UIUC/IEEE Nuclear Energy and Applications In-Person Workshop Summit

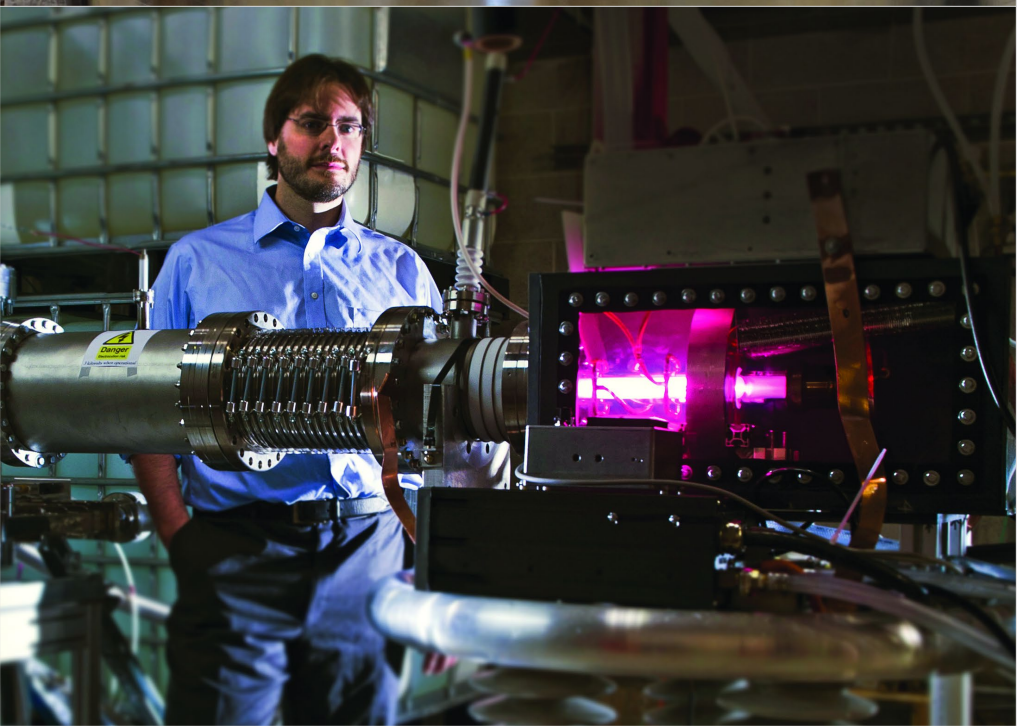
The Nuclear Landscape and the Role of Professional Societies

Craig Piercy

CEO, American Nuclear Society

10/20/26





The American Nuclear Society is …

The professional org for nuclear energy and technology

Over 12,000 members from all 50 states & over 40 nations

Over 150 Corporate partners

18 technical divisions

Nuclear engineers, technologists, and professionals…

… from National Labs, Universities, Suppliers, Utilities, and Government.

