VIRGINIA'S ENERGY LANDSCAPE

TRANSITIONING TO AN ALL-OF-THE-ABOVE STRATEGY

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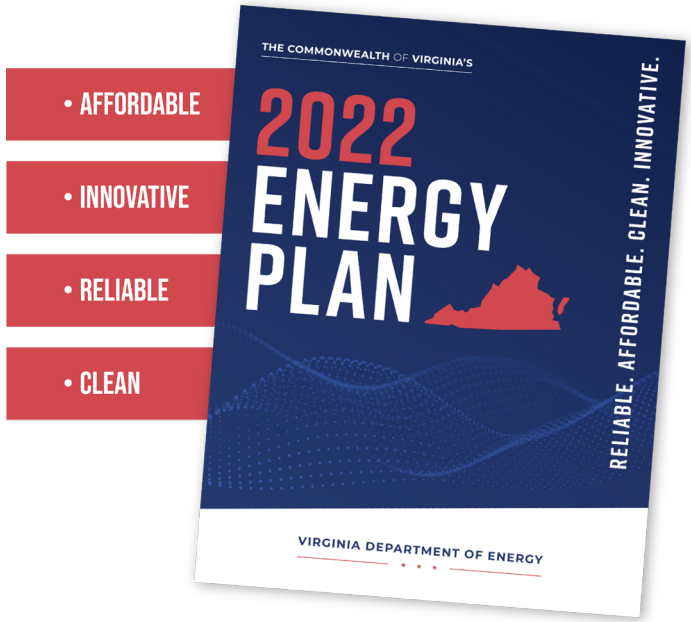
Virginia Department of Energy

July 2025

VIRGINIA Energy

VIRGINIA'S CURRENT ENERGY LANDSCAPE

LEADING THE COMMONWEALTH TO A RELIABLE & RESPONSIBLE ENERGY FUTURE



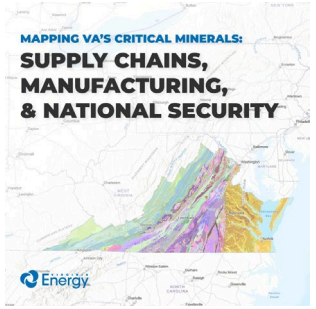
Strengthening Virginia's Energy Future
Programs supporting an affordable, reliable, & increasingly clean energy grid.

Promoting Economic Growth
Initiatives that attract investment, create jobs, & expand energy infrastructure.

Advancing Innovation
Funding clean technologies like nuclear, carbon capture, and energy storage.

Managing Natural Resources
Oversight of mining, reclamation, & geology to ensure environmental protection.

