



# Restoring America's Fuel Cycle

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# Forward-Looking Statements

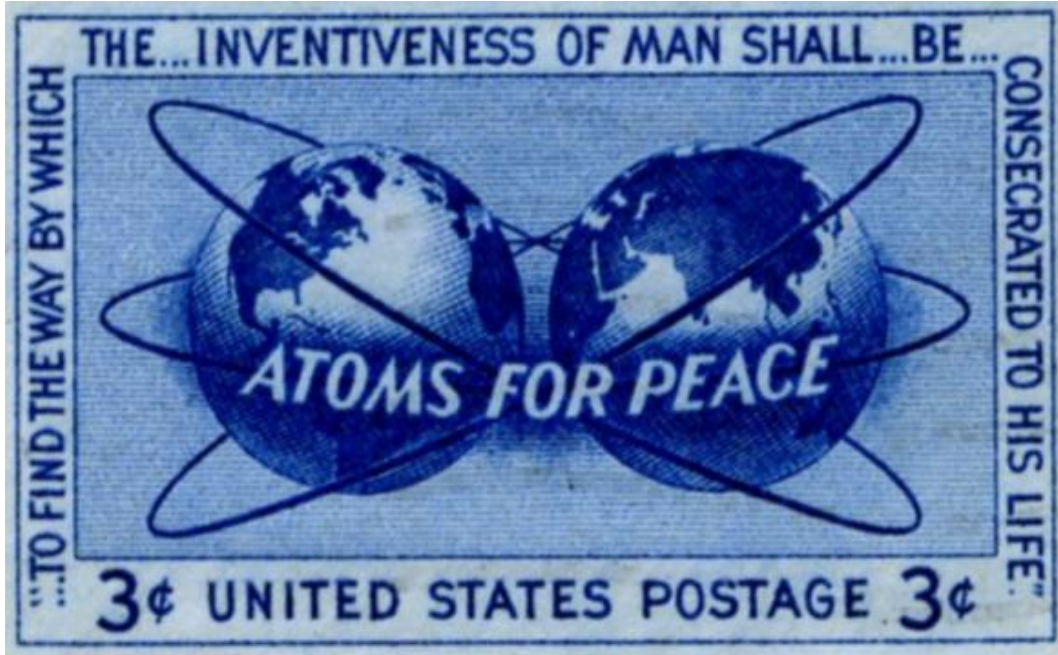
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**Disclaimer:** Our commentary and responses to your questions may contain forward-looking statements, including our outlook for the remainder of the year, and Centrus undertakes no obligation to update any such statement to reflect later developments. Factors that could cause actual results to vary materially from those discussed today include changes in the nuclear energy industry, pricing trends and demand in the uranium and enrichment markets and their impact on our profitability, the competitive environment for our products and services, the impact and potential extended duration of the current supply/demand imbalance in the market for low-enriched uranium, risks related to trade barriers and contract terms that limit our ability to deliver LEU to customers, risks related to actions that may be taken by the U.S. government or other governments that could affect our ability or the ability of our sources of supply to perform under contract obligations, including the imposition of sanctions, restrictions or other requirements, as well as those provided in our most recent Annual Report on Form 10-K and subsequent reports as filed with the SEC.

**Industry / Market Data:** Industry and market data used in this presentation have been obtained from industry publications and sources as well as from research reports prepared for other purposes. We have not independently verified the data obtained from these sources and cannot assure you of the data's accuracy or completeness.

# Longstanding U.S. Policy: Be the Dominant Supplier of Nuclear Technology and Fuel

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- Foundational principle of U.S. nuclear diplomacy since the 1950s:  
  
**By supplying the fuel and technology, the U.S. can set the ground rules for their peaceful use.**
- For decades, the U.S. designed, built and fueled reactors for any nation that agreed to international nonproliferation norms.
- ***No longer.***

# Nuclear Energy is an Energy Security Issue

- 30 nations depend on nuclear energy
  - 51 new reactors under construction in these countries
- Only 6 nations can produce enough enriched uranium for their own needs
  - 24 nations are net importers
  - Many could not power their economy without nuclear
- *Guess which nation is the world's largest importer?*

