

Microreactor Workshop – Inputs (in no particular order)

1) High Assay Low-Enriched Uranium

- Need access to material
- Deconversion to other than oxide

2) Test Platforms

- Non-nuclear
- Integrated heat transfer testing
- Power conversion testing at full scale
- Microgrid integration

3) Demonstration siting

4) Addressing spent/used fuel and waste disposal

- Consider reuse of uranium

5) Licensing

- Autonomous/remote operation
- Transportation
- Risk-informed licensing
- US/Canada coordination on licensing
- EPZ/Emergency planning
- Physical Security

Microreactor Workshop – Inputs (continued)

6) Access to computing capability and codes

- High performance computer access
- Fully coupled codes
- V&V

7) Nuclear Data and Critical Experiments

- High temperature moderators
- Epithermal data
- Beryllium
- HALEU/TRISO
- Composite shielding
- Fission product yields/gamma production
- Structural materials/DPA

8) Fuel and Structural Material Qualification

- TRISO
- Irradiation testing
- Code cases
- Graphite data (low DPA)
- Be data at high temperature

Microreactor Workshop – Inputs (continued)

9) Advanced manufacturing including additive manufacturing

- Code qualification approach
- What can and you cannot/do with AM?

10) Instrumentation, sensors, controls

- Autonomous operations (semi, full)
- Sensors

11) Independent Verification of Designs

12) Fast-flux/high DPA irradiation capability

13) Market/Economic Assessments

14) Advanced heat exchangers

15) Security

- Physical security
- Cyber security
- Physical protection

16) Access to legacy data and programmatic research products

- New production reactor
- Microreactor program

17) Community/user stakeholder engagement