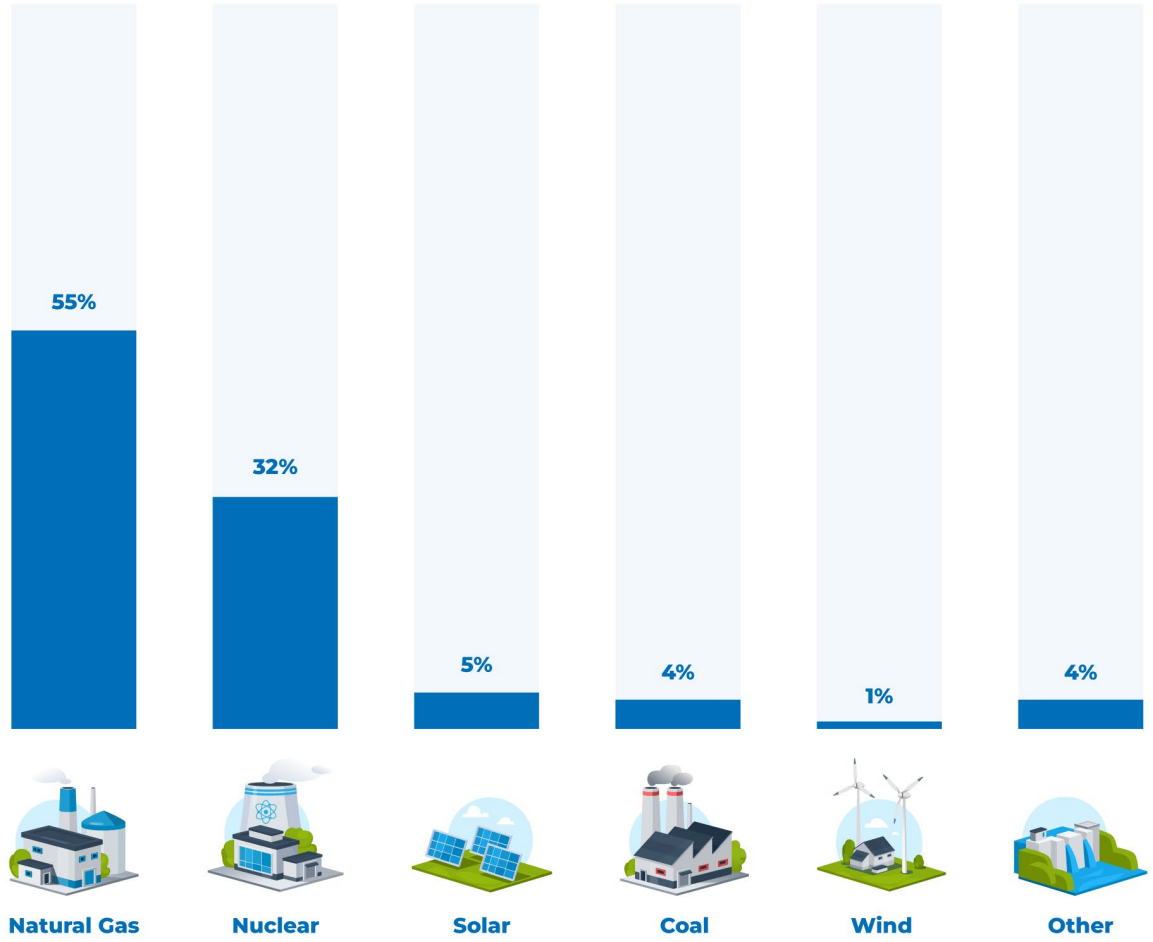
Providing Public Resources
Grants, data, & technical assistance supporting workforce development and community-oriented projects.



VIRGINIA'S ENERGY MIX: RELIABLE, AFFORDABLE, INCREASINGLY CLEAN

Virginia's energy mix is diverse, with natural gas, nuclear, and renewables powering homes and businesses across the Commonwealth.

As energy demand grows, maintaining a reliable, affordable, and sustainable grid requires a balanced approach that leverages all available resources.



VIRGINIA IS EXPERIENCING THE LARGEST GROWTH IN POWER DEMAND SINCE WWII

Current projections show **6.5% annual increase in demand**—up from 1.4% projected in 2020.

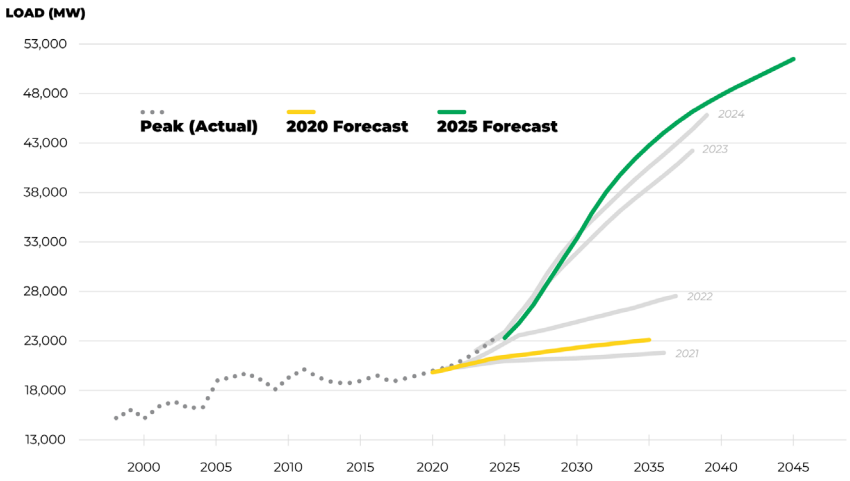
Power **capacity must double** in next 10 years to meet growing demand.

Electricity imports have increased significantly in the last three years, from 18% in 2020 to 36% in 2023.

It is reasonable that the law should **adapt as the world around it changes**.

