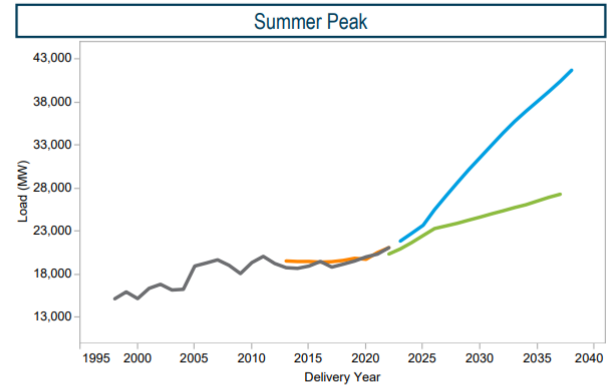


Data Center Boom is Unsustainable

The explosive growth of the data center industry in Virginia requires massive public investment in our electric grid and threatens our ability to achieve a clean energy future. Northern Virginia has the highest concentration of data centers of anywhere else in the world. And, as of late 2022, data centers accounted for 21% of Dominion Energy's electricity sales in Virginia. In fact, data centers represent the only growing sector of electricity demand in Virginia, and that demand growth is projected to more than double peak load by 2040. Virginia localities continue to approve more data center development, and the state is encouraging it through subsidies.



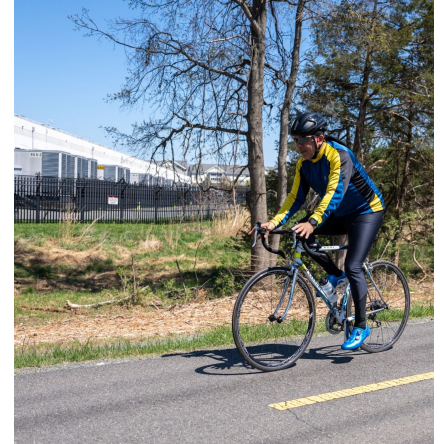
Projected increase in summer peak for PJM Dominion zone.
(Blue line = 2023 forecast)

Virginians are subsidizing data center profits

As new data centers are constructed and Dominion builds out the grid to accommodate companies like Amazon Web Services, local residents and communities are left wondering: **who is going to foot the bill and what are the implications for our air quality, climate goals, water resources, health and the environment?**

- **Climate & Ratepayer Impact:** The regional transmission organization, PJM, released projections in January 2023 that showed peak summer load doubling in 14 years due to increased data center demand. That is 23 GW, an increase that would provide enough power to serve the load of New York City! To meet the power needs of this industry, Dominion has proposed expensive grid expansion and continued reliance on fossil-fueled generation. Not only will Virginia fail to meet its climate goals and suffer the continued community impacts of fossil-fuel power, but all ratepayers are going to pay for it through increased rates!
- **Land and Water:** Massive data center buildings, substations, transmission lines, and power generation facilities convert large expanses of land from forest and agriculture, harming wildlife habitat, water quality, and food and fiber production. Additionally, as the electric system becomes more constrained, the data center industry may shift back to more water-intensive cooling, threatening our water supply.

- **Parks and History:** Due to the potential tax revenue that comes from data centers, localities have been willing to approve data center proposals in sensitive locations with little scrutiny. Data center developments have resulted in cemeteries being dug up and moved, wetlands being filled and mitigated off-site, and transmission lines being built through stream corridors and over trails. Data center campuses are also increasingly being approved adjacent to National parks such as Digital Gateway next to Manassas National Battlefield Park.
- **Air Quality:** Data centers in northern Virginia have quietly put in place thousands of commercial-sized, highly polluting diesel generators for backup power, which we fear are likely to be used more frequently as the grid becomes more constrained. Alarming, there's been no evaluation of the cumulative impact of this on nearby schools, parks, trails, nursing homes, etc. or regional air quality.



Cyclist on the Washington and Old Dominion Trail (W&OD) through Ashburn.

Myths about the data center industry:

You may hear...	But the truth is...
Data centers are fueled by renewable energy.	Data center companies do invest in renewable energy, but their industry also uses more electricity than any other, and that demand far outpaces the renewable energy sources being built. As a result, the planned retirements of polluting sources like natural gas power plants have been put on hold. And, the rapid approval of data centers combined with the continued buildout of utility-scale solar to help power them, the amount of land we stand to lose keeps increasing at a frightening rate.
Data center development will be self limiting once they run out of electricity and/or land.	Thousands of acres have already been approved by Virginia localities for data center development and more are under consideration. Under our current framework, the utility is obligated to expand our electrical infrastructure to provide service to these sites as they build out. This provides seemingly endless power at no cost to them, because the cost to bring new transmission and power generation facilities online falls on Virginia ratepayers.
Data centers are getting more energy efficient.	Data centers are more energy efficient than the onsite IT infrastructure they've replaced, but with the convenience and cost savings of using off-site data centers, consumption has increased dramatically. In addition, high-performance computing, such as AI applications, has increased server rack densities significantly which equates to higher power usage per square foot.

Economic development that results in environmental degradation and leaves Virginians paying the bill is not progress. The state needs to pause approvals, study these issues, and get a handle on this industry before it is too late.

Contact PEC's Julie Bolthouse to get involved: jbolthouse@pecva.org