



ENERGY EDUCATION



March 21, 2024

ENERGY PROJECTS



Daniel Kestner, Economic Development Manager



VIRGINIA
Energy

CURRENT GRANT PLAN

IRA Home Efficiency Rebates 50121**	\$	94,537,110
IRA Home Electrification and Appliance Rebates 50122**	\$	93,987,430
RACER Cooperative Agreement*	\$	1,000,000
FY21 Mid Atlantic Electrification Partnership Grant*	\$	5,388,154
FY24 SEP Grant*	\$	1,342,620
ARRA *	\$	5,304,936
Solar for All	\$	250,000,000
Energy Efficiency and Conservation Block Grant (EECBG)	\$	2,600,000
Energy Efficiency Revolving Loan Fund Capitalization Grant Program (RLF)	\$	11,400,000
Grid Resilience 40101d*	\$	11,000,000
State Energy Program (SEP), BIL special funding*	\$	9,500,000
Training Residential Energy Contractors (TREC)	\$	3,400,000
Energy Auditors Training Grant Program	\$	2,000,000
Renewable Energy Siting through Technical Engagement and Planning (R-STEP)	\$	2,000,000
Charging and Fueling Infrastructure***	\$	13,000,000
Offshore Wind Centers of Excellence***	\$	500,000
Abandoned Mine Land (AML), BIL special funding	\$	341,857,110
Carbon Safe	\$	4,296,915
Clean Energy on Mine Lands	\$	140,000,000
Other secured federal grant funding, various programs	\$	83,146,778
<i>*Received grant **Received a small portion for planning phase ***Support role</i>	\$	1,076,261,053



FEDERAL GRANT PROCESSES

1. Request for Information
2. Concept Paper
3. Letter of Encouragement
4. Full Application Drafting
5. Full Application Submittal
6. Pre-Selection Interview
7. Decision of Award

CURRENT PROJECTS



Abandoned Mine Land Economic Revitalization (AMLER) program: \$10 + Million since 2017

Bipartisan Infrastructure Law (BIL): \$22+ million since 2023

Economic Development Program created in 2020 to focus on repurposing mined lands



FUTURE PROJECTS

Clean Energy on Mined Lands

- \$140 million in DOE grant funds not yet received
- \$1.1 billion total investment to deploy solar on mined lands

Solar For All

- \$250 million in DOE grant funds not yet received
- Finances rooftop solar for low to median income residents



Carbon SAFE Phase II

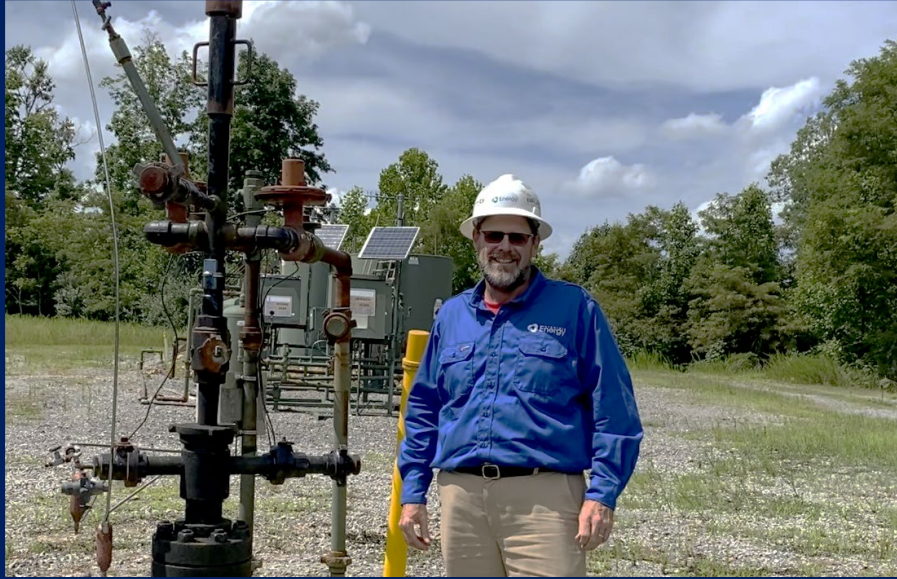
- \$4.3 million in DOE grant funds entering contract negotiations
- Feasibility study

SITING CHALLENGES



Mike Skiffington, Chief Operating Officer

VIRGINIA ENERGY AND REGULATORY AUTHORITY



Virginia Energy *DOES* regulate mining and gas and oil extraction in Virginia.