Open to all

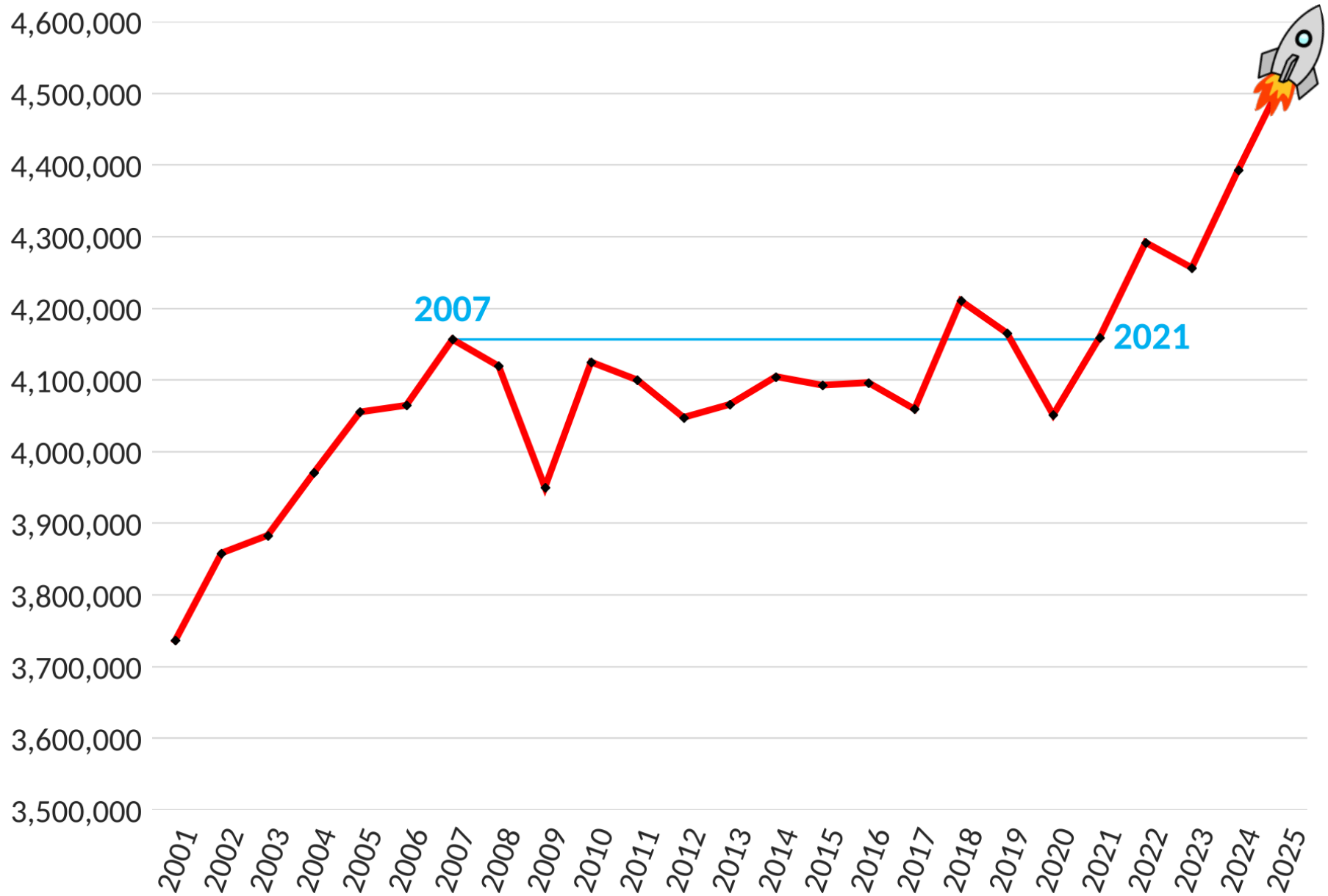
Nuclear swim lanes

INPO		Operational Excellence / Safety Culture / Training
EPRI		Research & Development / Technology Transfer
NEI		Industry Lobbying / Regulatory Input
USNIC U.S. Nuclear Industry Council		Business advocate for suppliers
ANS		Technical Exchange / Public Education / Workforce Development

ANS

How did we get here?

