# JOINT FERC-NRC COMMISSION MEETING

OCTOBER 22, 2026

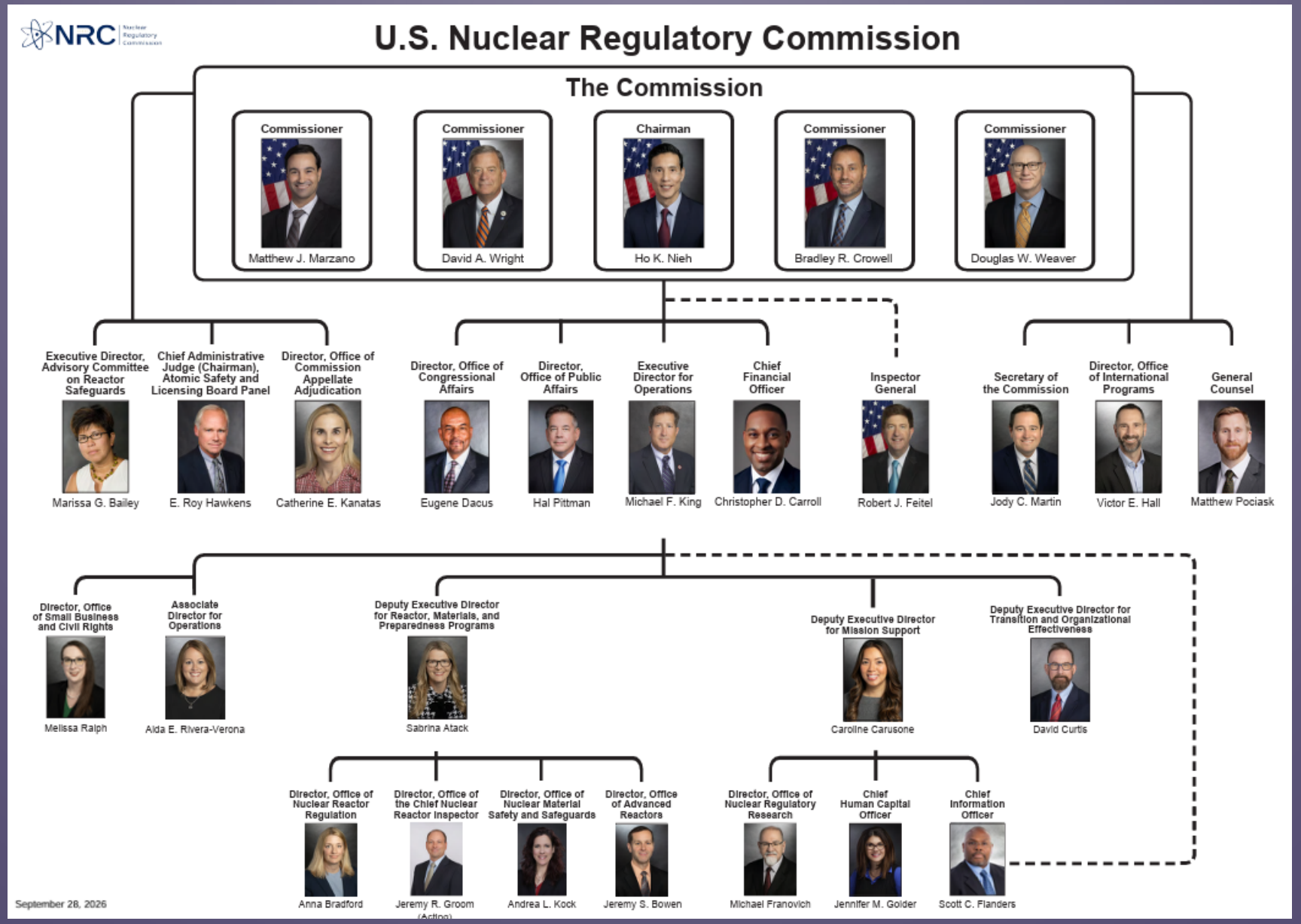


# Jake Zimmerman

Deputy Office Director for Licensing Programs

- Overview of NRC Reorganization

# OVERVIEW OF NRC REORGANIZATION



# OUR CONTINUED PARTNERSHIP CONTRIBUTES TO NUCLEAR POWER PLANT SAFETY

| | |
|---|---|
| Jake Zimmerman | • Overview of NRC Reorganization |
| Jen Whitman | • EO14300 Activities and NRC Reform Efforts |
| Mahmoud (MJ) Jardaneh | • Enhancements and Efficiencies in Power Reactor Programs |
| Josh Borromeo | • Optimizing Reviews for New and Advanced Reactors |



