

# Virginia's vision for deploying nuclear power in Appalachia



Glenn Davis, Director, Virginia Department of Energy

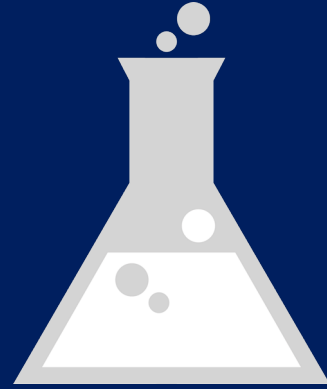
# Nuclear today in Virginia



Two  
Facilities  
3.2 GW



Business  
Cluster in  
Lynchburg



Atomic  
Physics  
and  
Nuclear  
Research



U.S. Navy's  
Nuclear  
Submarine  
Fleet

# The moonshot

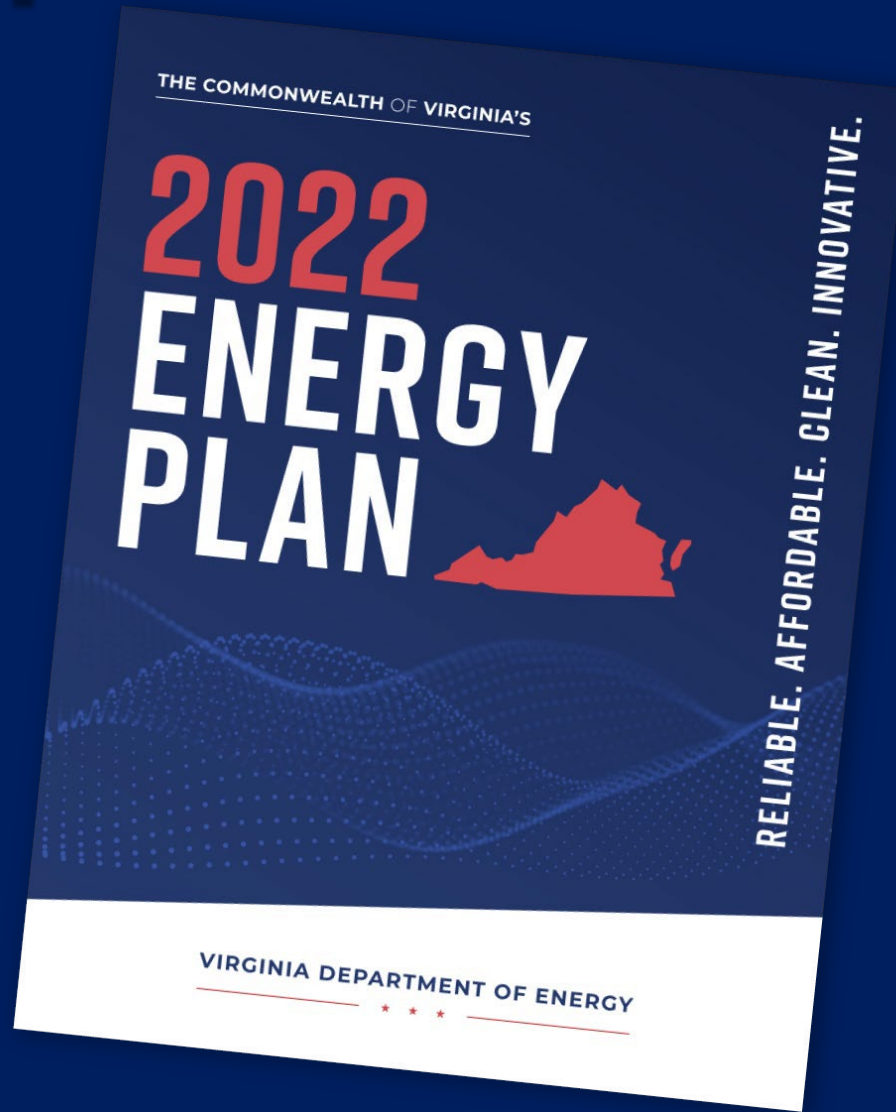
Deploy Nuclear  
Deploy Nuclear *by 2032*