Virginia Energy *DOES NOT* regulate the siting and permitting of energy generating facilities.



INTERCONNECTION

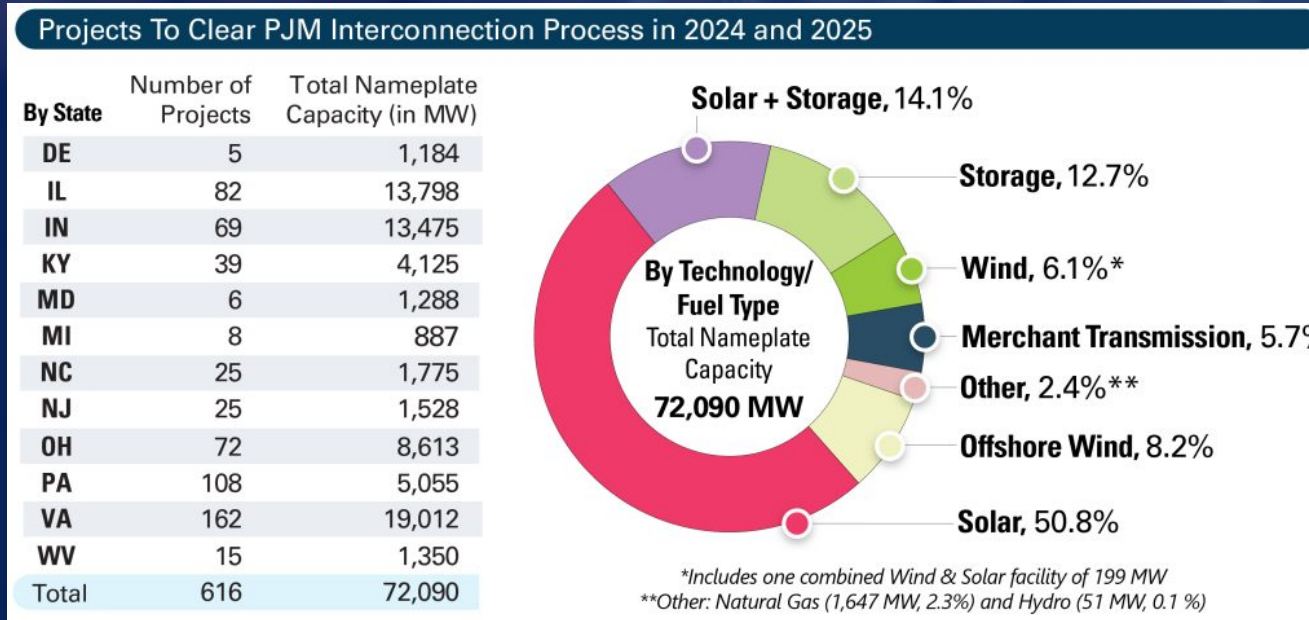
Greater than 20 MW overseen by FERC and implemented by PJM



Less than 20 MW overseen by State Corporation Commission (SCC)



INTERCONNECTION



End of 2023: 40,000 MW of projects yet to move through to construction

The PJM queue as of April 2023: 252,665 MW

Virginia's queue: 60,273 MW, mostly renewable resources

Mid 2025: 19,000 MW scheduled to complete the queue process

Historic Completion rate is 5%



APPROVALS

Local Land Use and Zoning

State Permit

Plan Review and Approval

Land Disturbance Permit

Decommissioning Plan



NUCLEAR SITING



PUBLIC PARTICIPATION OPPORTUNITIES



Local Siting

Certificate of Public Convenience and Necessity

DEQ Permits

Nuclear Regulatory Commission Licensing

Virginia Energy *DOES* NOT regulate the siting and permitting of nuclear energy generating facilities.