PJM Load Growth Forecasts

2020-2025, Dominion Zone, Summer Peak (MW)

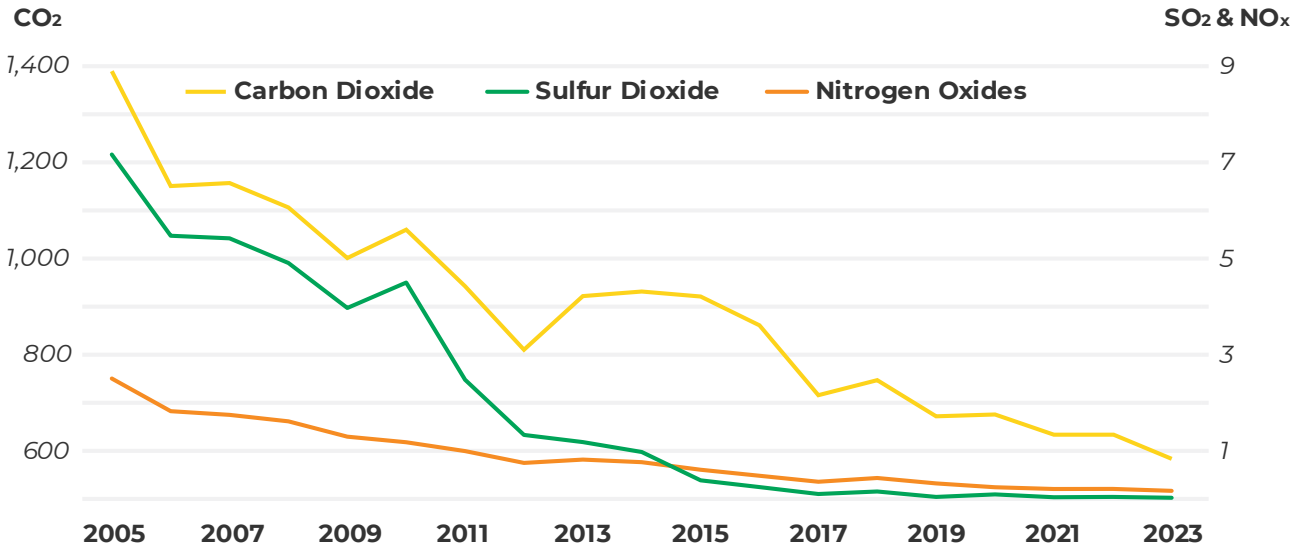


Source: PJM Long-Term Load Forecast Reports, 2020-2025.

VIRGINIA'S POWER SECTOR CARBON EMISSIONS HAVE DECREASED BY OVER 50% IN THE LAST DECADE

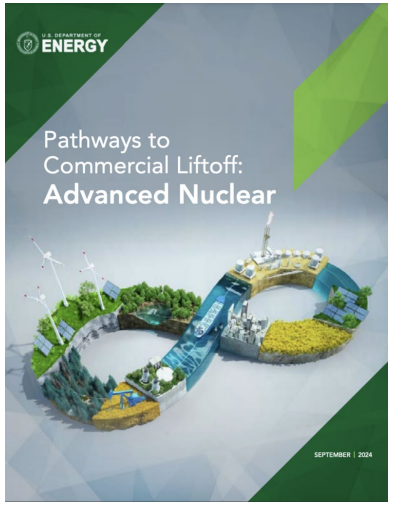
Faster than the national level of approximately 37% decrease.

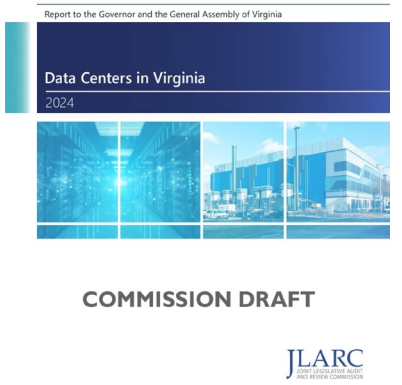
Annual Power Sector CO2 Emissions Decreased from 39,700 to 24,600 lbs/year or ~23% during the same period.



Source: PJM

DOMINION, JLARC, PJM, US DOE, & VIRGINIA ENERGY AGREE: WE NEED MORE POWER THAT WE CAN RELIABLY DEPEND UPON





Renewables alone **cannot meet demand**.

Natural gas and nuclear are needed to ensure 24/7 reliable service now and in the future.

Utilities and power providers need **regulatory and economic certainty** to make the necessary investments in technologies such as natural gas and nuclear to advance Virginia's economic development.