France	(72%)	U.S.A.	(20%)
Slovakia	(54%)	Romania	(17%)
Ukraine	(52%)	Russia	(17%)
Belgium	(52%)	Canada	(16%)
Hungary	(51%)	Germany	(13%)
Sweden	(40%)	S. Africa	(7%)
Slovenia	(35%)	Mexico	(6%)
Bulgaria	(35%)	Argentina	(6%)
Switzerland	(34%)	Pakistan	(4%)
Finland	(34%)	China	(4%)
Armenia	(31%)	India	(3%)
S. Korea	(30%)	Netherlands	(3%)
Czech R.	(29%)	Brazil	(3%)
Spain	(21%)	Japan	(2%)
U.K.	(20%)	Iran	(2%)

# Challenge/Opportunity: Nuclear Energy is a Global Reality

## *Will the U.S. lead or watch?*

 **Existing**

 **Under Construction**

Belarus UAE

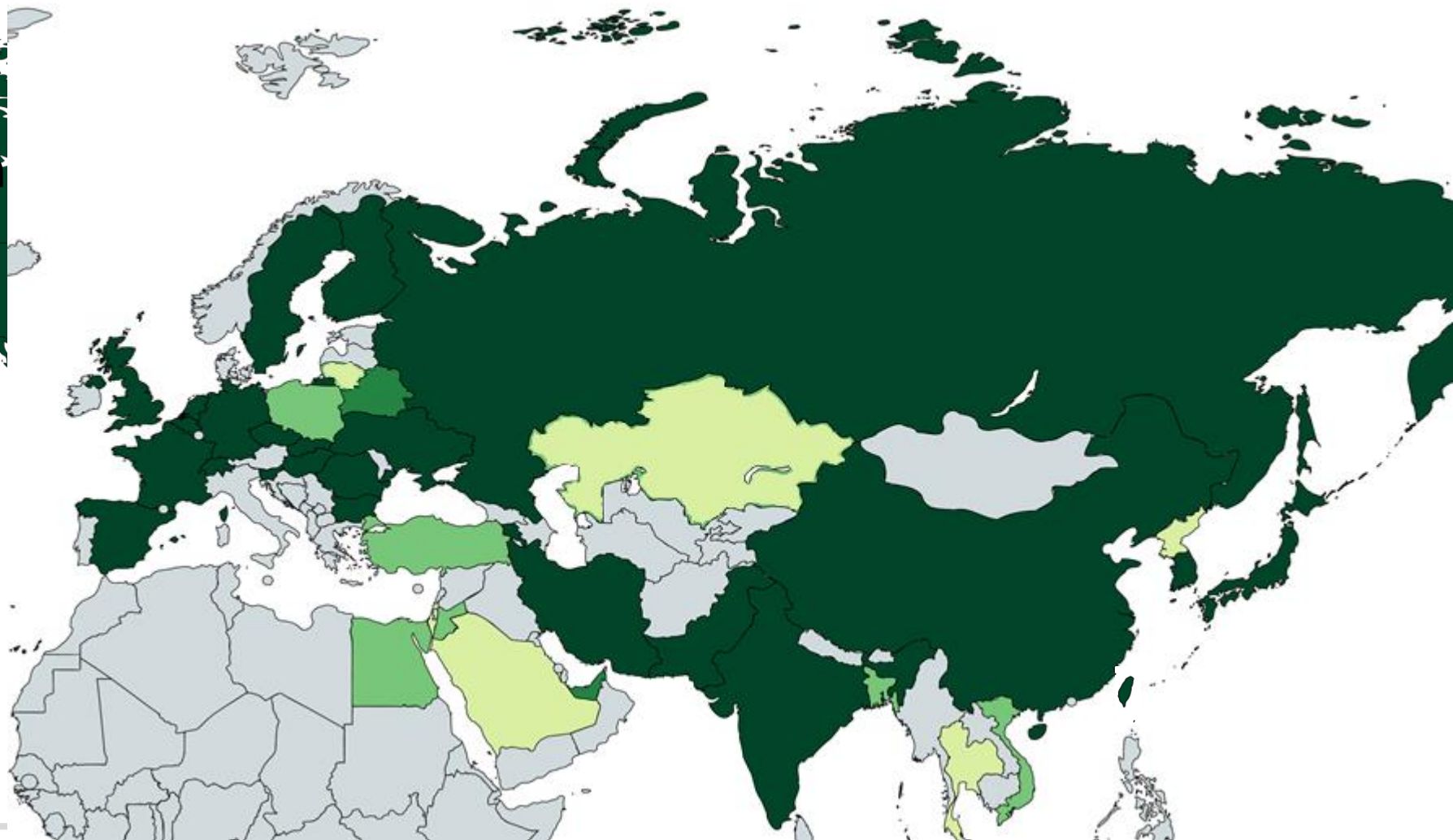
 **Planned**

Bangladesh Poland  
Egypt Turkey  
Indonesia Vietnam  
Jordan

 **Proposed**

Chile Malaysia  