NUCLEAR SITING

Multiple details that currently apply to traditional nuclear plants also apply to Small Modular Reactors

- Must be in a rural area
- Must be on bedrock
- Geology NOT prone to hazards (flooding, landslides, earthquakes)



NUCLEAR UPDATE



Glenn Davis, Director

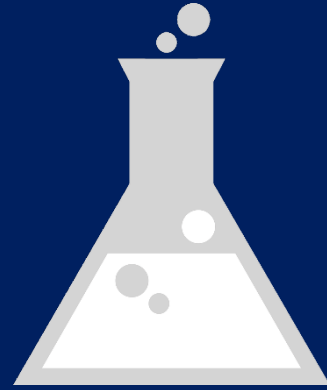
NUCLEAR TODAY IN VIRGINIA



Two
Facilities
3.2 GW



Business
Cluster in
Lynchburg



Atomic
Physics
and
Nuclear
Research

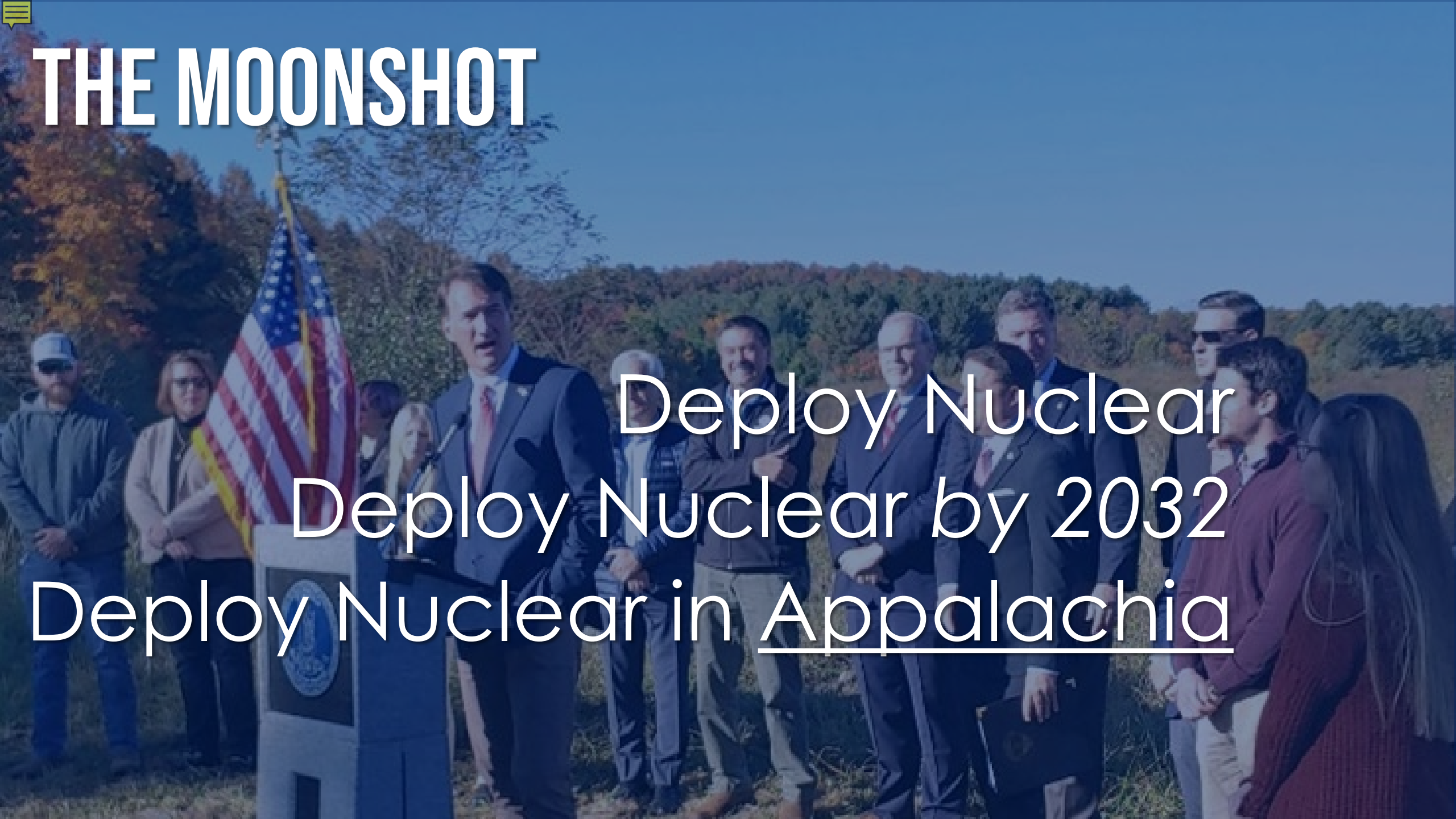


U.S. Navy's
Nuclear
Submarine
Fleet



THE MOONSHOT

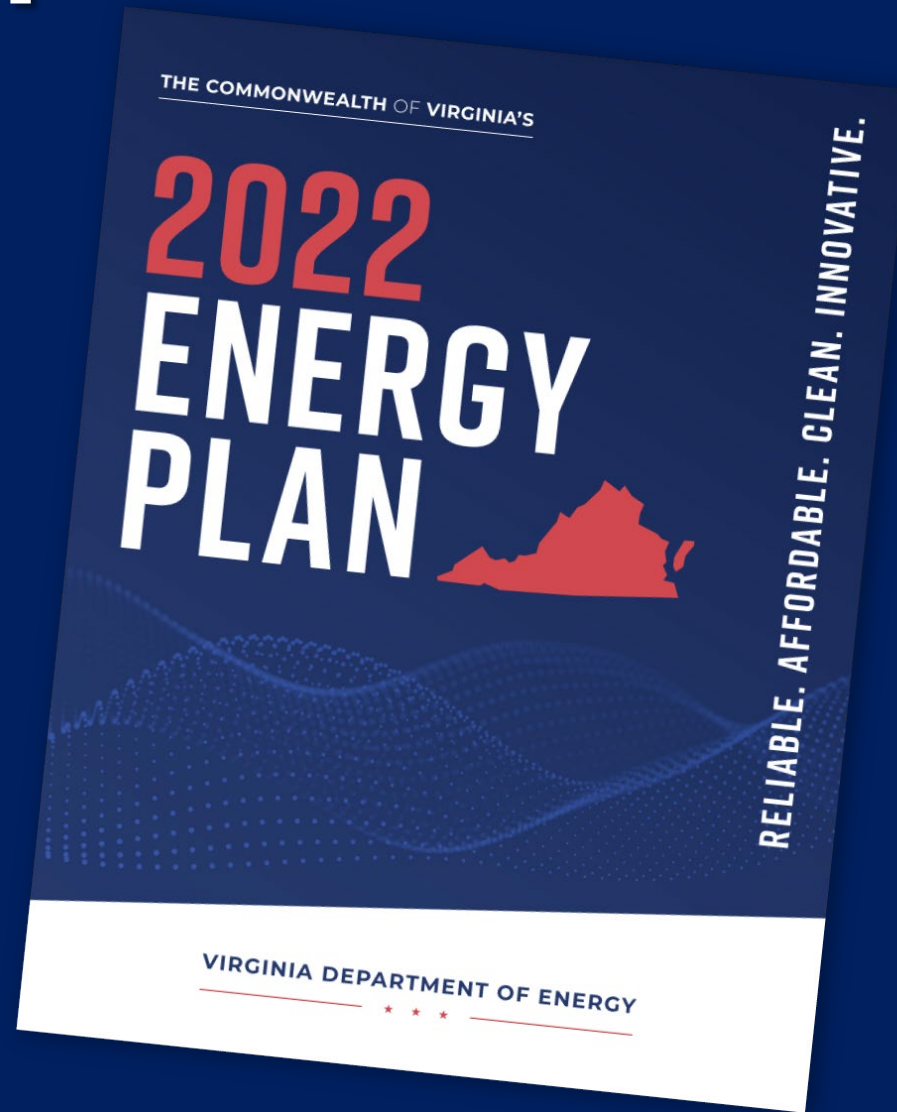
Deploy Nuclear
Deploy Nuclear by 2032
Deploy Nuclear in Appalachia