Electricity Generated, All Sources, Gigawatt-Hours per Year

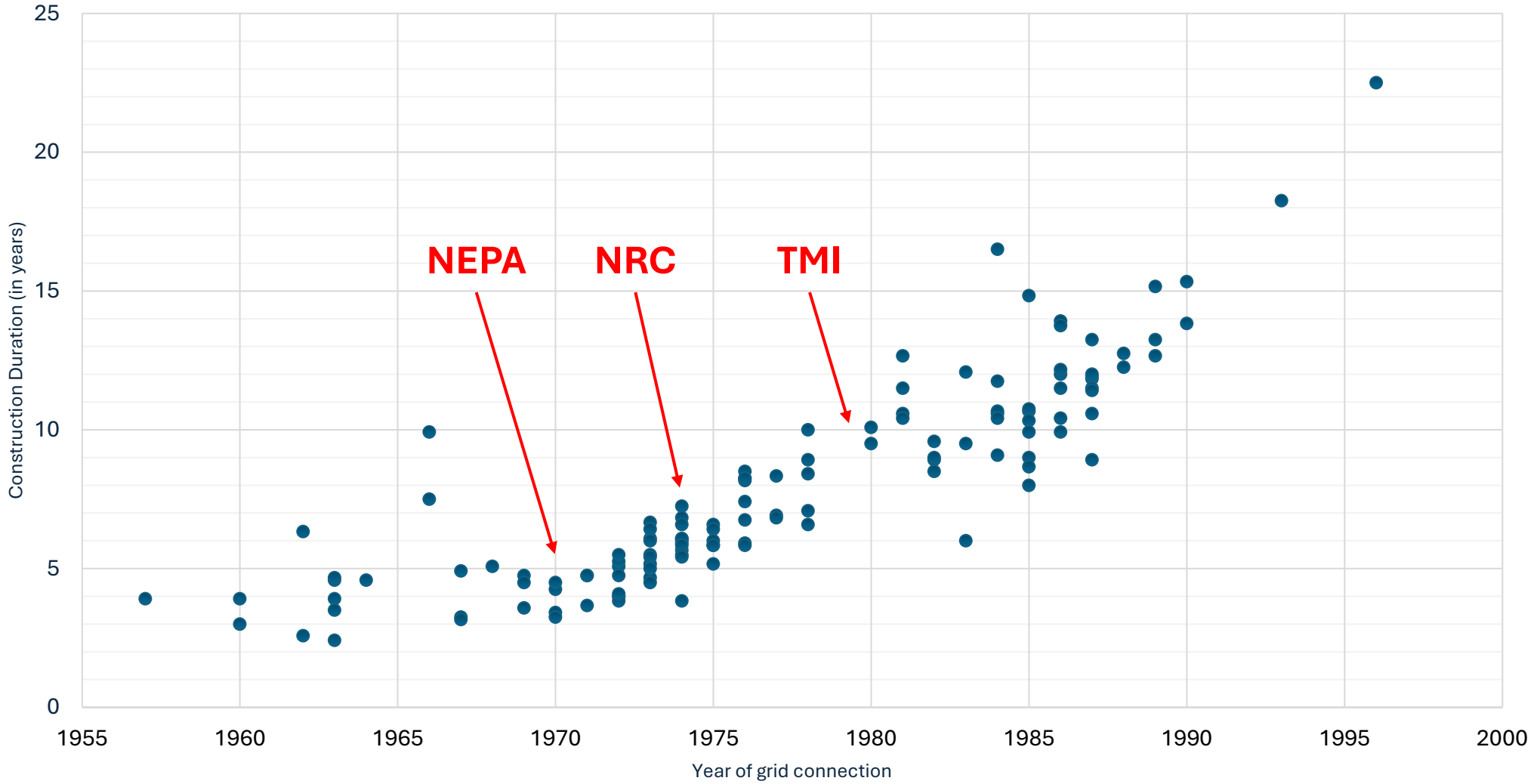


