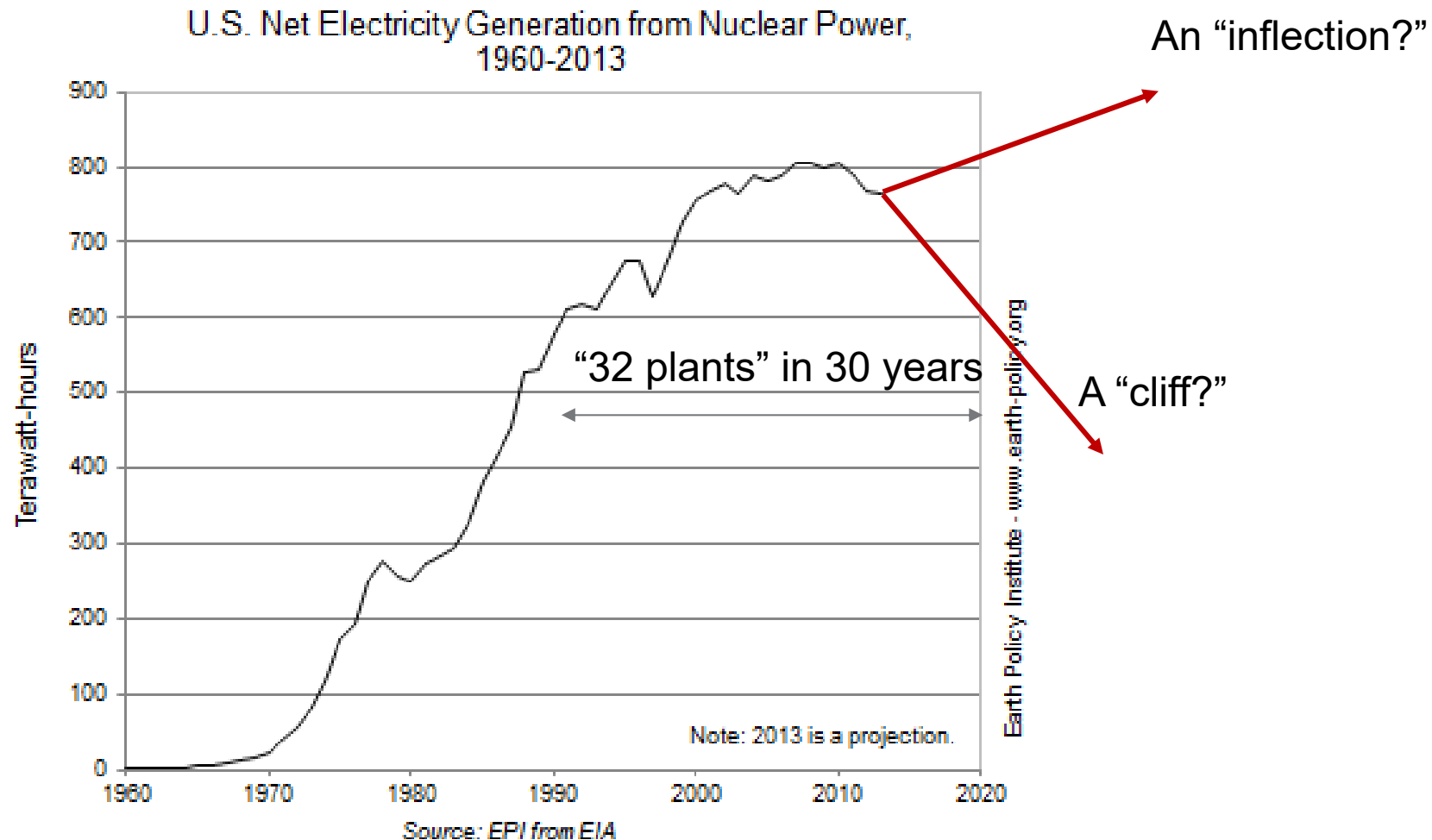




ADVANCED REACTORS & REGULATORY APPROACHES

APRIL 2021, TODD ALLEN, PROFESSOR & SENIOR
FELLOW

TRAJECTORY OF ATOMS FOR PEACE GENERATION

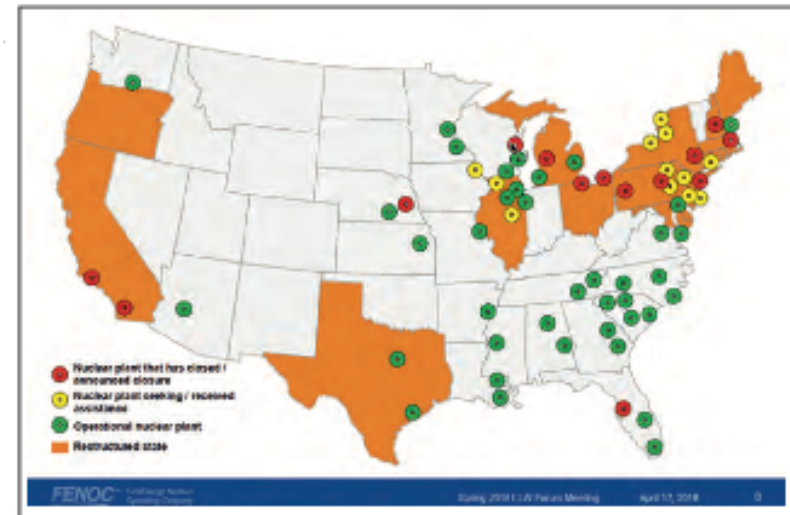


2015/2016 PIVOT

The 2015/2016 Pivot:

