SUPER-CHARGER

Big tech firms and the Pentagon need more power. They're counting on Dominion Energy CEO **BOB BLUE** to deliver it. By Brunswick's **STEPHEN POWER** and **MICHAEL O'LOONEY.**

Richmond, Virginia is an improbable place to go looking for the future of artificial intelligence. It's a city steeped in history and historic sites: the wooden pews of St. John's Church, where Patrick Henry helped ignite the American Revolution; the Roman-style columns of the state Capitol, designed by Thomas Jefferson to represent America's break with colonial England; the rolling hills of Hollywood Cemetery, final resting place of two presidents.

But on the 20th floor of a skyscraper overlooking the James River, executives at Virginia's biggest electric utility, Dominion Energy, are wrestling with a conundrum central to America's future: how to feed growing demand for electricity from data centers dedicated to artificial intelligence while also keeping that energy reliable, affordable and clean.

Few companies have as big a role to play in feeding AI's energy appetite. That's because Dominion's territory of Northern Virginia is home not only to big energy-using national-security installations like the Pentagon and the CIA, but also the world's largest data center hub, larger than the next four largest markets combined. Data centers in Dominion's territory used more electricity in 2023 than all of the US government's civilian agencies combined used in 2020, and just short of what the US Department of Defense used worldwide in 2020. Over the next 14 years, demand for power in Dominion's territory is set to double—the most rapid growth Virginia has seen since the years following World War II.

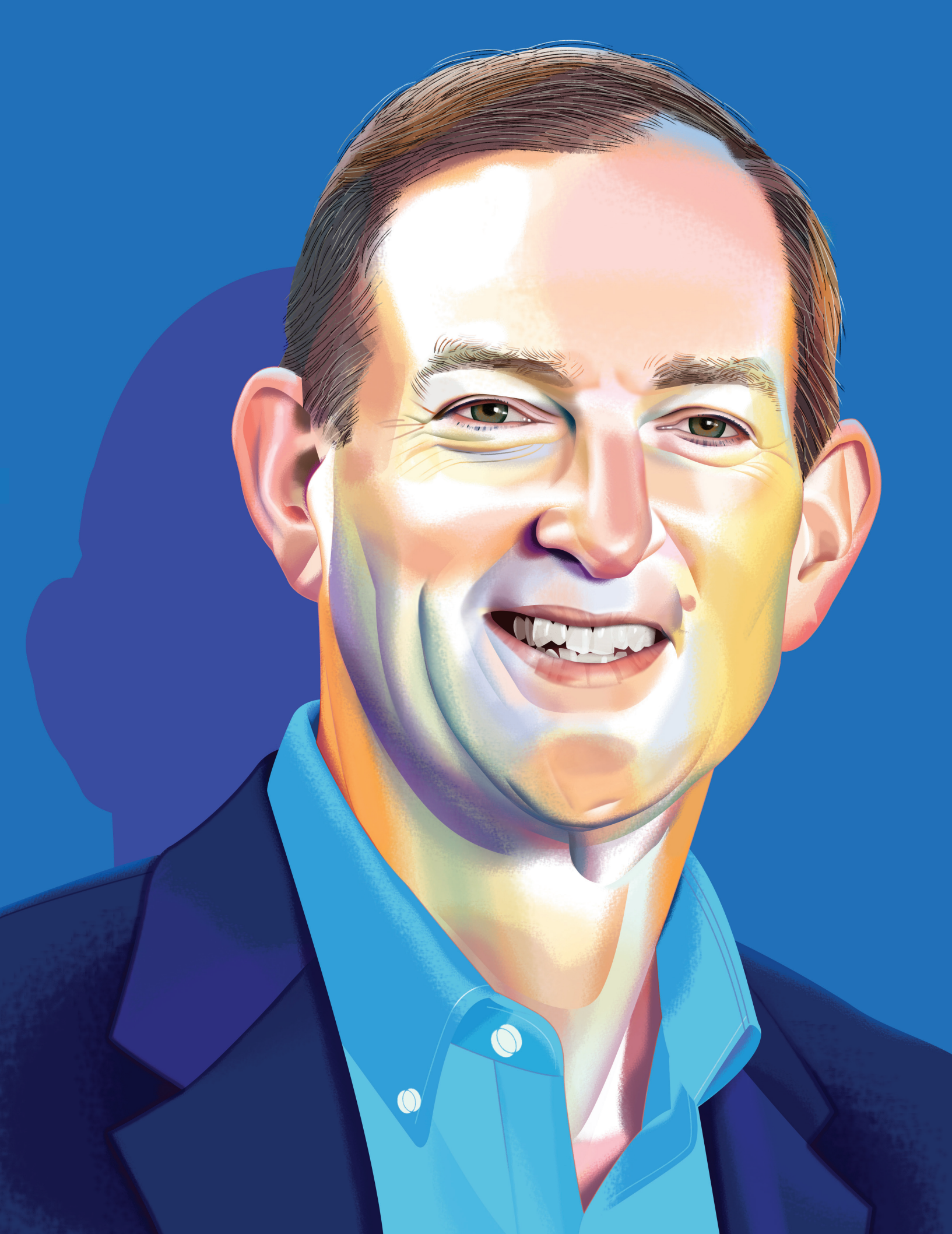
Keeping up with growth isn't Dominion's only challenge. Extreme weather is testing the company, too. In mid-January, record cold temperatures caused electric demand in Virginia to hit a new all-time record, only to be broken the next day. And the day after that.

