



**Pacific
Northwest**
NATIONAL LABORATORY

Military Mobile Nuclear Power

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Kerry McCabe

U.S. DEPARTMENT OF
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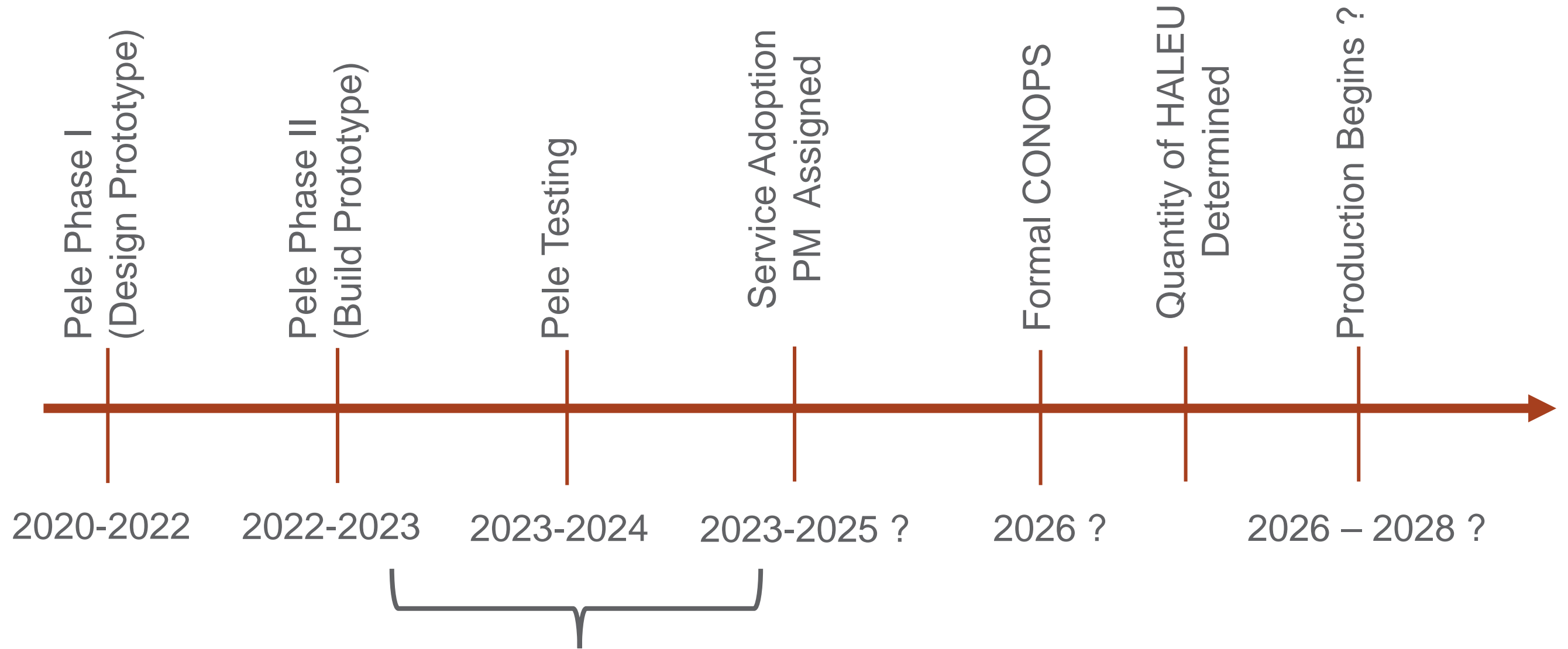
Military Mobile Nuclear Power Update

- Market for HALEU is emerging through the Pele development, DOD's Prototyping effort
 - Pele prototype is a first of a kind advanced reactor design using HALEU/TRISO fuel
 - Prototype system required a small amount of enriched material, this was taken from existing stocks
- Acceptance and adoption of the Pele prototype will drive military needs for high volume enrichment
- Transition of the Pele prototype to a Service is the key decision point. A Service, not DOD, must:
 - Accept mobile nuclear power as a Service requirement
 - Assign an acquisition Program Manager (PM) and create a Mobile Nuclear Power Plant (MNPP) program of record, to fund production and management of the MNPP capability over its lifecycle
 - Develop a formal Concept of Operation (CONOP), conduct acquisition planning, and determine an acquisition objective (number of systems required)

Military Mobile Nuclear Power (Continued)

- Final MNPP system design will drive fuel requirements, procurement objectives.
- PM lifecycle management planning will inform total fuel supply chain, buy quantities, and then the supporting HALEU production needs and schedules
- Differentiation between battlefield use of mobile nuclear power, and the more traditional stationary facility use case, may drive a future decision on use of encumbered vs. unencumbered HALEU for specific defense applications
 - DOD/DOE/NNSA may need a formal legal determination on using encumbered or unencumbered material, for powering military specific applications (weapons/radars/etc.).
 - Even if DoD legally justifies the use of encumbered fuel, policy considerations may direct that defense system hardware critical components not be dependent on foreign nations for supply.

Military Mobile Nuclear Power: Potential Timeline



Most Likely Period for a Transition to a Service

Questions



Thank you