VIRGINIA'S ALL-OF-THE-ABOVE ENERGY STRATEGY

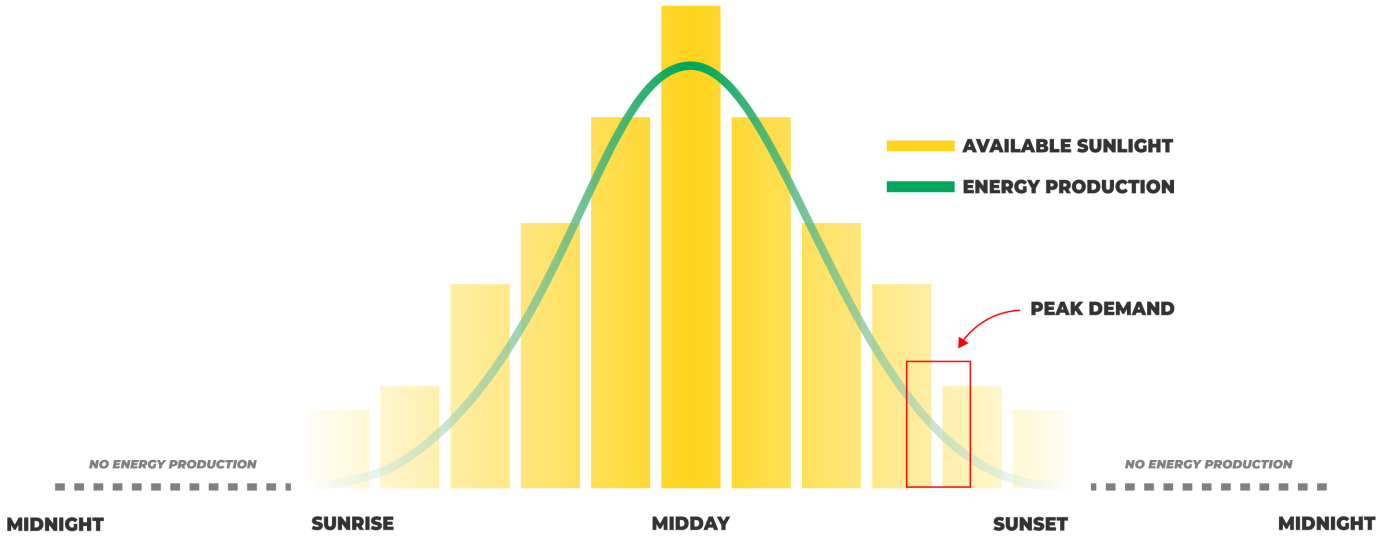
WHEN THE SUN'S NOT SHINING & THE WIND'S NOT BLOWING...

Renewables play a supporting role in our strategy for an increasingly clean future.

They are not powerful or reliable enough to provide us with the necessary baseload generation on their own.

6% of Virginia's power comes from solar and wind.

Solar is least effective during peak demand hours, when energy is needed most.



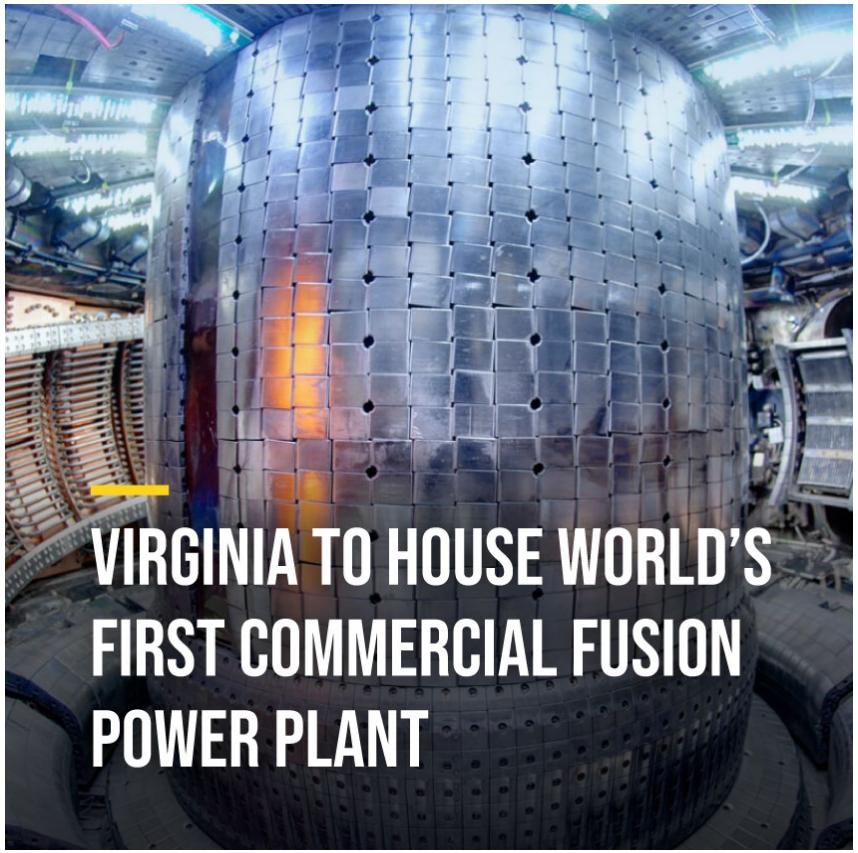
Note: Graph is meant to be illustrative of general trends and does not indicate precise energy quantities.