Israel Saudi Arabia  
Kazakhstan Thailand

Lithuania



# The Big Questions

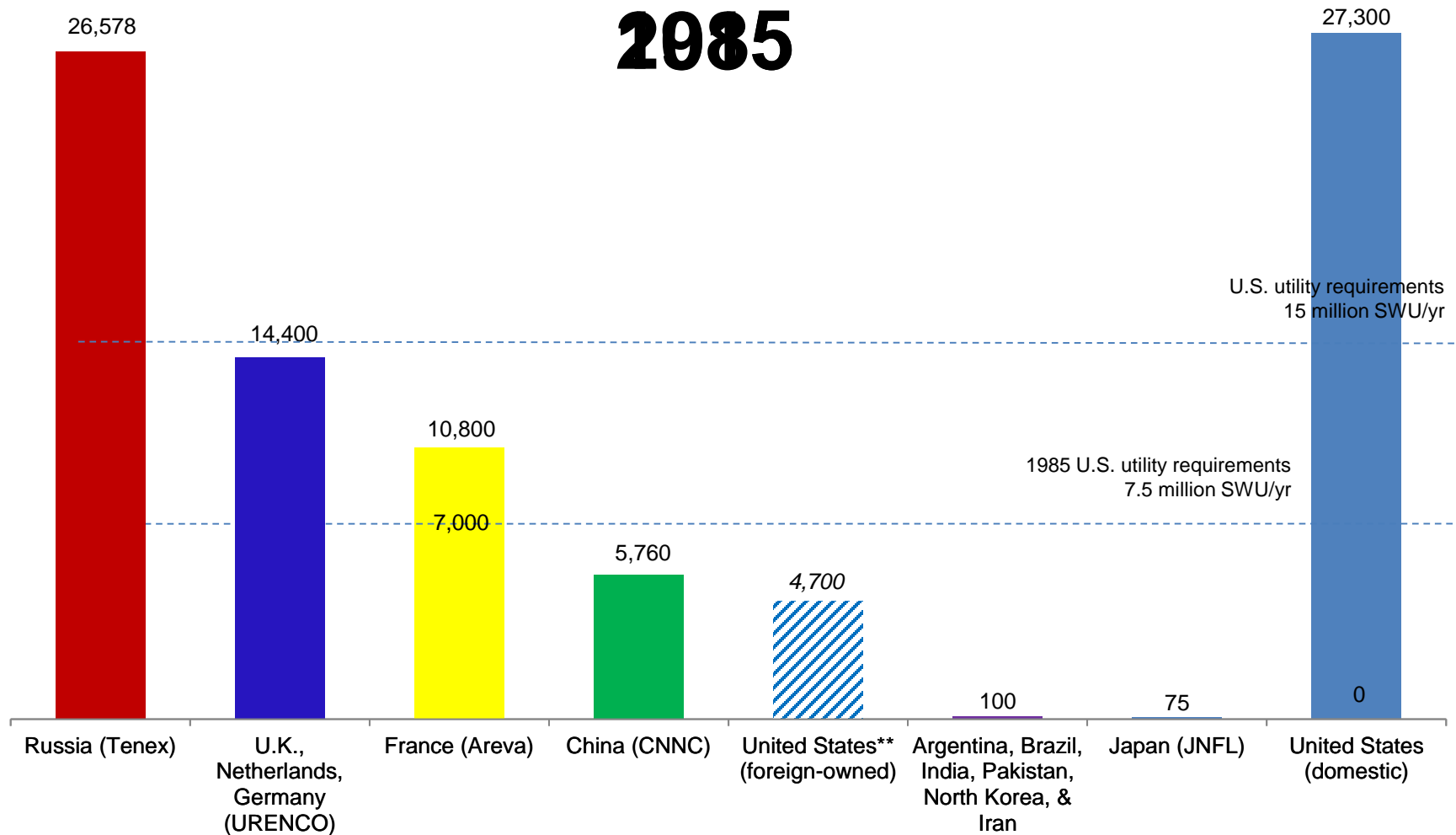
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- 1) Who will build/own/operate the reactors?
  - *U.S. prosperity and influence at stake*
- 2) Who will supply the fuel?
  - *Drives energy security and nonproliferation outcomes*
- 3) Who will be the favored global energy partner?
  - *Lost opportunities will damage long-term U.S. geostrategic influence for decades*
- 4) How can U.S. nuclear companies prevail in the face of state-owned, state-subsidized, tariff-protected competitors?
  - *Uneven playing field in challenging market presents serious obstacles*