# Jen Whitman

Director, Division of Risk Assessment and Safety Systems

Office of Nuclear Reactor Regulation (NRR)

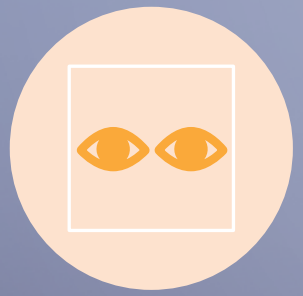
- EO14300 Activities and NRC Reform Efforts

# EO 14300 ACTIVITIES AND NRC REFORM EFFORTS

- More efficient, flexible, and predictable regulation
- Modernizing the regulatory framework and oversight
- Improving licensing timeliness predictability



# MODERNIZING THE REGULATORY FRAMEWORK



Improve efficiency, clarity, and flexibility



Greater use of risk-informed and performance-based approaches



Reduce unnecessary regulatory burden



Maintain reasonable assurance of adequate protection

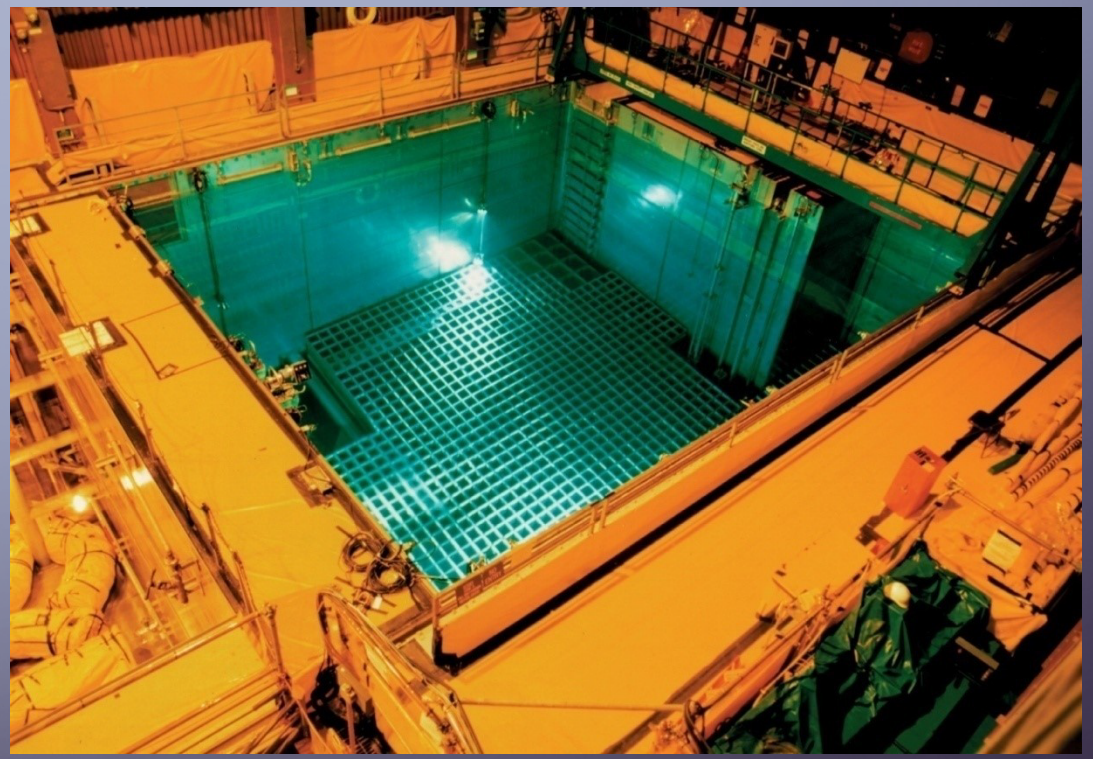
# MODERNIZING REACTOR SITING REQUIREMENTS

- Graded approach to site characterization
- Modernizes the evaluation of site characteristics
- Supports a broader range of potential deployment locations



# PREPARING FOR EVOLVING FUEL TECHNOLOGIES

- Accident-tolerant and advanced fuel designs
- NRC framework evolving to support broader deployment