Deploy Nuclear in Appalachia

# Why nuclear?

2020

Virginia Clean  
Economy Act



verses



# Why Appalachia?

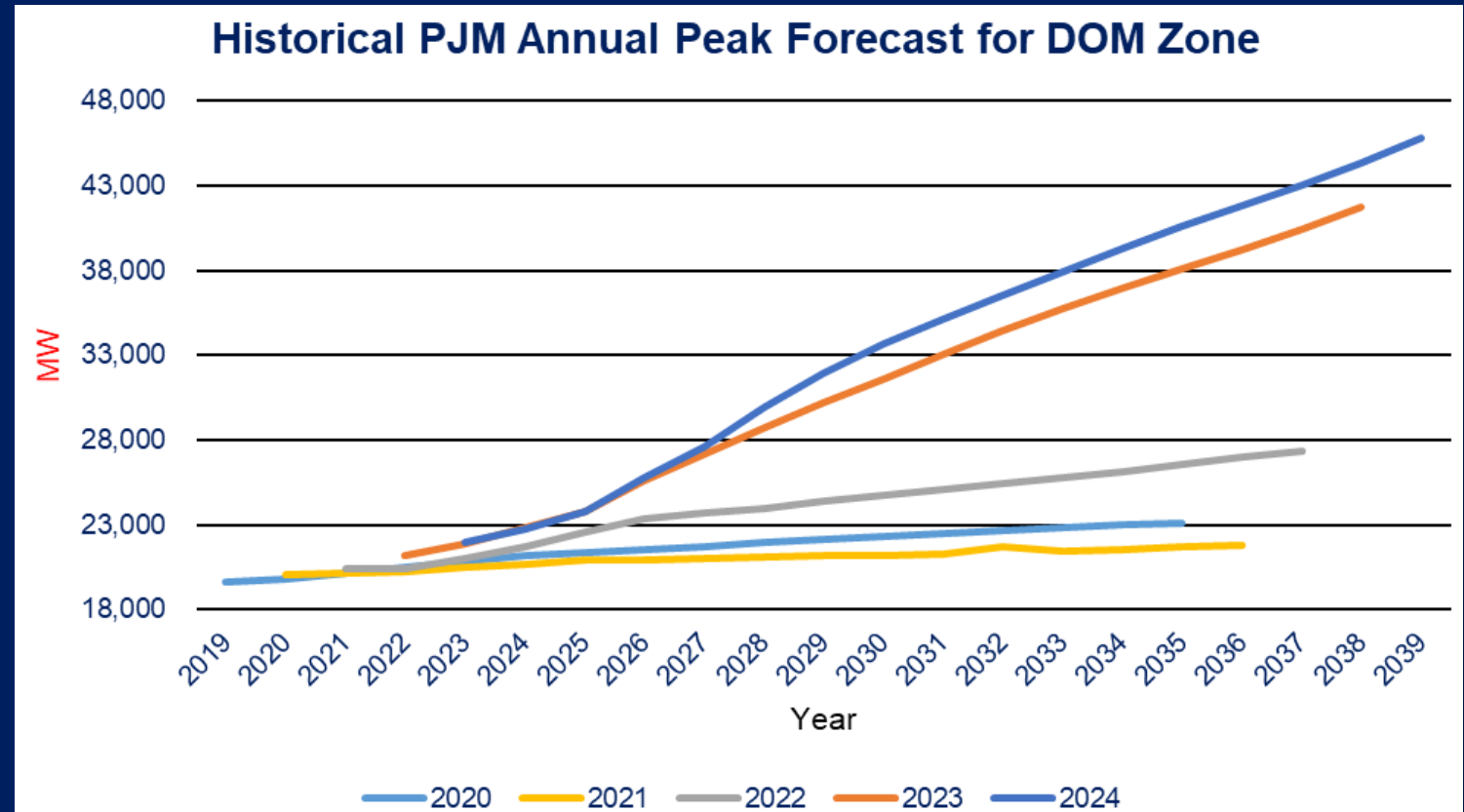
Rich Tradition in  
Energy Resources



Land Opportunities

# 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



# Industry Demands Nuclear

← Stories

## The Internet is 24x7—carbon-free energy should be too

September 2019 · Share

<b>Featured technology</b> 24/7 carbon-free energy	<b>Who we're helping</b> Our operations	<b>Our role</b> Set a goal to source carbon-free energy to match our operational electricity consumption
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Electricity is the fuel that allows our data centers to deliver billions of Google searches, YouTube views, and much more—every single day, around the clock. In 2017 alone, we purchased more than seven billion kilowatt-hours of electricity (roughly as much as is used yearly by the state of Rhode Island) from solar and wind farms that were built specifically for Google. This enabled us to match 100% of our annual electricity consumption through direct purchases of renewable energy.