VIRGINIA'S LEGACY & FUTURE OF NUCLEAR INNOVATION

Over 30% of Virginia's power comes from nuclear, and for good reason: it’s reliable, efficient, and virtually limitless.

Recent Announcements:

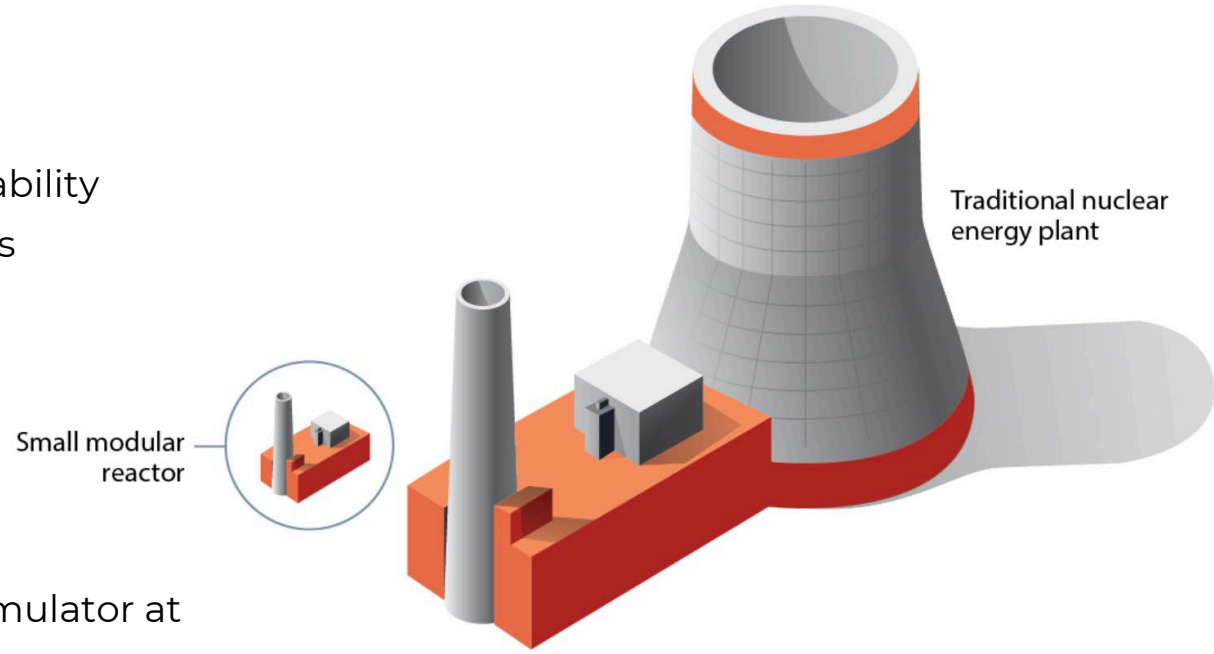
- CFS will build the world's first commercially viable fusion power plant in Chesterfield, VA.
- Amazon struck a deal with Dominion Energy to develop an SMR to power its data centers.
- The NAVY is exploring options to power naval bases with SMRs in Virginia.
- AEP began early site permitting process for an SMR on its Joshua Falls site in Campbell, VA.



SMRs & THE FUTURE OF NUCLEAR INNOVATION

BENEFITS

- **Reliable & Flexible**: 24/7 power, on-demand scalability
- **Compact:** Fits industrial, military, data center sites
- **Inherently Safe:** Passive safety systems
- **Modular:** Factory-built, faster & lower-cost
- **Grid Resilient:** Reduces imports



SMRs IN VIRGINIA

- **Workforce Development:** SMR Control Room Simulator at George Mason University
- **First-Mover Advantage:** Amazon, US Navy, AEP, Dominion – all working on SMR deployment
- **Public-Private Partnerships:** Funding for innovative projects through the Virginia Clean Energy Innovation Bank

NATURAL GAS: THE FOUNDATION OF VIRGINIA'S RELIABLE ENERGY GRID

Over 50% of Virginia's power comes from Natural Gas.