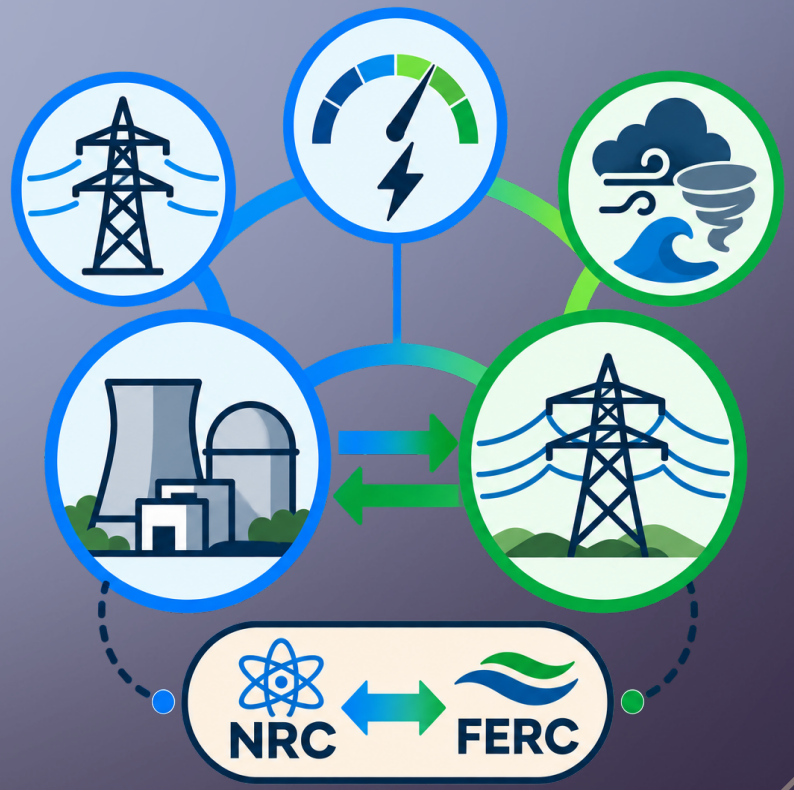
# GREATER FLEXIBILITY IN OVERSIGHT

- 40+ years of commercial nuclear operating experience
- Risk and plant performance inform insight
- Tailor inspection scope and frequency where performance supports it
- Streamline lower-significance reporting and oversight activities



# APPLYING LESSONS FROM OPERATING EXPERIENCE

- Plant and grid conditions can directly interact
- Transmission and voltage conditions can affect plant performance
- External hazards can affect plant and grid performance



# IMPROVING LICENSING PREDICTABILITY

Fixed service fee caps

Tailored fee caps





# Mahmoud (MJ) Jardaneh

Director, Division of Licensing Projects I

NRR

- Operating Reactor Fleet Status
- Restarting Decommissioning Plants
- Readiness for Power Uprates
- License Renewal Efficiencies

# OPERATING REACTOR FLEET STATUS




## FLEET COMPOSITION

- Total Reactors: 95
- Sites: 55
- States Represented: 28

## POWER TO THE GRID

- Nuclear Power Plants account for almost 20% of the nation's electricity.

## RELIABLE SOURCE

- >90% Average capacity factor

# RESTARTING DECOMMISSIONING POWER PLANTS

- Up to 2.2 GWe of generating capacity could return to the grid
- Building on the Palisades experience for Crane Clean Energy Center and Duane Arnold reviews
- Risk-informed, efficient reviews focused on safety and predictable schedules