Source: EIA

ANS

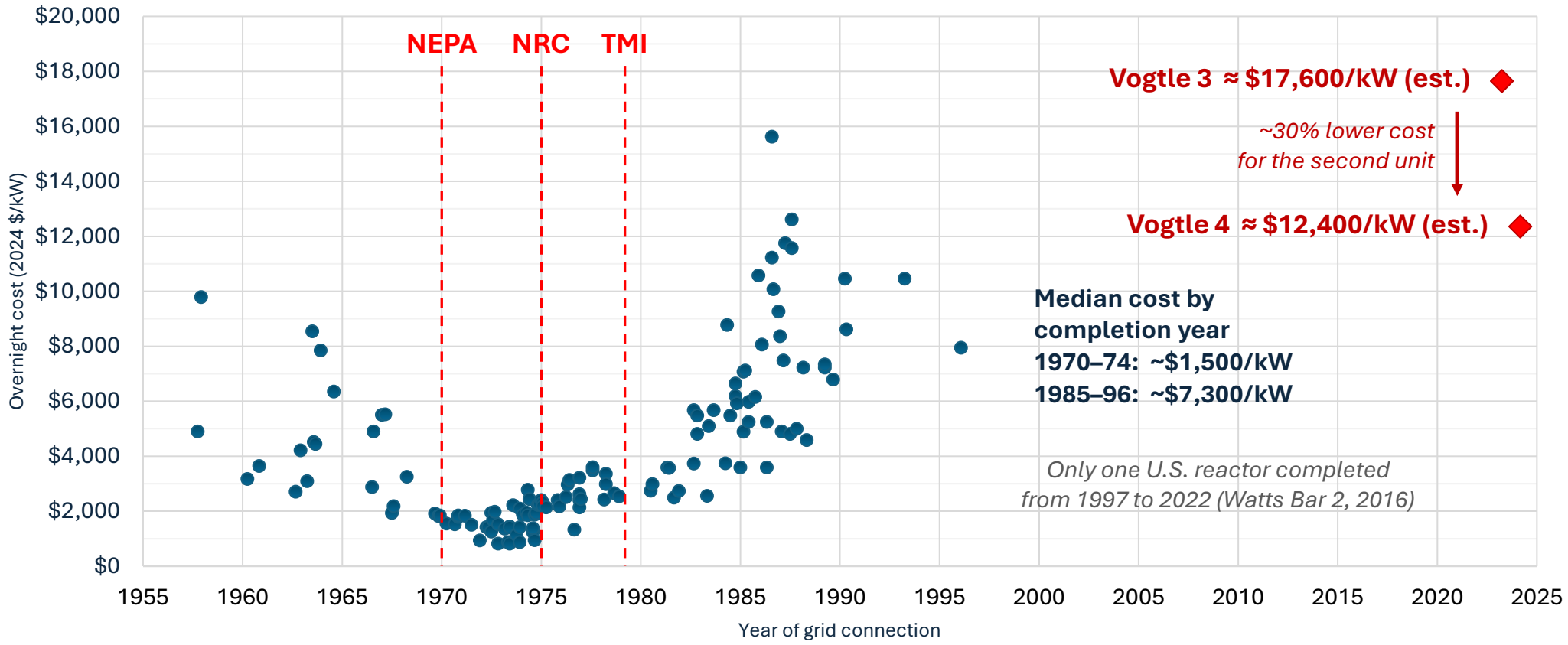
Construction Duration for U.S. Nuclear Power Reactors