## AWS acquires Talen's nuclear data center campus in Pennsylvania

Cloud company pays \$650 million – plans 960MW campus


March 04, 2024 By: Dan Swinhoe · Have your say

Amazon Web Services (AWS) has acquired Talen Energy's data center campus at a nuclear power station in Pennsylvania.

Talen Energy Corporation this week announced it has sold its 960MW Cumulus data center campus in Pennsylvania to a 'major cloud service provider' – listed as Amazon in a [presentation](#). Amazon is yet to comment on the news.

According to the investor presentation, Talen sold the site and assets of Cumulus Data for \$650 million. The deal comprises \$350 million at close and \$300m escrowed, released upon development milestones anticipated in 2024.

"We are pleased today to have sold our Cumulus data center campus, unlocking significant value



## 2 years in the making, Google unveils plan to achieve 24/7 clean energy by 2030

Published Sept. 15, 2020

## Microsoft, Google, others partner with LevelTen Energy to create first market for 24/7 clean energy

BY LISA STIFFLER on December 14, 2023 at 6:00 am

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# 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

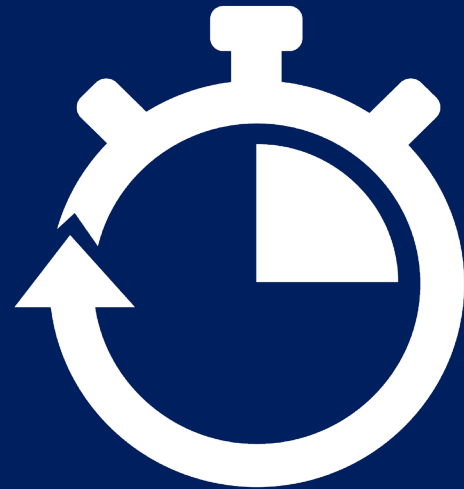


# What's happening now?



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

AND I'M TOTALLY FINE!

youtube.com  
3 things to know about spent nuclear storage


See insights and ads

👍👍 2

👍 Like    💬 Comment

**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.

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-...](https://energy.gov/ne/articles/5-...) #VirginiaEnergy



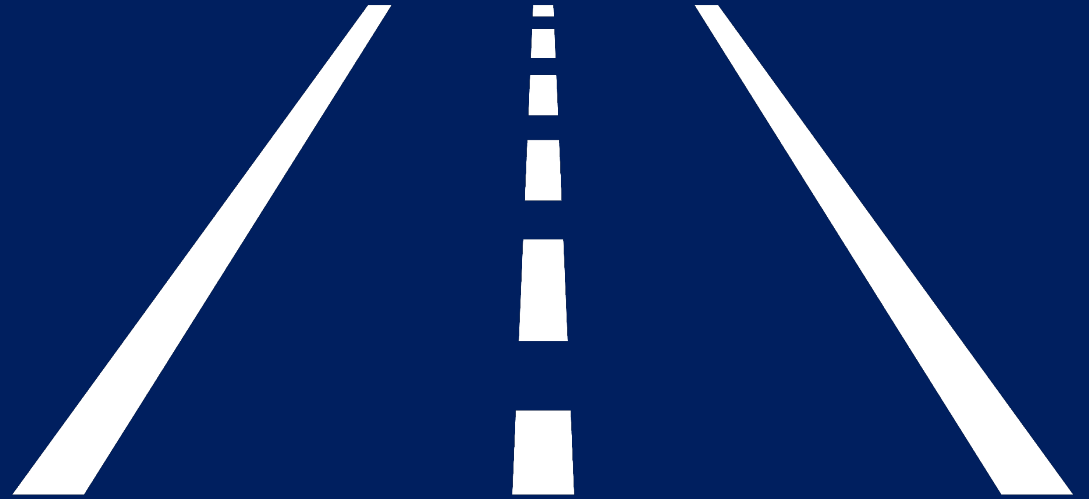
others  
arly 19% of  
ar? There are  
g in 28 U.S... more

🗨️ 1    ❤️ 2    📊 86    📌    📤

Educational Messaging

# Regulatory path?

Virginia is working across agencies to map out the necessary steps required to deploy nuclear technologies



Part of this journey involves identifying regulatory processes that are overly burdensome

The Virginia Department of Energy is actively engaging with the NRC

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