



Office of
NUCLEAR ENERGY

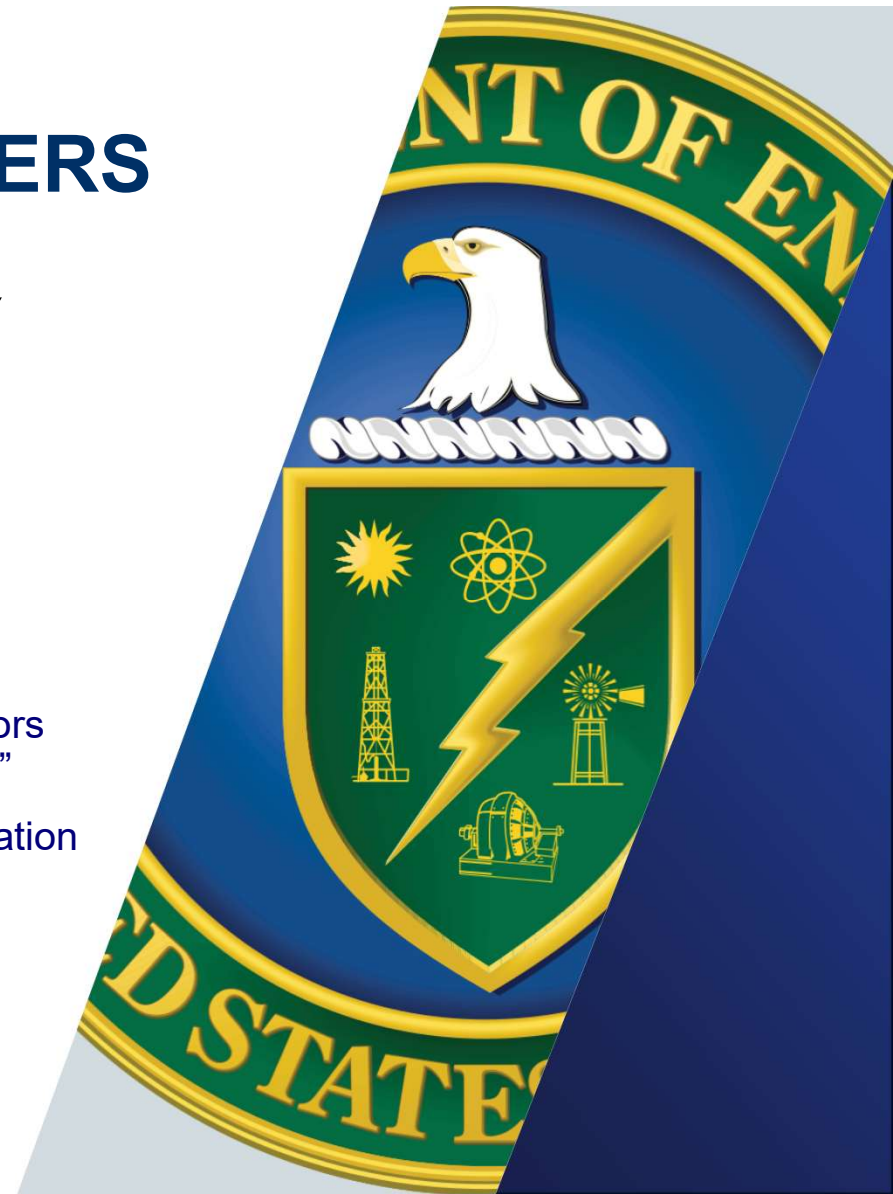
UPRISE

Dr. Rian Bahran

Deputy Assistant Secretary for Nuclear Reactors

NUCLEAR EXECUTIVE ORDERS

- *Ordering The Reform of the Nuclear Regulatory Commission-* [EO 14300](#)
 - “expansion of American nuclear energy capacity from approximately 100 GW in 2024 to 400 GW by 2050”
- *Reinvigorating the Nuclear Industrial Base-* [EO 14302](#)
 - “facilitate 5 gigawatt of power uprates to existing nuclear reactors and have 10 new large reactors ... under construction by 2030”
 - “promote to the fullest possible extent the production and operation of nuclear energy ... and to build associated supply chains”
 - “develop nuclear engineering and other nuclear energy-related skills”