(1955–2000, by year of grid connection)



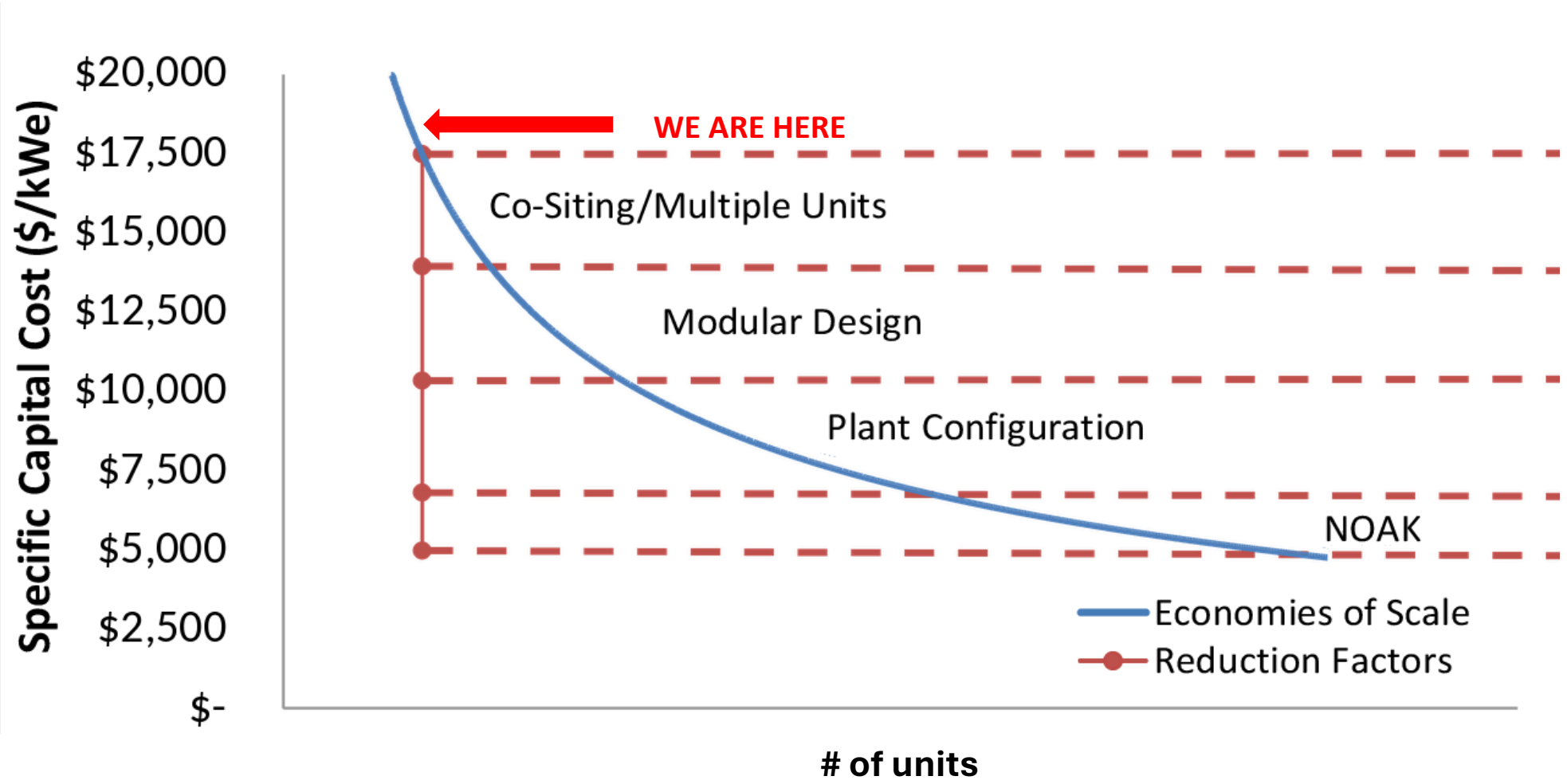
Overnight Construction Cost of U.S. Nuclear Reactors