Leading Dominion's response to these pressures is its Chairman and Chief Executive Officer Robert M. Blue. A native of nearby Albemarle County known to sometimes kayak to work on the James River, Blue has spent much of his life navigating other Virginia landmarks: the University of Virginia, where he studied government and foreign affairs and business in the 1980s and 2000s; the Virginia Capitol, where he served as a senior policy advisor to Virginia's then-governor Mark Warner in the early 2000s; and Dominion, where he held a variety of executive roles before rising to the top job in 2020.

As Chairman and CEO, Blue is pushing an all-of-the-above approach to energy, with investments in small modular nuclear reactors, new battery storage facilities, 12,000 megawatts of new solar (enough to power 3 million homes), the largest offshore wind project in the country currently being built off the coast of Virginia Beach and the world's most powerful pumped storage hydroelectric plant, located in Virginia's rugged Allegheny Mountains.

Dominion is also investing in natural gas—an energy source that adds to the company's emissions but which Blue says is critical to keeping Virginians' lights on when wind and solar aren't available.

ILLUSTRATION: NIGEL BUCHANAN



In a recent interview, Blue discussed how Dominion is balancing its obligation for affordable, clean energy with the need to help the US protect its technological advantage in artificial intelligence.

In an op-ed last fall, you said natural gas will be necessary "to keep the power on when renewables aren't available and battery storage cannot fill the gap." Why did you feel the need to make the case for natural gas?

Our mission statement is quite intentional and carefully thought through. It is to provide reliable, affordable and increasingly clean energy. All three of those pieces of our mission are critical. We start with reliability for a reason. We wanted to make clear to stakeholders who pay attention that reliability in the world we're living in is going to require energy that is dispatchable, that comes on when we want it on. We've got a mandate to keep the lights on for all of our customers and we're not going to be able to do that without more of this particularly reliable form of generation.

How is that message being received?

Some people focus on one piece of our mission to the exclusion of the others. There are some who care only about reliability and don't focus as much on the increasingly clean part. There are other people who are so focused on the clean part that they lose sight of reliability. We thought it was important to make sure that stakeholders understood that we were focused on all three parts of that mission, and this is what it's going to take in order for us to carry it out.

A Chinese startup claimed to have matched the abilities of cutting-edge chatbots with a fraction of the specialized chips. Does that call into question how energy intensive AI will be?

Much of our demand growth for the next decade is locked in by contracts that we've already signed. I can promise you, no one has shown up in the last few weeks and said, "we're not interested in executing on that." They are all saying, "we're going to need more generation and we're going to need it as fast as you can get it to us."

The wait time for data centers in Virginia to connect to the grid was reported to be as long as seven years. Why is that?

We have historically said that a request for a new delivery point by a new big energy user would be anywhere from one to four years. Given the size loads that are being requested today, and given the demand growth, it can now be anywhere from four to seven years. So that was reported as seven years. We're not saying it's going to take seven years, but it is going to take potentially a little bit longer, given the size of the requests and the overall demand growth.

What are your conversations with the big tech companies like?

What they tell us is what you would expect to hear: "Go faster." That's the kind of companies they are. They've become successful because they move quickly. We have to think about the reliability of a large system. We have to adapt a grid that's been built over the course of the last century. And that doesn't always move as fast as our largest customers would like.

But we get high marks from them for being adaptable and trying to address their concerns. And we consistently do that. We have a lot of experience with these companies, so we have a pretty good understanding now of what they want. We're moving rapidly, and we're happy to move as fast as we can as long as we're maintaining reliable, affordable and increasingly clean energy.

Are those things at odds?

There is a tension between serving rapid demand growth and being able to reduce your carbon emissions. People talk about demand growth being driven by data centers, but it's really being driven by people using a data center product. It's not that a data center is deciding they need a bunch of electricity so that we can all live our lives more productively and innovate. The demand is coming because our society is relying more on technology. Serving all that growth just by adding renewables is much more challenging.