Palisades Nuclear Plant



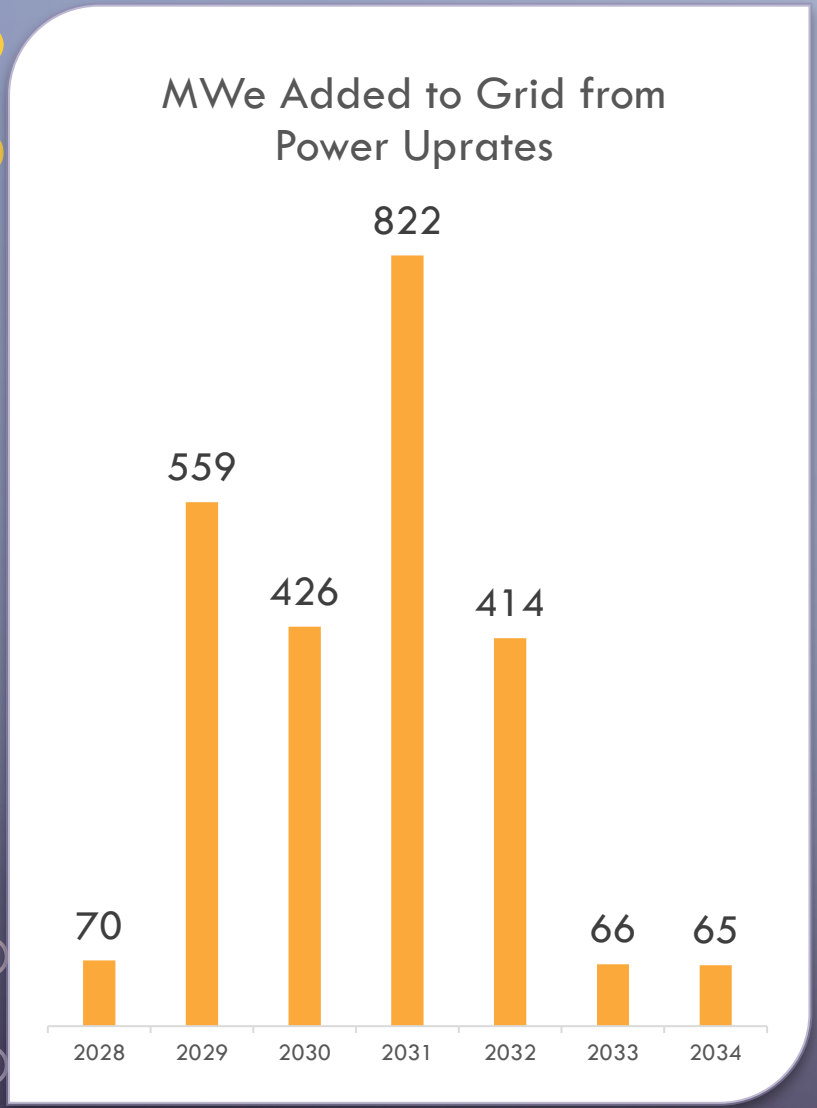
Crane Clean Energy Center



Duane Arnold Energy Center



# READINESS FOR POWER UPRATES

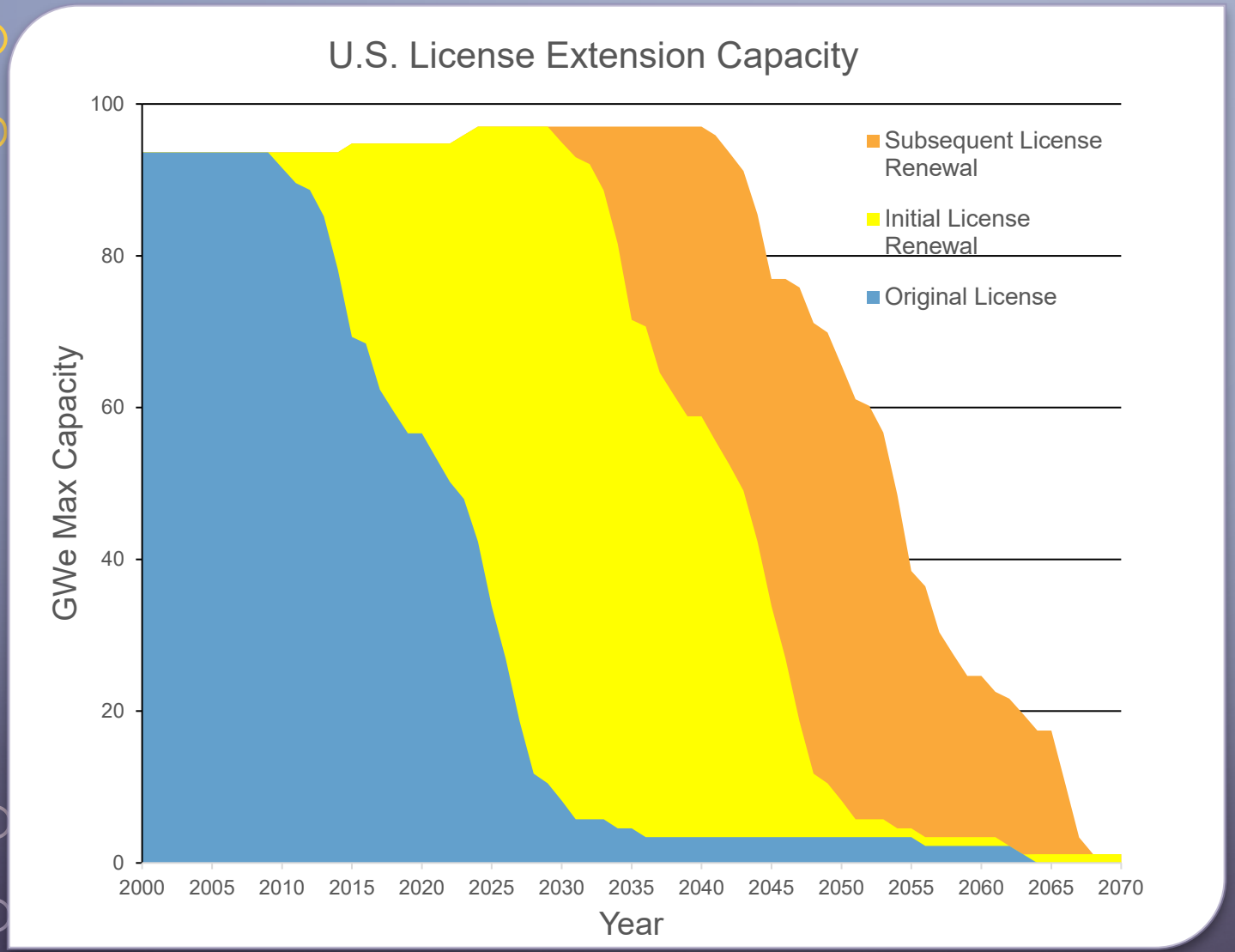



- 30+ units anticipated to submit PUR applications over the next 5 years
- Potential to add ~2.4 GWe
- Early engagement with licensee and graded reviews

# POWER UPRATE CATEGORIES AND REVIEW TIMELINES

- Measurement Uncertainty Recapture (MUR) Power Uprate
  - Approx. up to 2%
  - 6-month review target
- Stretch Power Uprate (SPU)
  - Approx. 2% to 7%
  - 9-month review target
- Extended Power Uprate (EPU)
  - Approx. 7% to 20%
  - 12-month review target






# LICENSE RENEWAL EFFICIENCIES

- Review hours reduced: 21,000 → 8,000
- FY26 average: 6 reviews in ~11,500 hours per review
- FY27: 11 reviews targeted within 12 months



# Josh Borromeo

Director, Division of Advanced Reactor Licensing

Office of Advanced Reactors (OAR)