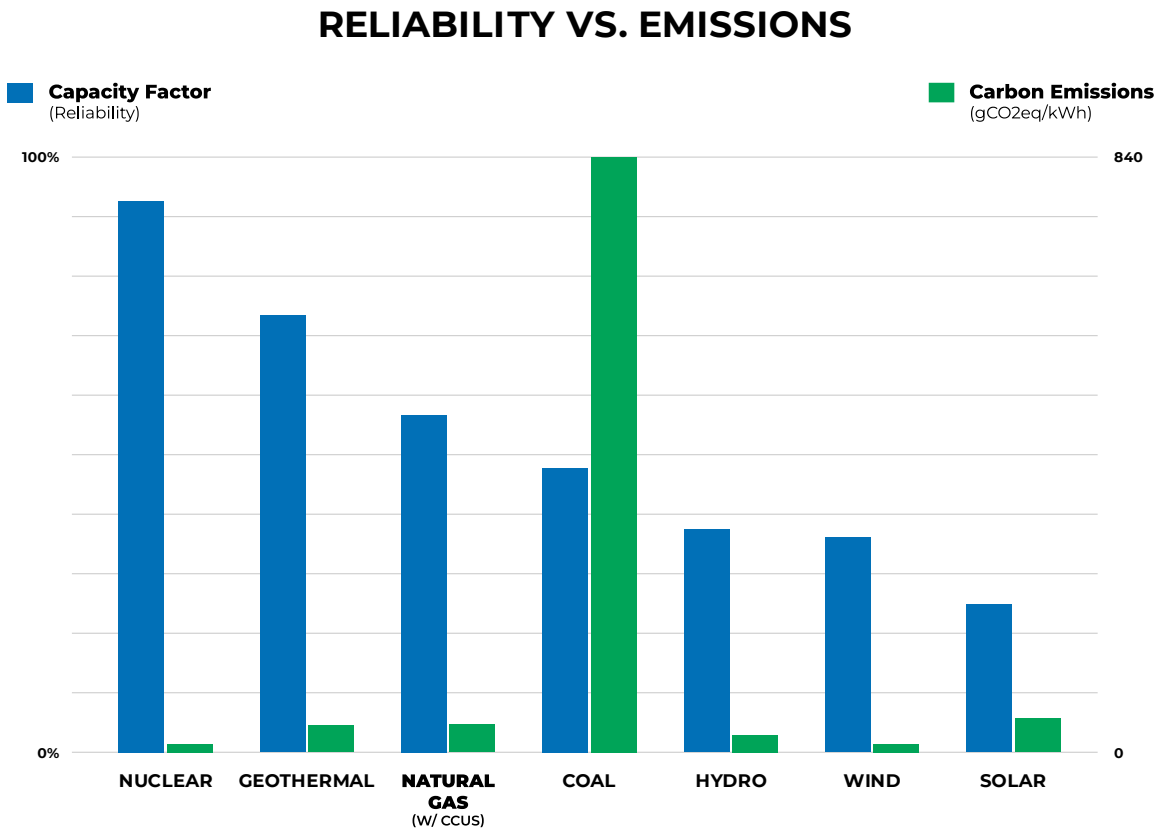
- **Affordability**
  Cost-effective energy with significant savings.
- **Reliability**
  24/7 power, flexible backup for renewables.
- **Environmental Benefits**
  Lower emissions with potential for cleaner tech.
- **Grid Resilience**
  Ensures stability when renewables fluctuate.
- **Economic Impact**
  Supports jobs, investment, and tax revenue.
- **Energy Security**
  Domestic supply reduces reliance on imports.

ALL-OF-THE-ABOVE STRENGTHENS OUR GRID & BOLSTERS ENERGY SECURITY

No two energy sources are created equal, and no single source has all of the answers.

Energy diversity means leveraging only the best parts of each source.

Energy diversity creates a more robust grid that can respond to or recover from extreme weather, cyber attacks, and other threats.