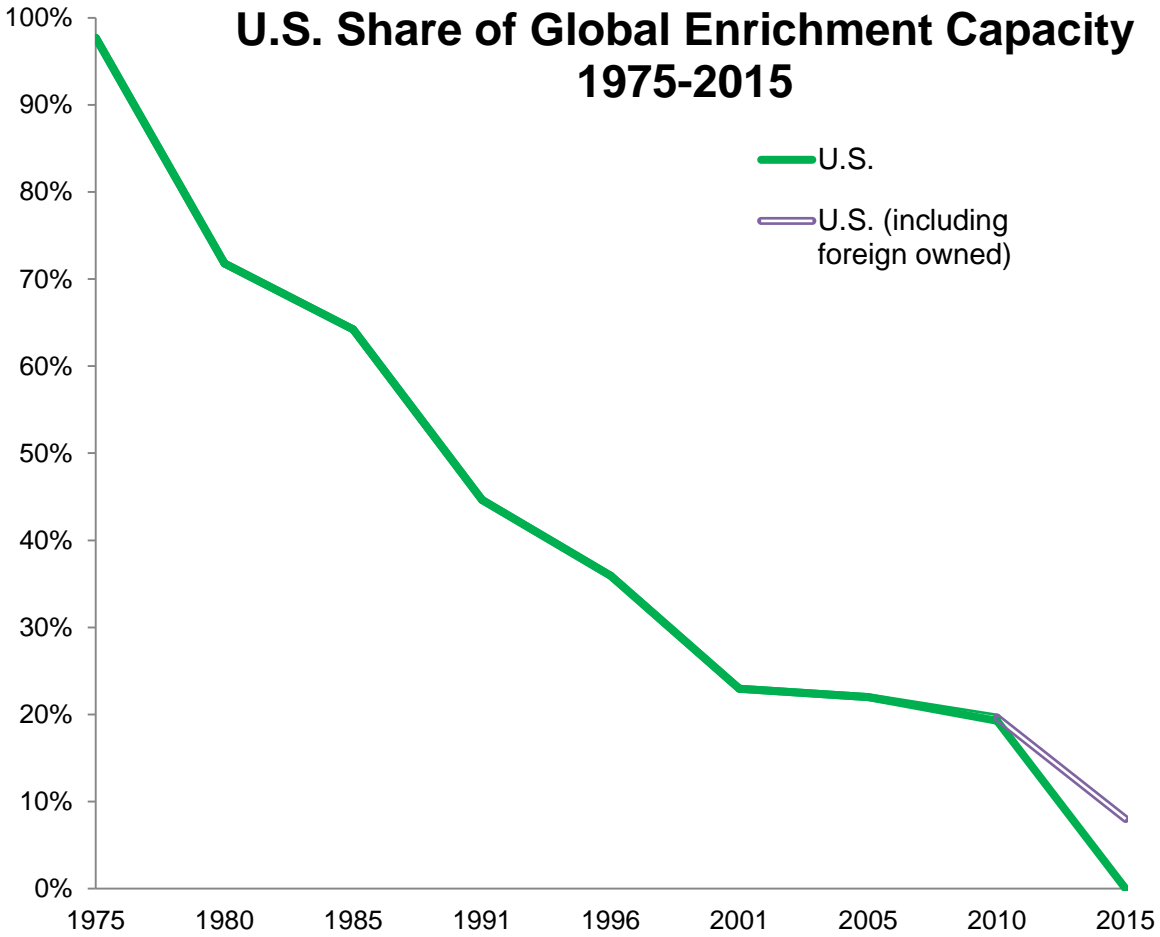
# U.S. Was the Primary Supplier for Decades