- Optimizing Reviews for Advanced Reactors

# MULTIPLE LICENSING PATHWAYS PROVIDE FLEXIBILITY AND ENSURE SAFETY

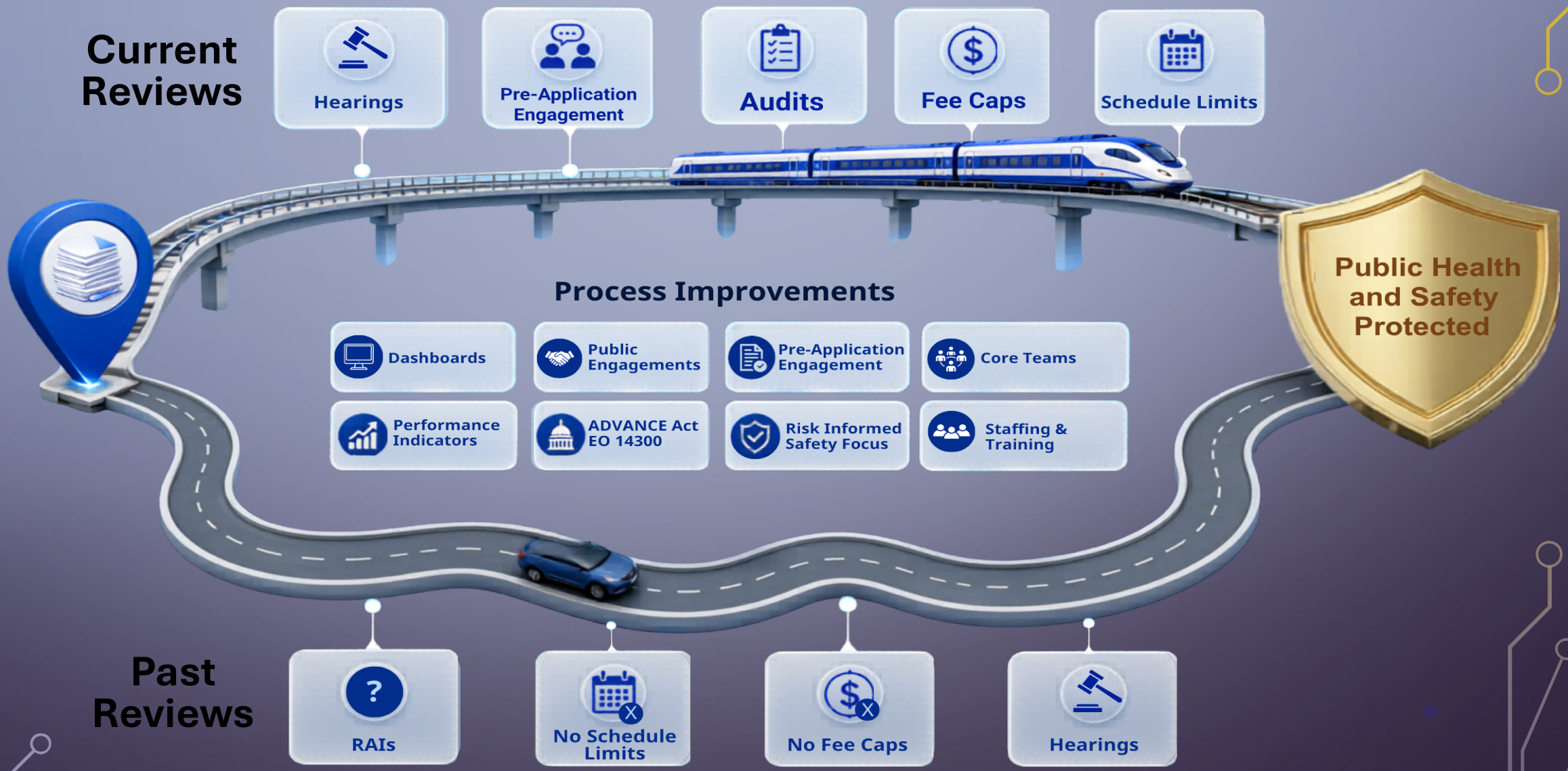
| Pathway | Primary Use | How It Works | Design Maturity | When To Use It | Safety Approach | Environmental |
|---|---|---|---|---|---|---|
| Part 50 | First of a Kind and NPUFs | CP → OL<br>2-Step | Low → High (CP → OL) | Early Design Maturity; Sequential Licensing | Defense-in-Depth and Safety Margins | ER with EA/EIS or Applicant Prepared EA/EIS |
| Part 52 | Standardized Reactors | ESP, COL, ML, DC, SDA<br>Flexible Toolkit | Moderate → High (Varies By Mechanism) | Fleet Deployment; Standardized Design | | |
| Part 53 | Advanced Reactors of All Technologies | CP, OL, COL, ML, DC, ESP, SDA<br>Flexible Toolkit | Any | New Designs; Optimization & Scaling | Fully Risk-Informed Performance Based | |
| Part 57 (Proposed) | Microreactors | CP/OL<br>Simplified 1-Step | High | Factory-Built; Rapid Deployment | Bounding Entry Criteria | Categorical Exclusion Possible |

**All Deliver**

- Consistent Safety Expectations
- Licensing of Various Design Maturities and Business Models
- Deployment at Scale and Speed
- Risk-Informed, Safety-Focused Reviews

CP= Construction Permit
OL=Operating License
COL= Combined Operating License
EIS=Environmental Impact Statement
ESP=Early Site Permit
DC=Design Certification
SDA=Standard Design Approval
ER=Environmental Report
ML=Manufacturing License
EA=Environmental Assessment

# PROCESS IMPROVEMENTS YIELD RIGHT-SIZED REVIEWS



# POISED TO SUPPORT THE NATION'S INCREASING ENERGY DEMAND




| Applications Under Current NRC Review | Technology | Schedule |
|---|---|---|
| Project Long Mott Construction Permit (CP) | X-energy Xe-100 | 18 months |
| Belews Creek Early Site Permit (ESP) | TBD | 15 months |
| Palisades Pioneer Limited Work Authorization | Holtec SMR-300 | 13 months |
| University of Illinois Urbana Champaign CP | Nano KRONOS | 16 months |
| Eden Radioisotopes CP | Isotope Production | 16 months |
| North Anna ESP Renewal | TBD | 12 months |




20+ Applications Expected in Next 2 Years


NRC
Nuclear
Regulatory
Commission
QUESTIONS