REGULATORY CHALLENGES & INTERCONNECTION BOTTLENECKS

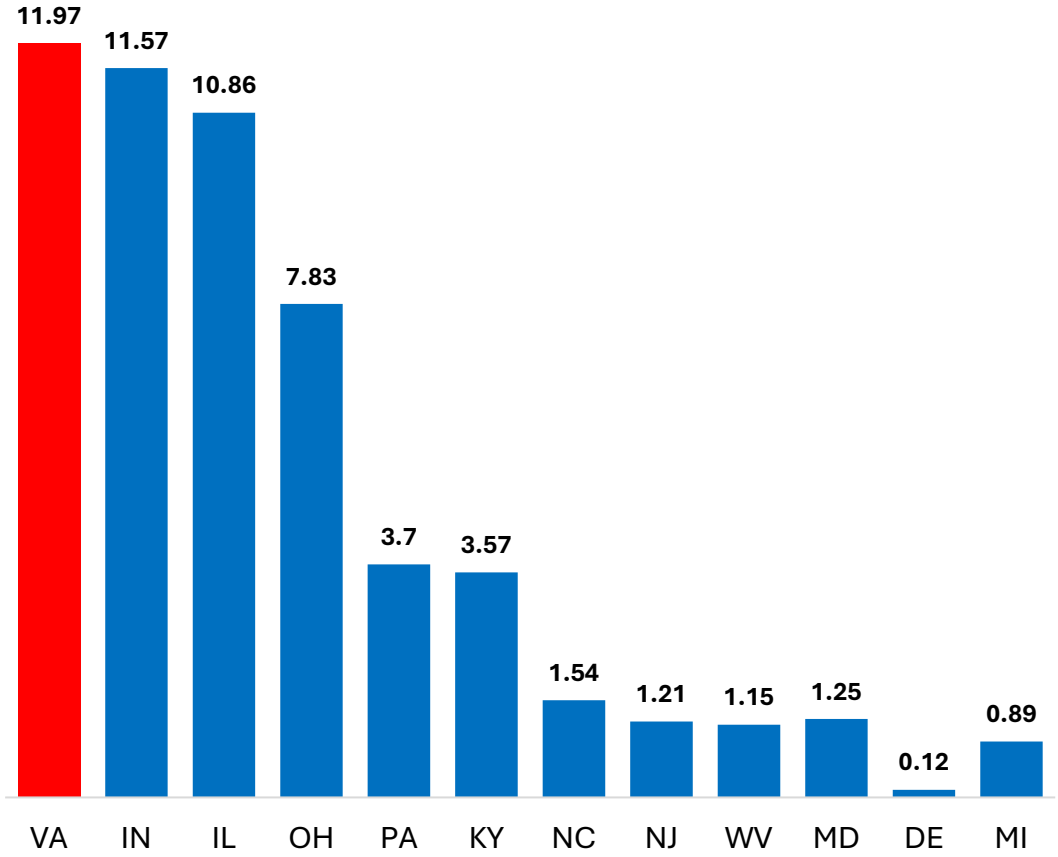
PROBLEMS IN THE PJM

Virginia has **53,492 MW in the Queue**

Historic completion rate of **5%**

Average interconnection time is roughly
Five to Seven Years

Capacity to Clear
PJM Interconnection Process
2024-2025



REGION 13
FUNDING INTERESTS

FEDERAL FUNDING STATUS

Majority of funding will continue for existing Programs

New Funding Opportunities

- **Metallurgical Coal**
- **Critical Minerals**
- **Energy Supply Chain (Nuclear)**

Abandoned Mine Land Economic Revitalization Program

Virginia Energy is one of nine states and tribal programs chosen by Congress to receive funding in Fiscal Year 2025 to develop and repurpose Abandoned Mine Lands with economic and community development end uses. The 2025 Abandoned Mine Land Economic Revitalization Program (AMLER) funding is made available as a direct payment by the federal Office of Surface Mining Reclamation and Enforcement (OSMRE), in accordance with the Consolidated Appropriations Act, 2024 (Public Law 118-42). First authorized in 2016, Virginia received between $10 million and $11.7 million per year. Virginia's payment in FY2025 is $11 million. **Learn more here.**

Coal Mine Methane Capture & Utilization Program

Virginia Energy, in partnership with the Department of Environmental Quality (DEQ), is administering $79.5 million in competitive grants to support projects that capture and reuse methane from active and abandoned coal mines in Southwest Virginia. Funded through EPA's Climate Pollution Reduction Grant program, this initiative aims to reduce emissions, improve air quality, and create new economic opportunities in coalfield communities. **Learn more here.**