WHY NUCLEAR?

2020

Virginia Clean
Economy Act

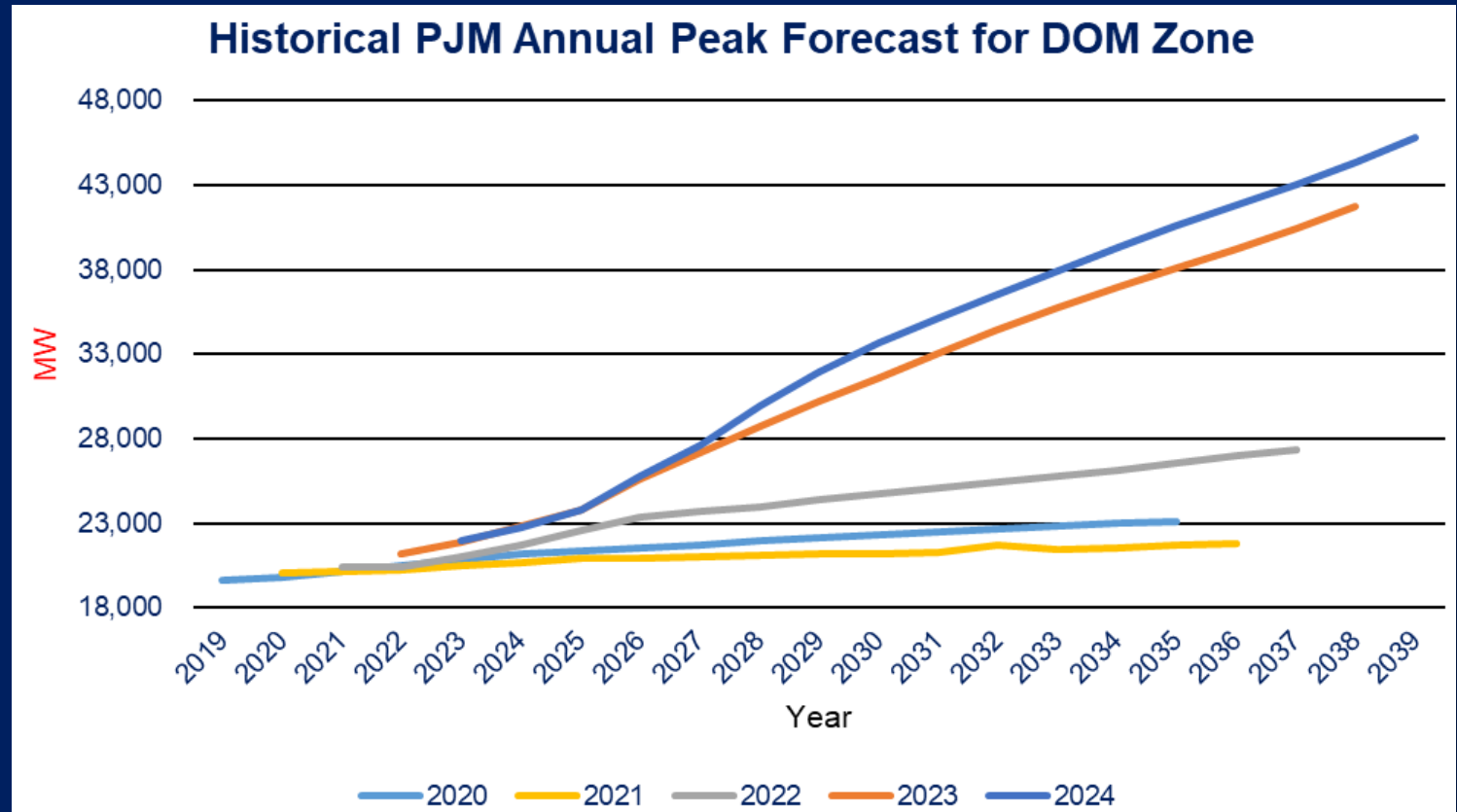


verses



THE DEMAND

- Significant increases in demand, 5.5% annually
- Virginia's peak demand is expected to grow to 42,004 MW by 2034 and almost double from current levels
- Growing data center industry



FEDERAL NUCLEAR SUPPORT

“The continued deployment of nuclear energy is essential to confronting climate change,” said U.S. Secretary of Energy Jennifer Granholm.



\$400 Billion DOE Loan Program Office Funds



IRA Tax Incentives



STATE NUCLEAR SUPPORT

2020: Clean Energy Designation, funding for research

2023: VINhub, \$4 million to Power Innovation Fund

2024 PROPOSALS: Appalachian Power SMR , Nuclear Education Grant

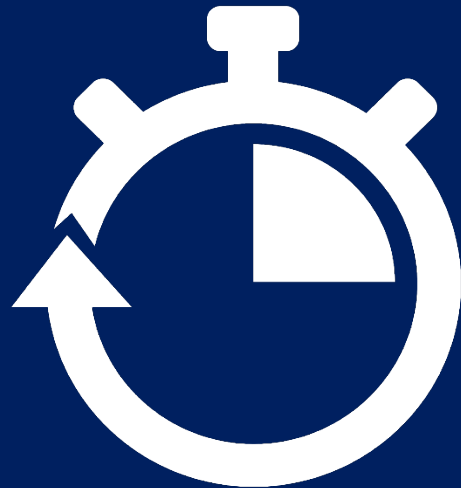


WHAT'S HAPPENING NOW?



Meetings underway with major developers

Identifying existing and needed supply chain



Virginia Department of Energy
Posted by Hootsuite
Feb 26 · 🌐

Ever wonder how spent nuclear fuel is stored? Watch as [U.S. Department of Energy's Katy Huff](#) goes inside a storage facility at [Dominion Energy's North A...](#) See more

I'm touching a dry cask spent nuclear fuel About this website

AND I'M TOTALLY FINE!

youtube.com