(by year of grid connection, 2024 dollars per kW)



Sources: Lovering, Yip & Nordhaus, "Historical construction costs of global nuclear power reactors," Energy Policy 91 (2016), converted from 2010$ with CPI-U; Vogtle 3 & 4: MIT CANES, MIT-ANP-TR-201 (2024), ~$15,000/kW two-unit average, split assuming Unit 4 cost ~30% less than Unit 3 (Southern Company). Overnight cost excludes financing.

Nuclear Deployment Pathway



Nuclear Regulatory Environment



A Tectonic Shift…

- EO 14300
- NRC Modernization: 47 regulations, 27 rulemakings, and 71 guidance documents
- DOE Pilot Program, Criticalities
- Licensing speed-up
- Bipartisan foundations
- Standards will play greater role
- NRC Workforce a concern: 740 separations and 270 hires since 24

The ANS role in the nuclear resurgence











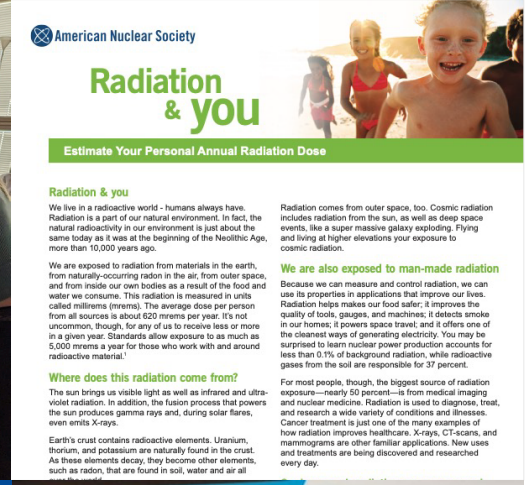


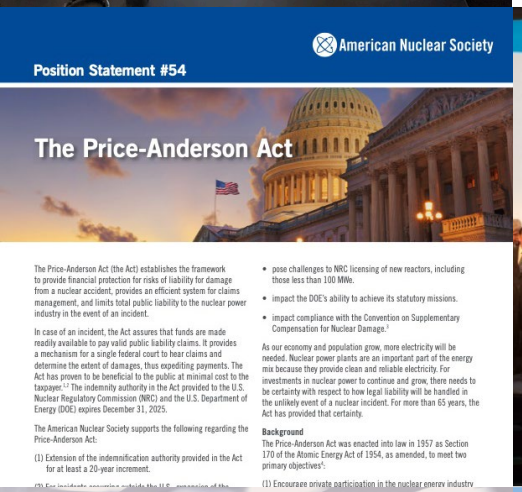
For our members …

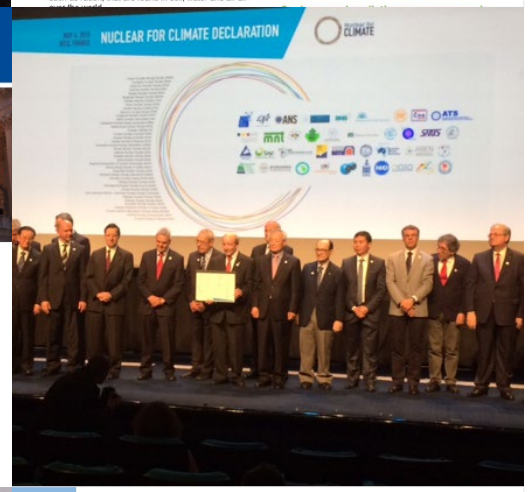
- Meetings/conferences/webinars
- *Nuclear News* / *Radwaste Solutions* magazines
- Nuclear Newswire / daily briefing
- 3 Peer-reviewed Technical Journals and our open-access platform
- Scholarships, Honors & Awards
- Leadership opportunities

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Process for Infrastructure Aging Management and Life Extension of Nonreactor Nuclear Facilities

For the nuclear sector, our nation and the world…

- K-12 education
- Workforce Development/Credentialing
- Rapid Response Communications
- Policy Engagement
- International Partnerships
- 90+ Consensus Standards

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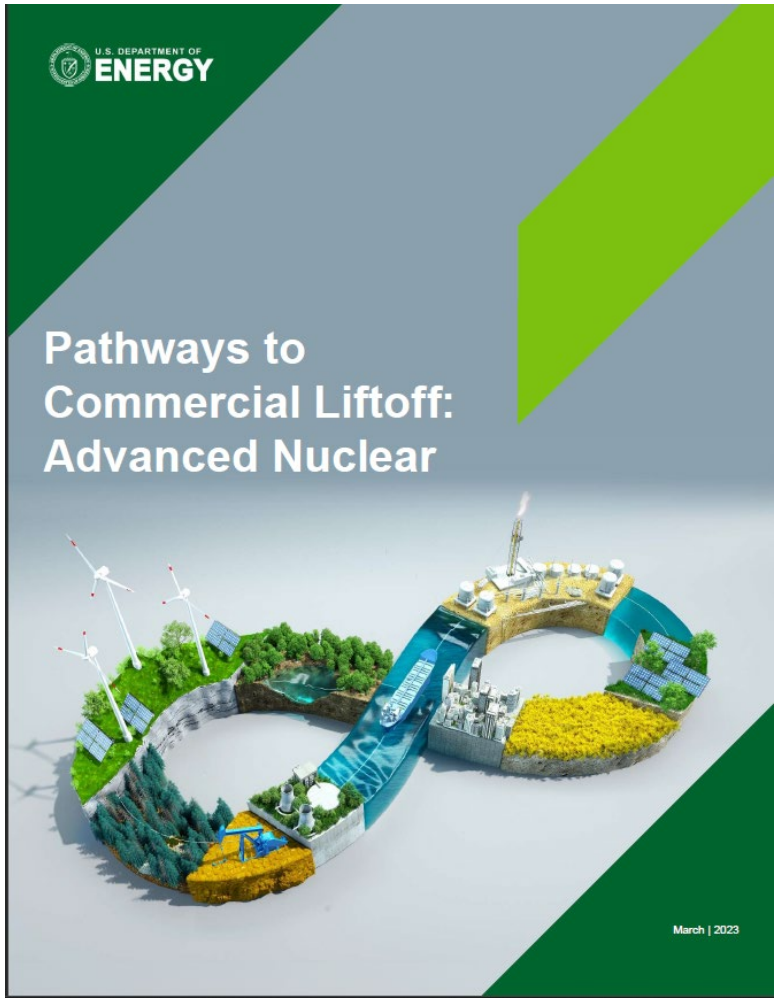
NUCLEAR DOMINO THEORY