Southwest Virginia Hydrogen Hub

Up to $1 million in funding is available for programs supporting potential hydrogen production industry development in Southwest Virginia. Four subawards of up to $250,000 each will fund projects exploring blue and green hydrogen production with a focus on repurposing previously mined lands and energy-ready industrial sites. **Learn more here.**

Carbon Storage Feasibility Study

Up to $500,000 in funding is available for carbon storage feasibility studies focused on storing carbon in underground gas zones in Southwest Virginia, particularly in relation to industrial CO2 production. Two subawards of up to $250,000 each will support research on this innovative technology. **Learn more here.**

REQUEST FOR INFORMATION

COAL MINE METHANE CAPTURE & UTILIZATION PROGRAM

Virginia Energy, in partnership with the Virginia Department of Environmental Quality (DEQ), is launching a major initiative to reduce methane emissions from active and abandoned coal mines in Southwest Virginia.

Supported by $80.7 million from the U.S. Environmental Protection Agency's Climate Pollution Reduction Grant (CPRG) program, the Coal Mine Methane (CMM) Capture & Utilization Program will fund innovative projects that detect, capture, and reuse fugitive methane as a valuable energy resource.

SEEKING INPUT ON

- Methane detection & capture technologies
- Site readiness & prioritization
- Infrastructure or permitting barriers
- Opportunities for public-private partnerships
- Community, environmental, & economic co-benefits

WHO SHOULD RESPOND

- Methane detection & reuse professionals
- Project developers & site operators
- Landowners with legacy coal properties
- Local gov. & economic development leaders
- Academic & research institutions

REQUEST FOR INFORMATION

Your input will help shape the upcoming Request for Proposals (RFP) and guide funding priorities.

Responses Due: July 16, 2025

Contact: cmm@energy.virginia.gov

RFI Link: Virginia Business Opportunities

PROGRAM GOALS

REDUCE METHANE EMISSIONS

Up to 1 million metric tons CO_2 annually, equivalent to removing 230,000+ cars from the road

REVITALIZE MINED LANDS

Targeting economically distressed areas in Southwest Virginia

BOOST ENERGY SECURITY

Reuse captured methane for on-site power, RNG, or manufacturing

CREATE JOBS

Support skilled workforce development in coal-impacted communities

VIRGINIA CLEAN ENERGY INNOVATION BANK

Powered by Virginia Energy

Accelerating the Deployment of Clean Energy Infrastructure Statewide

The Virginia Clean Energy Innovation Bank (VCEIB) is tasked with accelerating the deployment of clean power generation and energy infrastructure across the commonwealth. VCEIB will mobilize public and private capital to address critical financing gaps in the clean power generation and infrastructure sectors, supporting the goals outlined in Virginia's All-American, All-of-the-Above Energy Plan.

July 2025

VIRGINIA Energy

Virginia Energy Grants & Programs

ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT SUBGRANT

Virginia Energy is thrilled to announce the sub-granting of $1.6 million in **Energy Efficiency and Conservation Block Grant** (EECBG) funding from the U.S. Department of Energy (DOE) to eligible local governments. This is a big boost to help enhance state-level EECBG initiatives and support local energy improvement efforts.

More information on other grants and programs, as well as links to individual grant pages available at the website above (QR code): https://energy.virginia.gov/grants-and-programs/grants-programs.shtml

DEMAND RESPONSE

Demand response (DR) pays Commonwealth of Virginia buildings and facilities to conserve or shift electricity use in response to grid signals. These signals can be triggered by high electricity demand, inadequate energy supply, high electricity prices and high emissions. DR serves as a lifeline for Virginia's grid operator and utilities to prevent blackouts or electricity service interruptions which can be extremely disruptive, even deadly, to businesses and residents.

VIRGINIA GRID RELIABILITY IMPROVEMENT PROGRAM (VGRIP)

Virginia Grid Reliability Improvement Program (VGRIP) VGRIP supports a wide range of projects that improve grid reliability. Eligible initiatives include reducing outage duration and frequency, enhancing grid modeling for strategic investments, modernizing infrastructure, addressing outdated components, and supporting workforce development in the energy sector

SOLAR FOR ALL

On April 22, 2024, Virginia Energy received $156 million for the Solar for All program through EPA's Greenhouse Gas Reduction Fund. The federal funding will result in more affordable energy through residential solar installations over a five-year period.

VIRGINIA Energy

THANK YOU.

July 2025

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