GROWTH OF DATA CENTERS IN VIRGINIA: A NEW ENERGY CRISIS?

Aerial view of data centers in Ashburn, Virginia.

Power shortages in states including California, Texas, and New York have made the news in recent years. So far, Virginia has been spared. But that too might change as supply fails to keep up with demand in a revolutionary development that is transforming Virginia's economy: the coming of data centers. As a Virginia-based solar developer, Secure Solar Futures is watching these developments with concern—and helping schools, hospitals, and businesses prepare.

Virginia hosts 35% of all data centers in the world, making it the #1 location on earth for these warehouse-like buildings housing computers that store and share data on the internet. To meet growing demand by users of apps, cloud storage, and AI, a modern data center can use as much energy as a small city.

Chasing a skilled workforce and infrastructure close to the nation's capital, tech companies such as Amazon and Google continue to open new data centers in Virginia at a rapid rate. But the state has failed to increase its energy supply to meet the looming demand, which bodes ill for the future. If data centers continue to grow without any limits, Virginia could use three times more electricity in 2040 than it does today, according to a 2024 state government report. Electric bills could increase by 50% or more over the next 15 years.

Northern Virginia is the largest data center market in the world, constituting 13% of global data center operational capacity.

Even more concerning, the reliable power that Virginians have come to take for granted may be at risk.

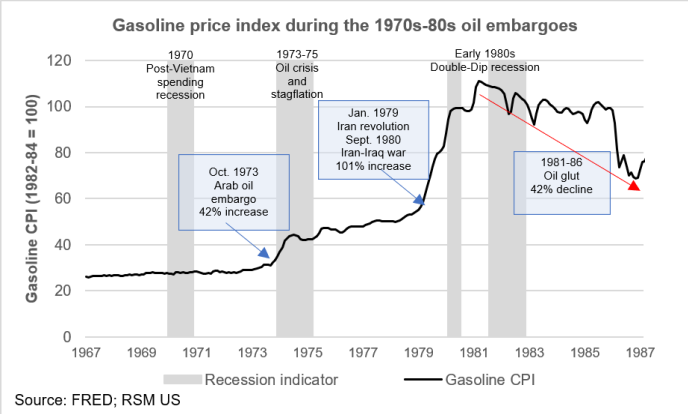
> ***"I have to say, on a personal basis, I believe we will have rotating blackouts before this gets resolved."***
>
> **–GARY WOOD, PRESIDENT OF CENTRAL VIRGINIA ELECTRIC COOPERATIVE**

Gary Wood, President of Central Virginia Electric Cooperative, predicts rolling power outages, which could last half an hour or more, to become widespread in the mid-Atlantic region in the next 3-5 years.

Ever since the rise of big utility and oil companies after World War II, Americans have taken for granted energy that would always be affordable and abundant. When an energy crisis hits, we suffer, but when it's over, we are quick to forget. But organizations that want to protect themselves from the risk of volatile prices and uncertain supply driven by data center growth should remember what happened back in the 1970s.

CAUGHT UNPREPARED FOR OIL SHOCK AND GAS PRICE SPIKES

Average gas prices jumped more than 42% from 1973 to 1975 after OPEC oil producers declared an embargo on exports to the United States and other western nations. Again, after the Iranian Revolution, from 1979 to 1981, gas prices climbed a staggering 101%, according to the Federal Reserve. Throughout the 1970s, supply shortages spiked prices and closed gas pumps, leading to gas lines and stranded motorists. A combination of inflation and recession ("stagflation") struck the economy, closing businesses and bringing unemployment.

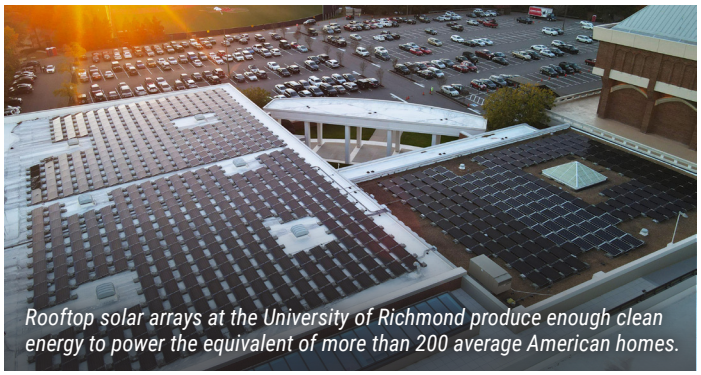


By the early 1980s, the economy was in recovery. But that was no comfort to the private sector businesses that didn't survive. Schools and hospitals could weather the storm by drawing on public funding, but it took years for their budgets to recover. Any organization was at risk if they assumed that the supply of cheap energy would be reliable in the future because it was reliable in the past.

REDUCE RISK WITH SOLAR POWER AND BATTERIES

Relying on big energy companies left Americans vulnerable to the oil crises of the 1970s. Today, many Virginia organizations have decided that they don't want to leave something as crucial to their operations and their future budgets as energy in the hands of monopoly utility companies that have failed to adequately prepare Virginia for the data center energy crunch.

More and more schools, hospitals, and businesses are installing on-site solar power with battery storage to lock in affordable and predictable energy costs for decades to come. And they're doing it now, while federal incentives remain in place to reduce the cost—and before any kind of energy crisis hits, when demand to go solar is likely to rise, raising costs as well.



Rooftop solar arrays at the University of Richmond produce enough clean energy to power the equivalent of more than 200 average American homes.

Since 2010, **Secure Solar Futures** has helped schools, hospitals, local governments, and businesses save money now and lock in predictable energy costs for decades to come with on-site solar power. Now we're adding batteries to provide organizations with microgrids that will let them manage their total energy picture, producing some of their own power with solar and storing it for later use when grid power is most expensive.

SECURESOLARFUTURES
Resilient Solar Solutions®

If you'd like to learn more about ways to protect your organization from the coming energy crunch, which may bring blackouts and will certainly bring higher costs, contact us today. Learn more at **securesolarfutures.com**.