3 things to know about spent nuclear fuel storage

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virginia_energy

DID YOU KNOW?

There are currently **93 REACTORS** operating in **28 U.S. STATES.**

Nearly 19% of America's electricity comes from nuclear.

*States marked in light blue represent states with nuclear reactors.

Energy

View insights Boost post

Virginia Energy @Virginia_En... · 1/24/24

No need to go bananas - they're all safe but [#didyouknow](#) that many of our everyday items are radioactive? Check out the information below and learn more here: [energy.gov/ne/articles/5-...](#) [#VirginiaEnergy](#)

others
arly 19% of
ar? There are
g in 28 U.S... more

🗨️ 1 ❤️ 2 📊 86 📌 📤

Educational Messaging



SMALL MODULAR REACTORS

Small Footprint

Lower Cost

Siting Flexibility

Safer Design

Economic Development

**Nuclear expansion
and innovation is
essential to a carbon-
free reliable grid.*





NUCLEAR COMMON MISCONCEPTIONS

Virginia will choose a site for an SMR. **FALSE**

Spent nuclear fuel will be stored in underground coal mines. **FALSE**

If we just deploy more solar, we do not need nuclear. **FALSE**

Nuclear is not a clean energy source. **FALSE**

NUCLEAR Q&A



Glenn Davis, Director