- Advanced Reactor Companies
- GAIN, ARPA-E, NRIC
- NEIMA/NEICA
- NGOs
- Part 53

Figure 3: Nuclear Plants Closing in Restructured States



Source: Don Moss, President and CEO, First Energy. Testimony to Nuclear Energy Caucus (4/17/16)

Advanced Reactor Companies

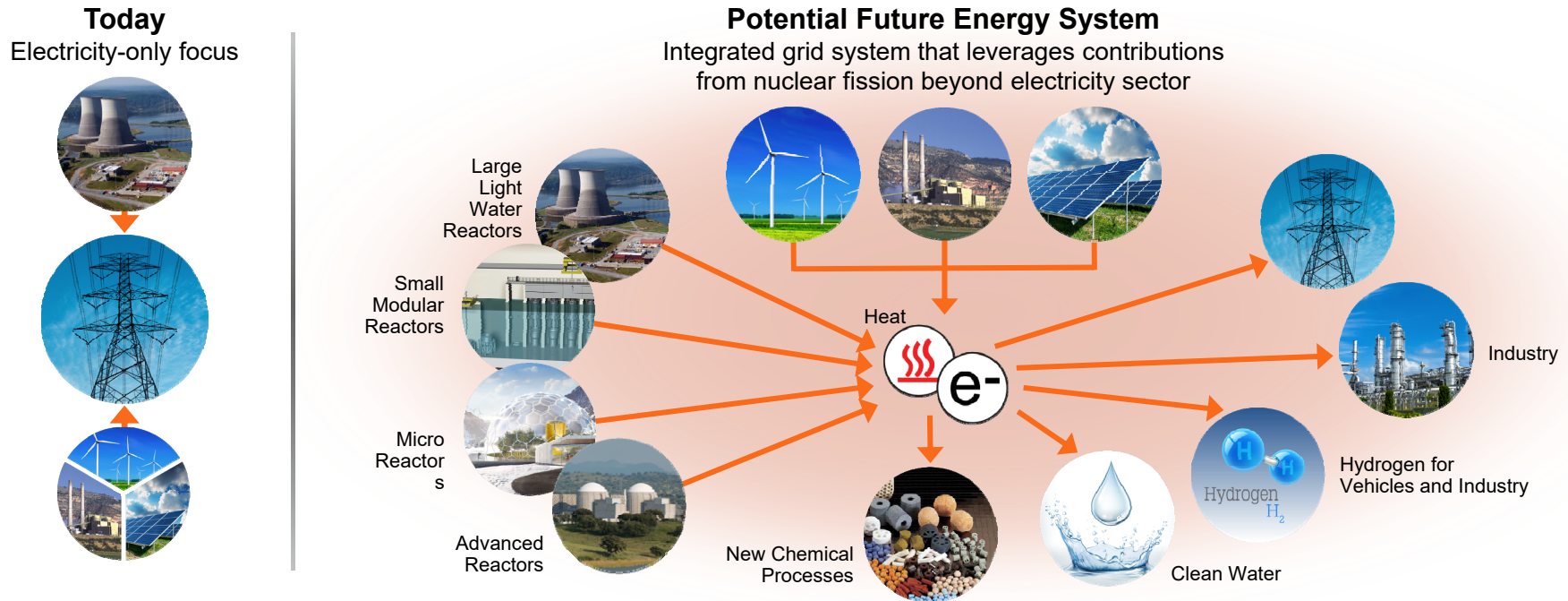


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ENERGY REIMAGINED

Maximizing energy utilization, generator profitability, and grid reliability and resilience through novel systems integration and process design



Flexible Generators ❖ Advanced Processes ❖ Revolutionary Design

Courtesy Shannon Bragg-Sitton, Ph.D., Idaho National Laboratory

THEMES

The following themes will be important:

- Nuclear energy concepts will be proposed aimed at many uses other than just gigawatt sized electricity production.
- Proposed sites will be more varied than seen in the first generation LWR deployments
- Technology approaches (e.g., manufacturing approaches, digital technologies and automation) may get value through the ability to frequently update

More ideas brought forward at a faster pace.

The more the regulatory system can find a way to create performance-based metrics, rather than size specific, site specific, or technology type specific approaches, the more efficient the system will be in responding to new technology ideas while maintaining public safety.

