

University Fuel Services Program

Andrew Boulanger, Ph.D. University Fuel Services Program Manager Office of Nuclear Energy Department of Energy

February 22, 2024

University Fuel Services Overview

- University Fuel Services program provides U.S. government-owned fuel to 25 NRClicensed university-based research and test reactors at low or no cost to the universities
- Spent or damaged used fuel is returned to the U.S. Government for disposition through the University Fuel Services program
- Some universities reactors supported by the University Fuel Services program are engaged with isotope production
- The following activities are beyond the present scope of University Fuel Services
 - Development of new fuel types for NRC review and approval
 - Providing reactor operation equipment
 - Providing enriched uranium (e.g. HALEU) directly to universities
 - Providing universities with ancillary components related to fuel fabrication or assembly





University Fuel Services Operations

- University Fuel Services program has been implemented through the Idaho National Laboratory (INL) site since 1977
- INL has contractual agreements with 24 universities with NRC-licensed research and test reactors for fuel supply and disposition
 - 12 Training, Research, Isotopes, General Atomics (TRIGA) fuel facilities
 - 8 plate fuel facilities
 - ★ 3 Aerojet General Nucleonics (AGN) facilities
 - 1 PULSTAR facility
 - 1 critical facility



University Fuel Services Recent Activities

- First delivery of 30 newly manufactured TRIGA fuel elements in September 2023
- Storing newly manufactured TRIGA fuel elements at the INL to alleviate possession limit requirements at universities



https://www.energy.gov/ne/articles/penn-state-receives-worlds-first-new-triga-fuel-shipment-more-decade





Advanced Research Reactors

- University based advanced research reactors could provide excellent opportunities
 - Teaching tools for student and future work force development
 - Research opportunities
 - Possible production of isotopes
- Recent changes in authorization show promise in supporting advanced research reactors
 - CHIPS Act of 2022
 - National Defense Authorization Act for FY 2023
- DOE welcomes the potential benefits that advanced research reactors would bring to the nuclear research community





Thank you