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The nuclear workforce

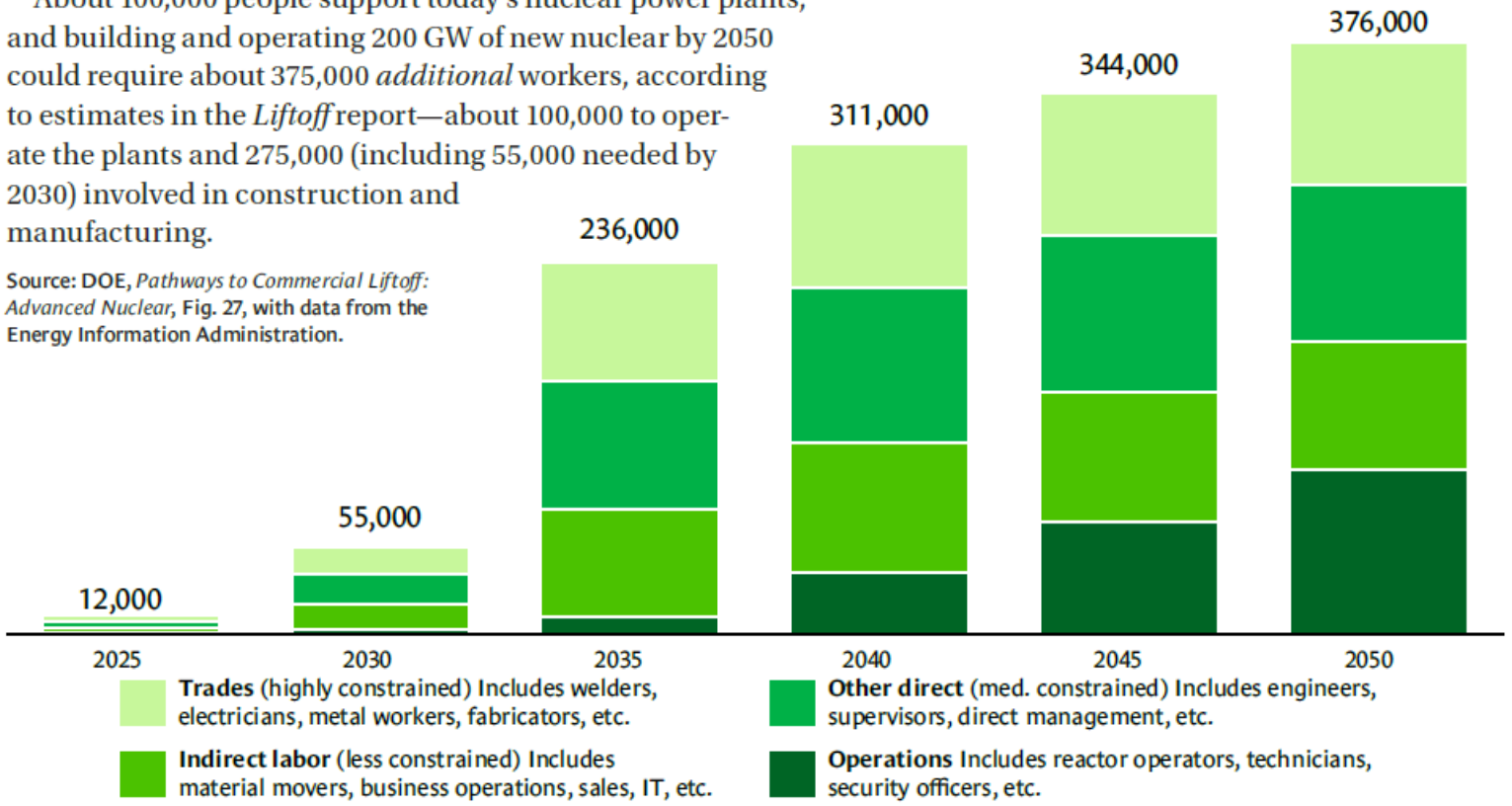
“We need a bigger boat”



Workforce buildup

About 100,000 people support today’s nuclear power plants, and building and operating 200 GW of new nuclear by 2050 could require about 375,000 *additional* workers, according to estimates in the *Liftoff* report—about 100,000 to operate the plants and 275,000 (including 55,000 needed by 2030) involved in construction and manufacturing.

Source: DOE, *Pathways to Commercial Liftoff: Advanced Nuclear*, Fig. 27, with data from the Energy Information Administration.

