

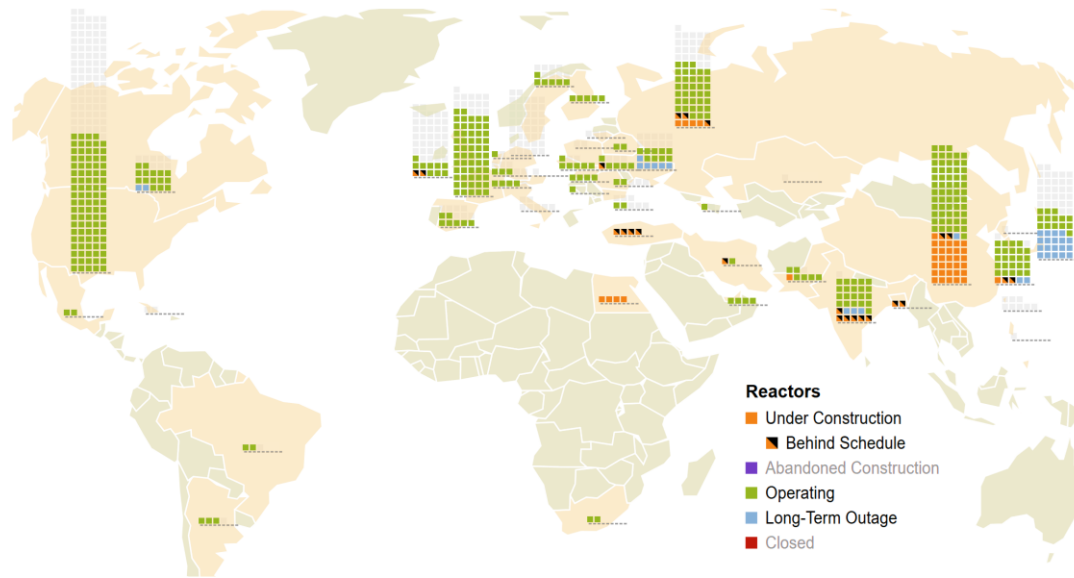


Global Nuclear Cooperation – Why it is Essential Now

November 2025

World Status of Nuclear Power Plant

Large-scale Commercial NPP Deployment



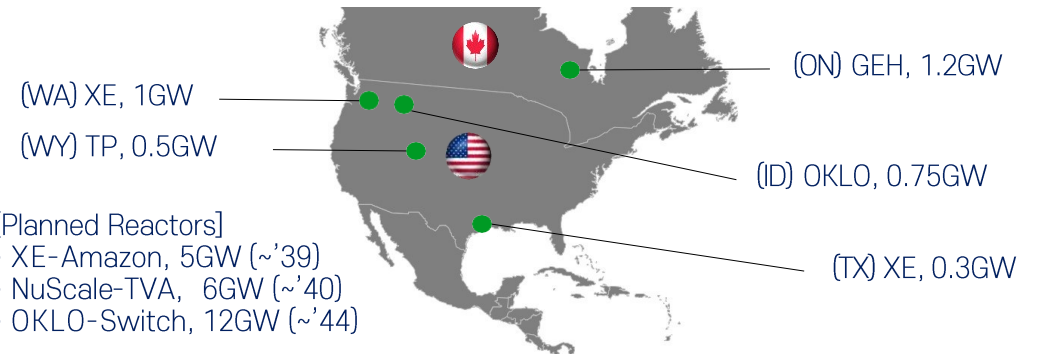
- In Operation: 416 Units (376,261 MWe)
- Under Construction: 63 Units (66,190 MWe)

(US) Trump Administration has set a target of initiating construction of **10 new NPPs by 2030**

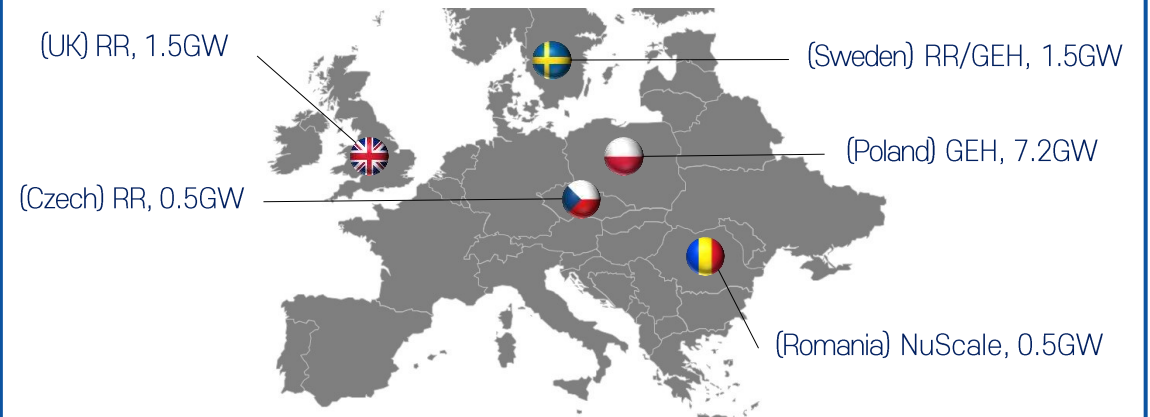
Source: World Nuclear Industry Status Report (2025. 9.)