## Uranium Enrichment Capacity (Thousand SWU/year)

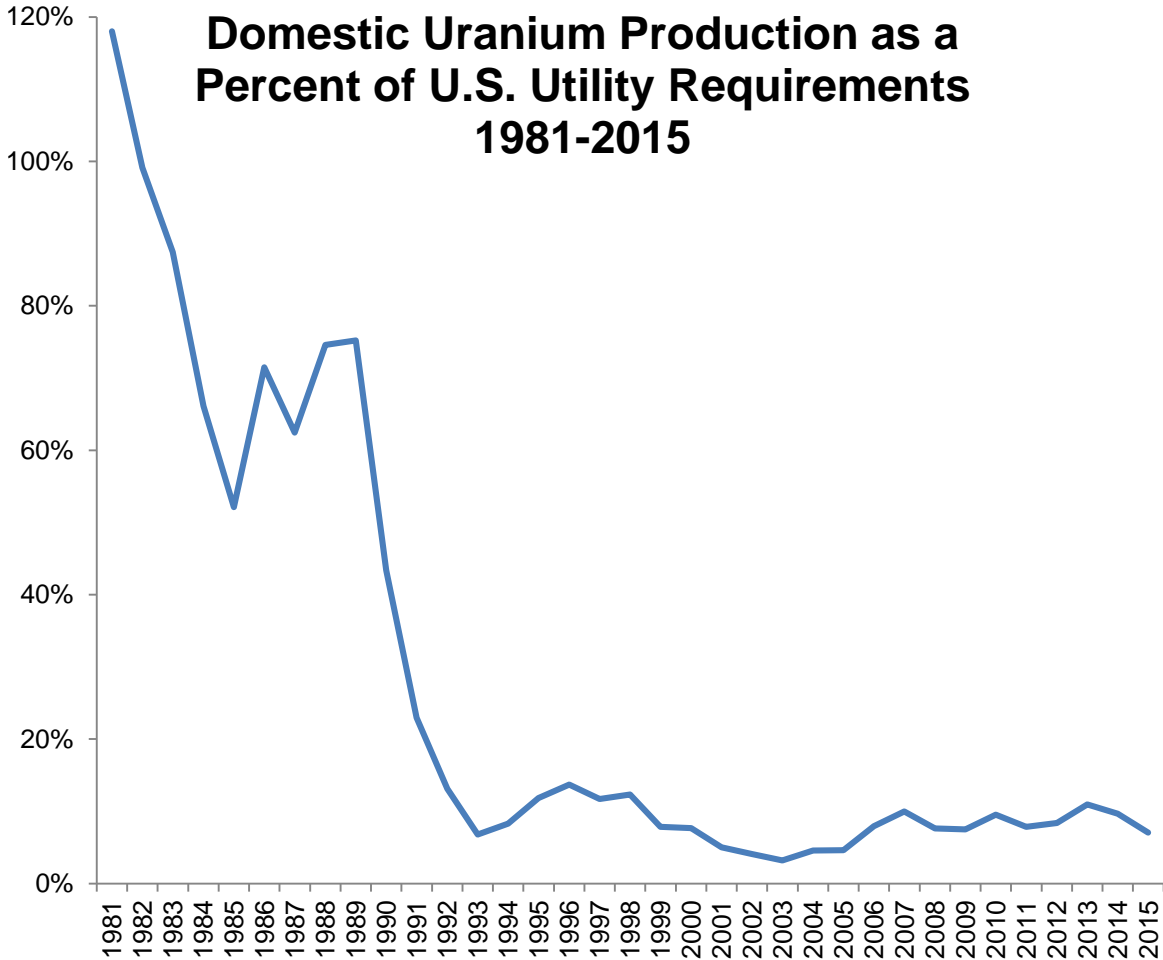


# Four Decades of Decline

**U.S. Share of Global Enrichment Capacity  
1975-2015**



**Domestic Uranium Production as a  
Percent of U.S. Utility Requirements  
1981-2015**



Sources: IAEA, Stockholm International Peace Research Institute,  
Congressional Budget Office, World Nuclear Association

Source: U.S. Energy Information Administration



# The Energy Security Issue

## No One Talks About

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Net Import Dependence		
	1981	2015
Oil	34%	24%
Uranium	0%	91%
Uranium Conversion	0%	32%
Uranium Enrichment	0%	68%

# Reasserting American Nuclear Leadership

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- **Bottom line: Longstanding U.S. global leadership stands at serious risk**
  - *Energetic initiative will be required to recover*
- Premise: greater U.S. role in global nuclear commerce will promote nuclear safety and nonproliferation best practices
- Embrace bipartisan consensus supporting U.S. nuclear industry at home and exports abroad
  - Energize “Team USA” approach.
- Need concrete action
  - Establish Assured Nuclear Fuel Services Initiative
  - Restore U.S. fuel cycle capabilities
  - Lead development and deployment of SMRs and advanced nuclear technologies

# Advanced Reactors and HALEU

- Many designs require High-Assay LEU (higher than 5% but less than 20% U235)
  - None of the world's commercial enrichment facilities are licensed & configured to produce HALEU.
- 2017 U.S. NIC survey of 13 advanced reactor companies:
  - 8 of 13 companies said "Assured access to HALEU" is "urgent" or "important"
  - Ranked #2 out of 7 issues
  - 9 of 13 said "Development of a U.S. supplier" was important to their company

## Q4: Rank the following in terms of priority

	Urgent	Important	Somewhat important	Low priority	Don't know	Total	Weighted Average
Grants to pay for NRC pre-licensing activities?	53.85% 7	15.38% 2	15.38% 2	15.38% 2	0.00% 0	13	3.08
Assured supply of High Assay LEU?	50.00% 6	16.67% 2	16.67% 2	16.67% 2	0.00% 0	12	3.00
More funding for the Advanced Reactors Concept cost-share Program for technology development?	46.15% 6	7.69% 1	30.77% 4	15.38% 2	0.00% 0	13	2.85
New Advanced Test Reactor?	30.77% 4	38.46% 5	7.69% 1	23.08% 3	0.00% 0	13	2.77
Access to DOE National Labs?	15.38% 2	46.15% 6	30.77% 4	7.69% 1	0.00% 0	13	2.69
Development of government first mover sites for prototypes, demos?	30.77% 4	30.77% 4	15.38% 2	23.08% 3	0.00% 0	13	2.69
GAIN program?	23.08% 3	30.77% 4	30.77% 4	15.38% 2	0.00% 0	13	2.62

# Win Advanced Reactors by Winning the Fuel Cycle

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- First nation to develop HALEU production = huge competitive advantage in advanced reactors
  - Hard to win deals for U.S. advanced reactor designs if you have to get the fuel from China.
  - China/Russia winning reactor deals worldwide by bundling reactor design, construction & fuel cycle solutions
- Opportunity: DOE is seeking HALEU capability by 2025 or 2030 for non-pro missions.
  - Piggyback on national security & non-pro needs, make U.S. the exclusive supplier of HALEU



*Fueling the Future  
of Nuclear Power*