UPRISE - Utility Power Reactor Incremental Scaling Effort

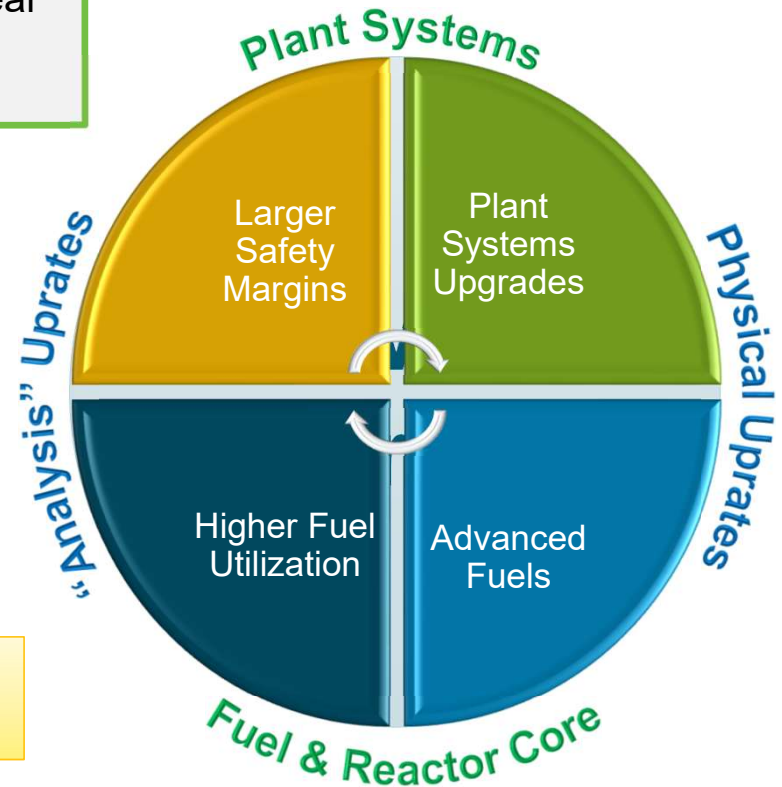
- ✓ UPRISE strives to significantly expand the United States' nuclear energy capacity by increasing the power output of existing reactors and bringing dormant facilities back online.

UPRISE coordinates efforts to accelerate the growth of U.S. nuclear energy production.

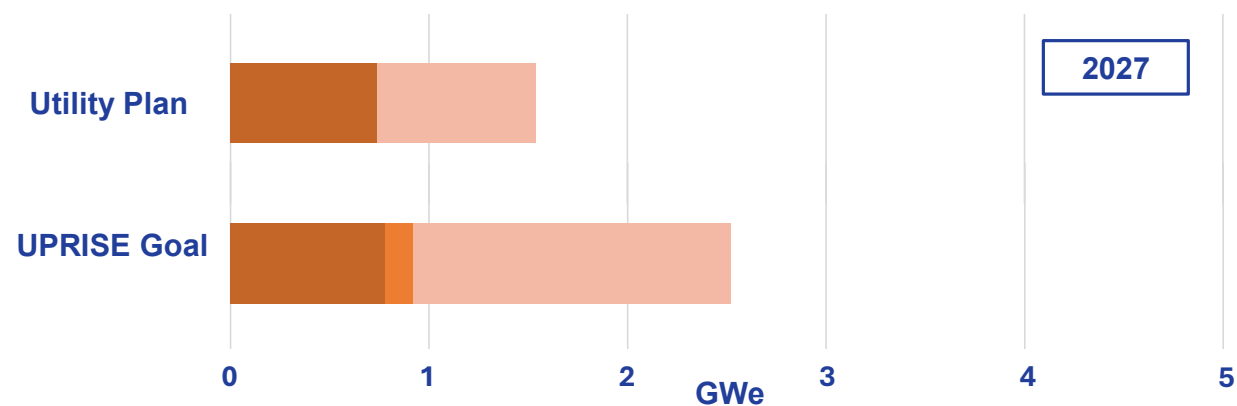


- DOE offices - Nuclear Energy, Energy Dominance Financing, Critical Materials and Energy Innovation
- federal partners including NRC
- utilities, nuclear plant owner-operators
- data centers, industry end-users
- investors