SMR Deployment

North America (Construction Phase)



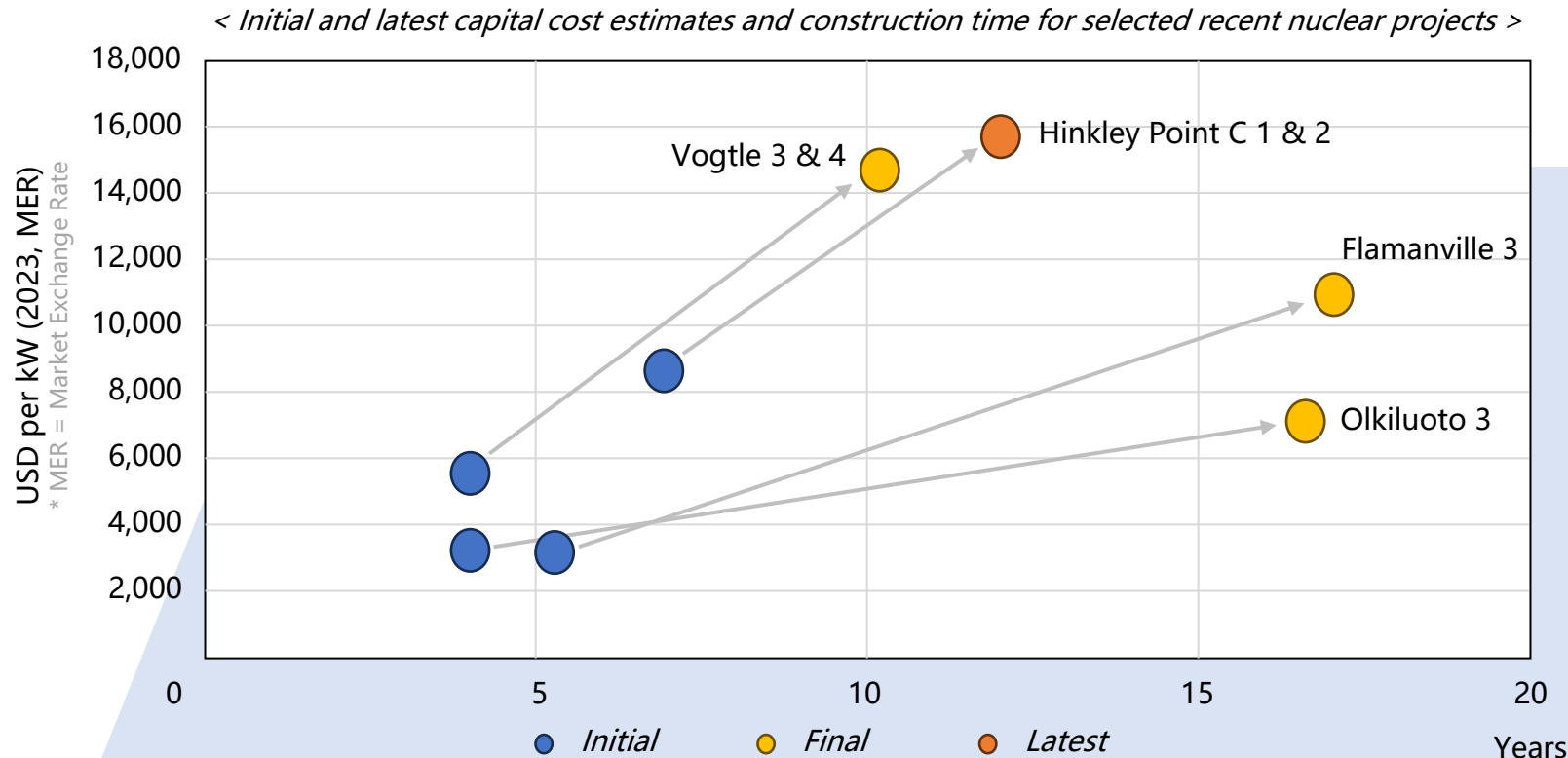
Europe (Deployment Progress)



