INDUSTRY PERSPECTIVES ON RULEMAKING FOR GREATER THAN 5% ENRICHMENT

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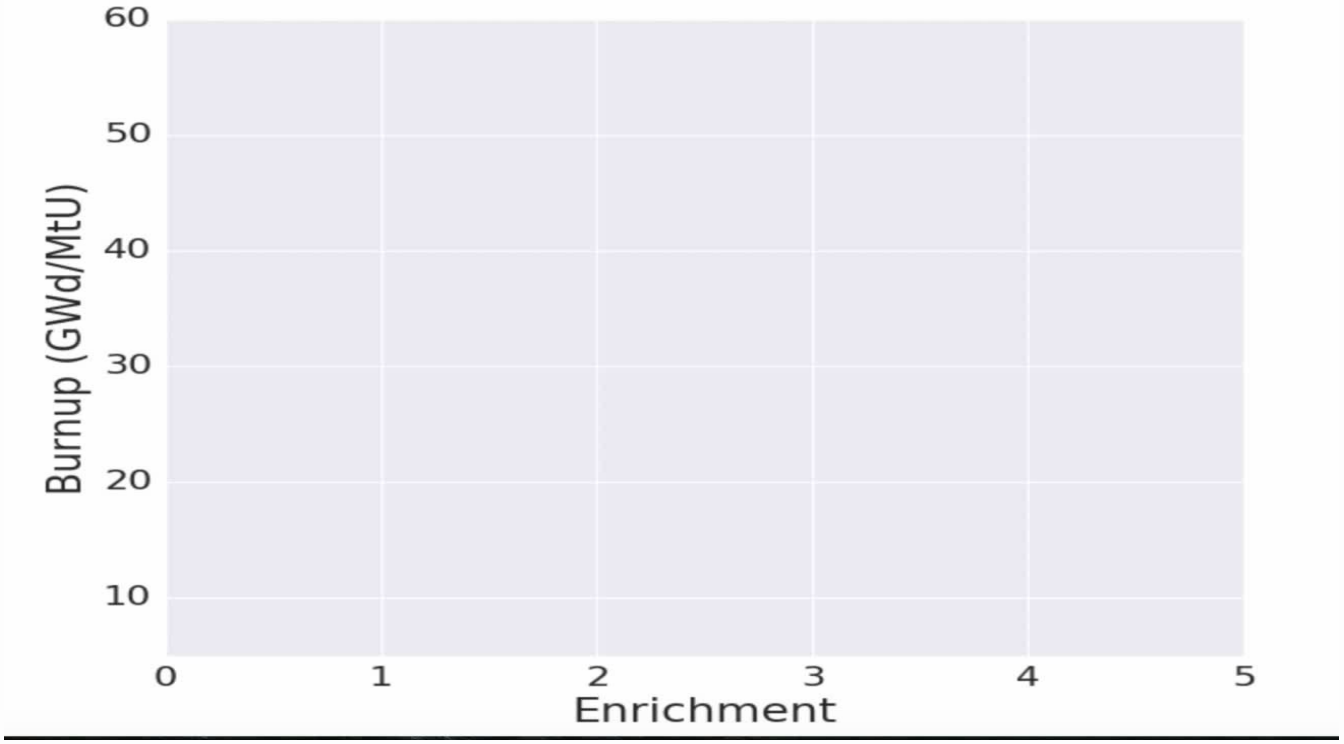
Historical LWR Fuel Efficiency Gains



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Industry ATF/LEU+/HBU Strategic Aspirations

- Develop and deploy fuel technologies that enhance accident tolerance as well as fuel reliability and operational margins while enabling sustained economic performance through minimizing cost and improving efficiency
- **Achieve fuel licensing infrastructure to support burnup and enrichment extensions (LEU+) beyond legacy limits in the mid-2020s**
- Modernize global supply chain to support LEU+ reloads in the mid-2020s
- Safely and economically enable 24-month cycle operation for the entire fleet of existing light water reactors: [Burnups up to ~75 GWd/MTU]
- Commercialization and economies of scale of these advanced fuel technologies through sustainable volumes to meet the global demand

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Industry LWR Perspectives for >5% U235

- Improve regulatory clarity, consistency, and certainty
- Extend enrichment limit to the maximum 20%:
  - Advanced reactors are being licensed and will be deployed with enrichments up to 20% and new LWR fuel concepts may use enrichments up to 20%
  - LEU+ for LWR fleet is currently expected to <10% U235 to meet the current industry strategic aspirations, but why not futureproof to potential possibilities
- Licensees currently using the exemption process for ATF/LEU+ LTAs:
  - Proposed schedule for the new final rule (June 2026) would not impact the existing submittal schedules for ATF/LEU+ LTAs to be loaded in fall 2023
  - Current exemption requests and licensing submittals for the ATF/LEU+ LTAs to be effective operational experience to inform the proposed rulemaking

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Industry LWR Perspectives for >5% U235

- Proposed rule should provide regulatory clarity and efficiencies:
  - Not prescriptive to Zr/UO_2 to allow potential LWR fuel innovations
  - Not limited to a mid-level enrichment limit for LEU+ and move directly to 20%
- Proposed rule should be technology and fuel form neutral:
  - Existing regulatory example: 10 CFR Part 71
  - Reactivity based and technology/fuel form independent
  - Proposed rule to allow for variety of LWR fuel innovations
- Opportunities exist for enhanced regulatory efficiencies:
  - Minimizes regulatory burden of exemption requests for NRC and licensees

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Industry AR Perspectives for >5% U235

- New rule must be set to 20% enrichment:
  - Most, but not all, advanced reactors will use enrichments up to 20% with a number of reactors using enrichments up to a nominal 19.75% (less than 20 to ensure not going over with uncertainty)
- Neutral to technology and fuel form
- Storage configurations for spent fuel will vary by design and may or may not include a pool type configuration and may include more than one storage location; e.g.:
  - TRISO pebbles may be discharged into canisters that will be moved once full
  - Molten salt reactors may discharge a portion of the core or the entire core to a storage location

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Questions