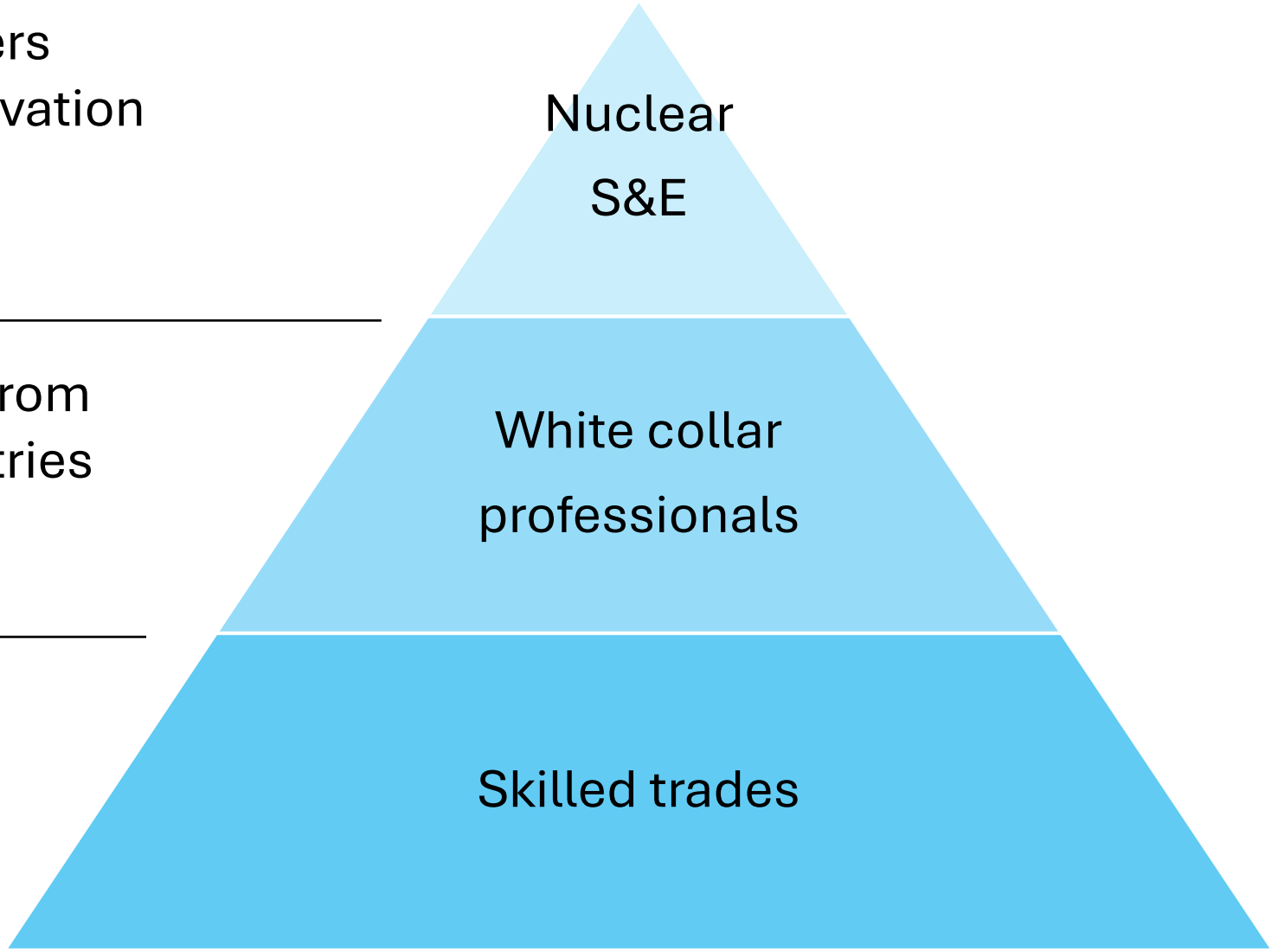


Nuclear Workforce Pyramid

Small in numbers
Critical for innovation

Lateral moves from adjacent industries

Broad demand



ANS Nuclear Workforce Development Pipeline

Entry Pathways into Nuclear

- Building Trades
- Operators
- Engineers
- Contractors
- Early-career professionals



ANS Certificate Courses

- Nuclear 101
- Licensing & Regulation
- Radioactive Waste Management

Continuing Education & Professional Development

- Nuclear 101, online (3rd Q 2026)
- Safety Culture (4th Q 2026)
- Nuclear Economics (2027)
- Design Control (2027)
- Safety Basis (2028)

- Additional PDH / CEU courses aligned with CNP renewal

Waste






I'm touching
a cask of spent nuclear fuel,


ANS

Thank You

Craig Piercy, CEO
cpiercy@ans.org