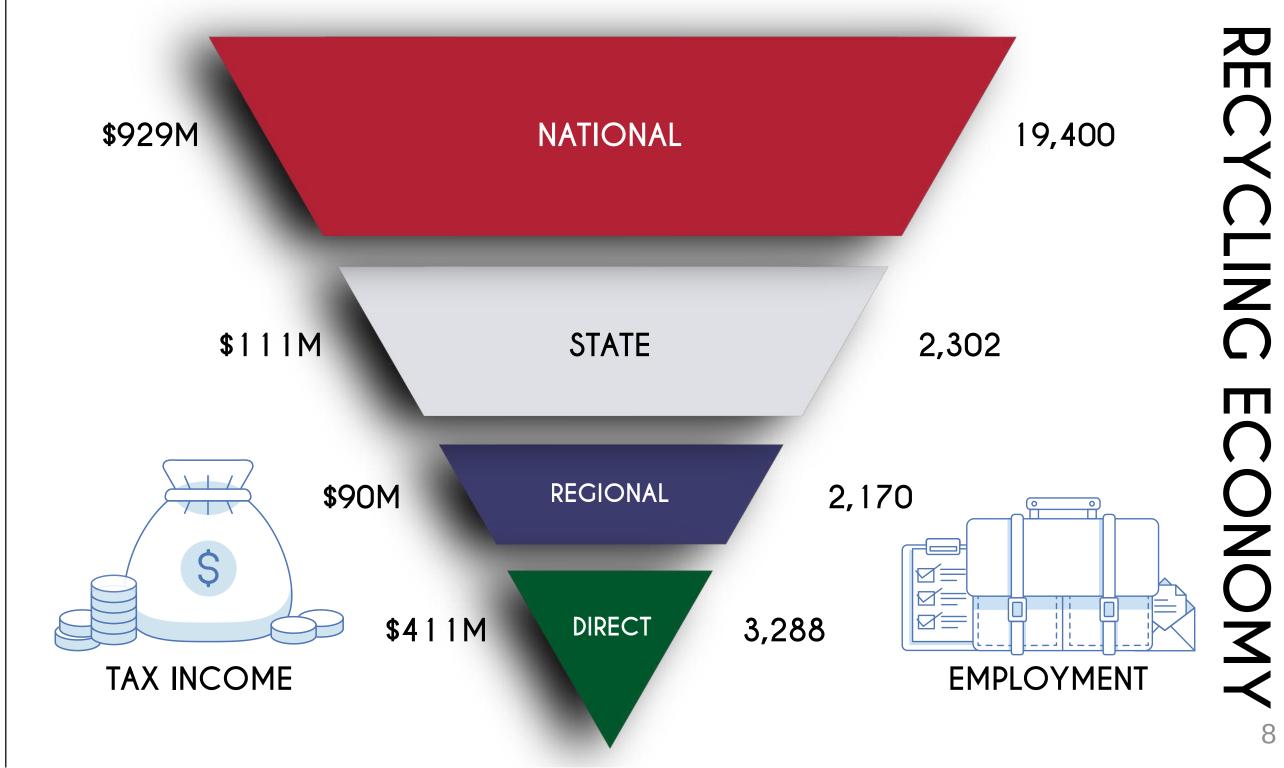
### **COMMERCIAL (2035)**

4000 MT/year scale 40% US uranium, 40MT TRU Multiple revenue streams





- Applicable to any region of the continental United States
- Use of geologic barriers to isolate materials from the biosphere for geologic timescales
- Large economic advantages compared to mined repositories
- NuCycle® reduces high-level waste volumes to levels where only FOUR boreholes will be needed to dispose of all U.S. waste till ~2050
- 12-inch diameter boreholes drilled to depth of 18,000 ft
- Borehole thermal effect distance reduced from >100m to <10m</li>
- Option to dispose of other waste streams locally without requiring transportation



# TIMELINE TO U.S. MARKET



#### STAGE I

FOCUSED ON EARLY REVENUE GENERATION
WHILE ESTABLISHING STRATEGIC
PARTNERSHIPS. PROOF-OF-CONCEPT WITH
VARIOUS LICENSING AVENUES FOR DEMOS

#### STAGE II

COMMERCIAL-SCALE OPERATIONS UNDER NRC LICENSE. MAXIMIZING ISOTOPE RECOVERY AND MARKET PENETRATION. FOCUS ON ADVANCED REACTOR DEPLOYMENT



2023 - 2025

2025 - 2028

2028 - 2032