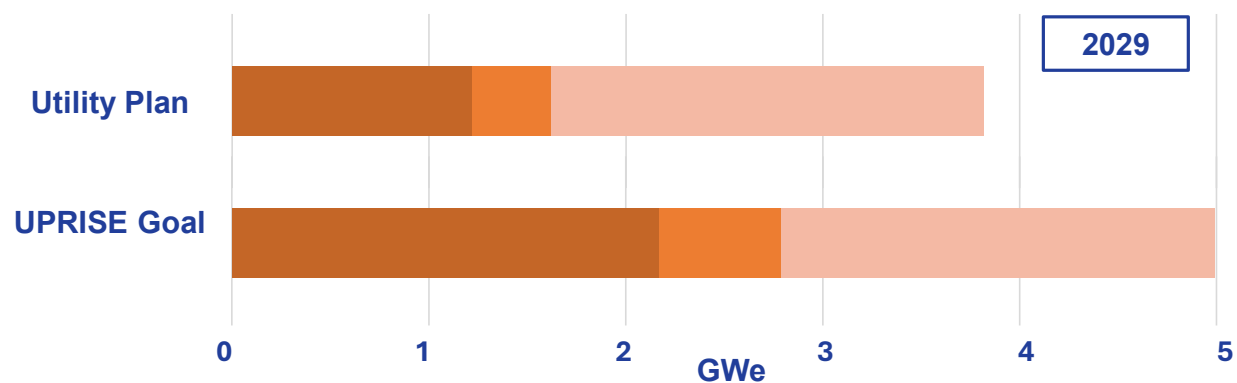
UPRISE will build a unified coalition of industry and government stakeholders



Vision for Expanding Nuclear Energy (E.O.14302)



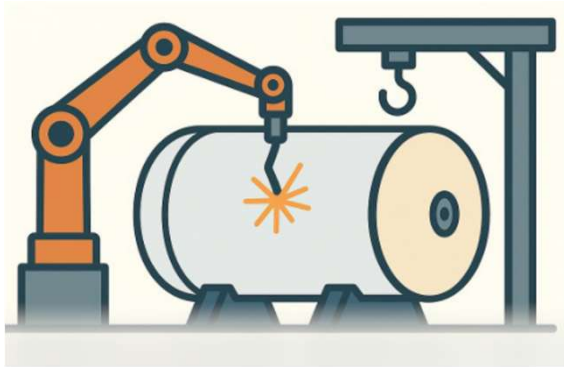
Challenge: What can be done to accelerate nuclear capacity expansion?



- Balance of plant and operational improvements
- Plant physical uprates that require license amendments
- Plant restarts

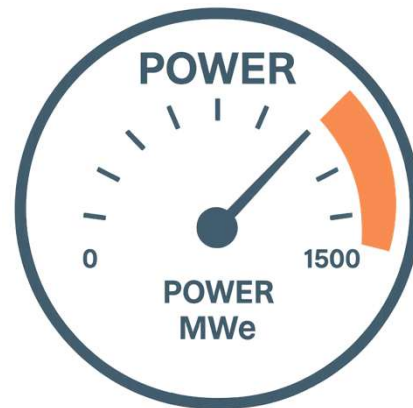


DOE UPRISE activities underway



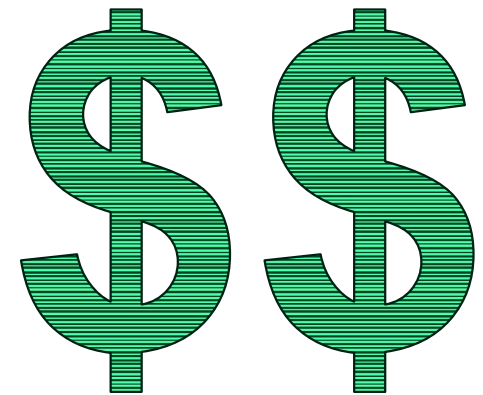
Ensure readiness of a domestic supply chain for uprate equipment

Foster relationships and approaches to identify key systems and components to enable nuclear manufacturing scale up.



Implement risk-informed tools

Develop and demonstrate risk-informed safety analysis methods to create significant power uprate margin.



Mobilize plant uprate projects

Complete investor grade technical and economic analyses to support business case decisions.





U.S. DEPARTMENT
of ENERGY