※ (China) ACP100 Commissioning Phase (~' 26), HTR-PM Commercial Operation (' 23)

Challenges in New Builds

- **Construction period** for nuclear reactors in advanced economies **has risen significantly**.
- Most recent projects have been plagued by **substantial delays and cost overruns**



< Schedule Delays & Cost Overruns >

Project / Units	Schedule Delay	Cost Increase
Vogtle (Units 3–4)	~7 years	~2.5× (~\$14B to >\$30B)
Olkiluoto 3	13 years	~3× (€3B to ~€11B)
Hinkley Point C (Units 1–2)	4~6 years (projected)	~1.7–2× (£18B to £30–35B)
Flamanville 3	12 years	~3× (€3.3B to ~€10-12B)

Source: The Path to a New Era for Nuclear Energy by IEA (2025. 1.)

Key Causes of Cost Overruns & Construction Delays

- One of the main causes of construction delays and cost overruns is **supply chain issues**.

1. Inadequate Design Maturity

- Construction initiated before design completion
- Frequent design changes leading to increased rework
- Increased FOAK design risks

2. Weak Project & Construction Management

- Insufficient coordination among EPC functions (engineering–procurement–construction)
- Inadequate schedule and risk management
- Poor implementation of QA/QC procedures

3. Skilled Workforce Shortage

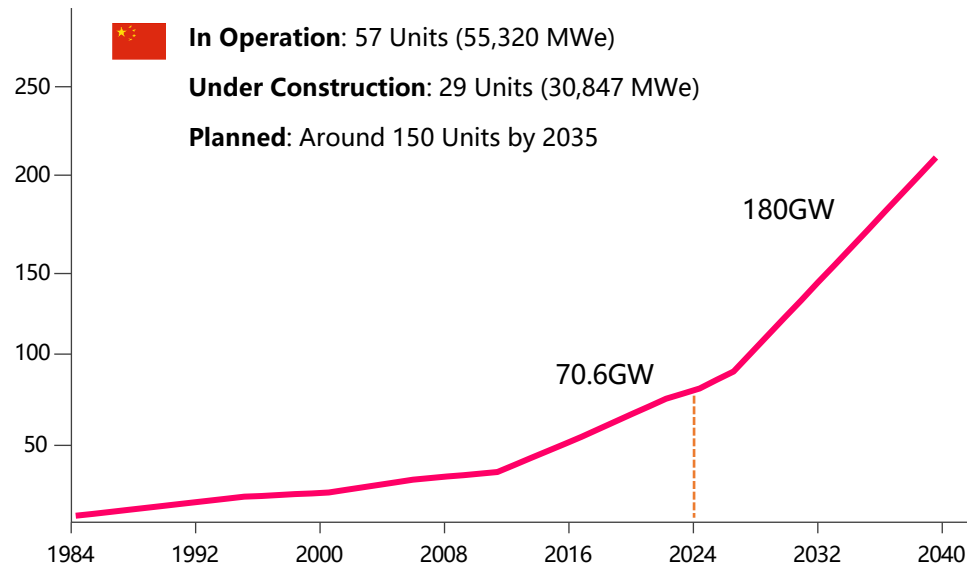
- Decline in highly skilled workers (welding, piping, electrical, etc.)
- Loss of experienced personnel due to generational turnover
- Shortage of qualified project management professionals by the prolonged halt in new NPP construction

4. Supply Chain Fragility

- Decline in manufacturers of specialized nuclear components
- Delays in procuring components leading to schedule impacts
- Volatility in global logistics and raw material prices
- Labor market rigidity limiting workforce mobility and slowing project execution

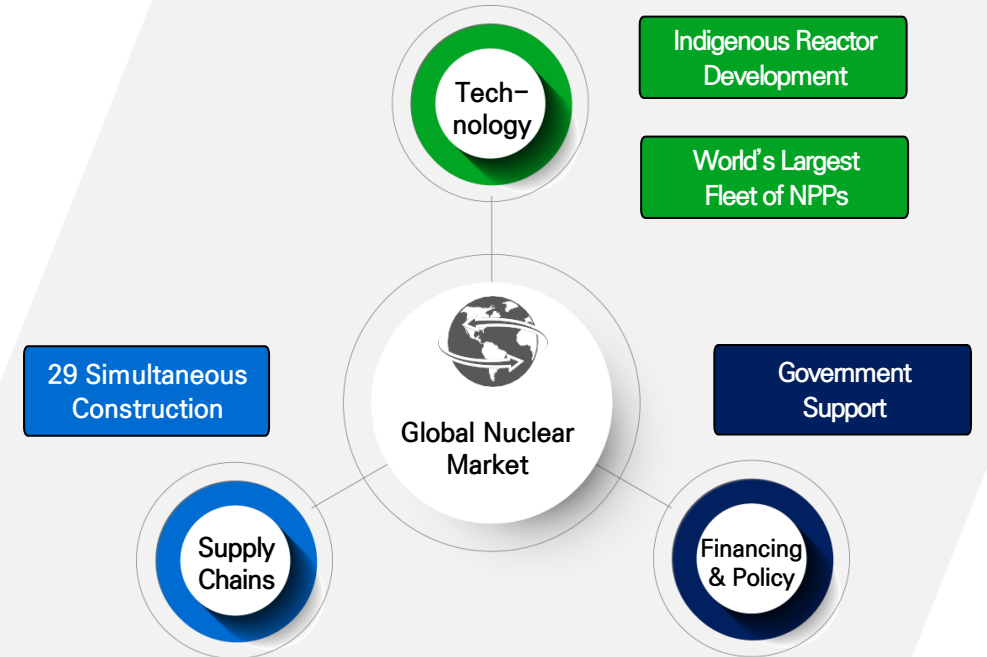
Chinese NPP Capability

China's Advancing Nuclear Power Industry : Competitiveness through Scale



China's nuclear industry is **rapidly expanding**, driven by domestic market. Construction capabilities are expected to continue strengthening.

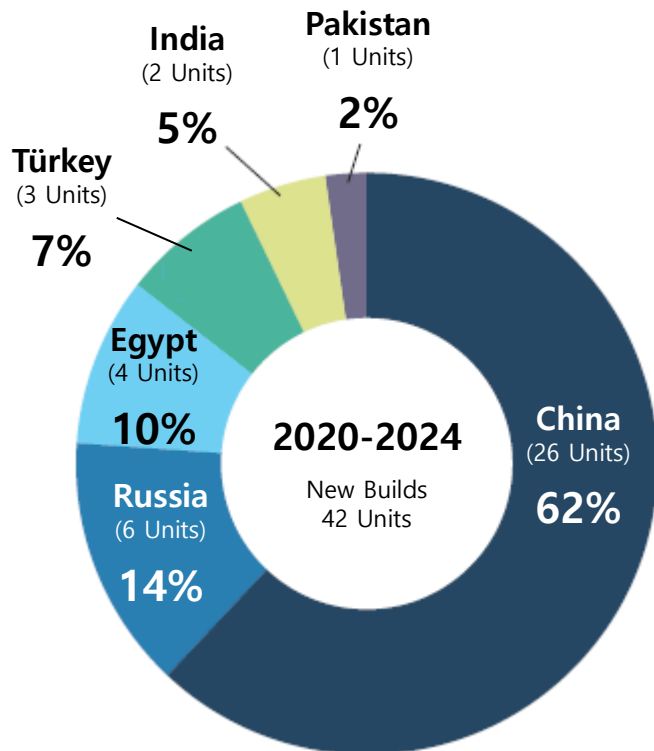
Strength of Chinese Nuclear Power



Around **10 New Reactors** Approvals / year
→ **World's Largest NPP Operating Country in 2030s**

NPP Overseas Market Share

📍 NPP Construction Starts by Country (Last 5 Years)



📍 Overseas NPP Projects by Country



Russia

39 Projects Claimed : 25 Under Construction

- [Large NPPs] Türkiye (4), Bangladesh (2), Egypt (4), China (4), India (4), Iran (1)
- [SMRs] Uzbekistan (6)



China

8 to 15 Units in Negotiation : 1 Under Construction

- [Large NPPs] Pakistan (1)



Korea

2 Units Contracted

- [Large NPPs] Czech (2)



France

2 Units Under Construction

- [Large NPPs] UK (2)

42 units began construction over the past 5 years were **Russian or Chinese** Reactors.
Among over 50 projects considered ongoing or planned, **Russia and China take the Majority.**

Solution



Establish a High-Level Cooperation Network



Shared Nuclear Supply Chains



Building an Optimal Business Project Portfolio Model by Combining Strengths

A Global partnership will serve as a powerful driver for delivering nuclear projects worldwide.