How do your customers expect you to do this?

Our customers' view is, "We don't need to know how you generate and transmit and distribute electricity. That's not our problem. That's your problem. We want it to be cheap, we want it to be reliable and we want it to be clean. You figure it out." And that's fine. That's what we should be doing. But as with, I'm sure, many industries, there's not a lot of understanding of how any of that gets done.

Dominion has committed to achieving net zero emissions by 2050. Is that still possible?

Yes, but anyone who's ever run a race knows the first mile feels a lot easier than the last mile does. And that's going to be true of decarbonizing the power sector in this country. We've reduced carbon emissions by 53% since 2005 by switching from coal to gas because gas was cheaper and equally reliable. Now, renewables are going to continue to drive down carbon emissions. We said when we announced our net-zero goal that we could see our way to the first 80%, but that the last 20% was going to require some technological innovations and policy help. That hasn't changed.

How do you define the term "energy transition?"

In our view, there are really three transitions all going on at once. One of them is reducing carbon emissions and becoming cleaner. But the second one is the datafication and electrification of everything—that's driving demand growth. And the third is, as people are more reliant on electricity, there's an increasing need for reliability and the resiliency of the grid. And in my view, our company sits squarely at the intersection of all three of those.

We have in Virginia state policy goals to create a carbon-free grid by 2050, with off ramps for reliability. We serve the largest data center market in the world, larger than the next four combined. Our regional transmission operator projected last year that demand growth in Virginia would be 5.5% per year for the next decade and demand would double in the next 15 years. They've revised that forecast recently to up it a little bit. So we're seeing that effect of datafication and electrification, driving demand growth.

We also serve some of the most critical facilities in the world, the Pentagon, the largest naval base in the world, a host of homeland security and national security agencies. That's the resiliency piece. They need us to be increasingly reliable for them to carry out their critical mission. So, we're really squarely at the intersection of all three of these trends, all three of these transitions, which is a little more complicated than just any one of them.

What needs to change to enable companies like yours to meet all this demand?

We've been saying for some time that a rational permitting process is critical. If there is a change in ideology and a permit that was valid with one set of government leaders becomes invalid with another set of government leaders, then it makes it impossible for us to build infrastructure because we've committed capital at that point. That's true regardless of the type of infrastructure we're building, whether it's generation that is renewable or generation that is natural gas or electric transmission—any of these things.

We have a transmission line project near Williamsburg, across the James River. We're retiring an old coal plant that began operating in 1957. As a result, we needed to get more electricity to that part of Virginia through additional transmission. We started the permitting for the new line in 2013. We got the permit from the US Army Corps of Engineers in 2017 and put it into service in 2019. Then, a federal appellate court invalidated the permit. They allowed us to continue operating the line, which is good because it's critical to maintain reliability, but remanded the permit back to the agencies for an environmental impact study. That study still hasn't been done, and it's now 2025. It's an example of how lengthy and at times uncertain the permitting process is.

What would a rational permitting process have?

Having some certainty in the permitting process and the rules of the road is absolutely critical. We're building assets that are designed to last for decades. The permitting process should be very thorough. It should be extremely demanding. And it should have a beginning and an end that aren't too far apart from each other.

In nuclear power, there's a lot of excitement about small modular reactors. Others argue that big nuclear plants offer unbeatable economies of scale and are essential. What's your view?

As a general matter, scale in our industry is really valuable, but the recent experience with large reactors in this country hasn't been very positive. The costs have in some cases ended up being triple what the original estimates were. We're not that big compared to the amount that's required to invest in a large reactor. So the theory with small modular reactors is you're biting off a smaller amount and you will drive out customization, which has been a problem. Every plant is sort of custom built. And so if small modular reactors drive out that customization, it could be really valuable from a cost perspective.

What is something about being a CEO that has been a surprise for you?

I don't know that I'd say that there's anything that's been a particular surprise, but I would say that the importance of all the different constituencies that influence everything that we do, is something that's really been driven home.

What do you mean?

I have a board of directors; our board of directors has shareholders. Policymakers are very invested in everything we do and provide input. Our employees are quite candid about what they think we ought to be doing. And that's good. We're always going to be better with the collective judgment of a group of very talented people and not just one person thinking that he or she knows everything.

What do you say to those who are skeptical about the ability of regulated utilities to move at a pace that's needed to scale up energy infrastructure?

What I would say is that we've done it before. In the years after World War II, there was incredible growth in electricity demand in this country as people electrified appliances, put in air conditioning and heat pumps, and the industry responded. Now, it's more complicated because you have to think about a rate of growth off a much larger base; the grid was a smaller machine after World War II than it is today. So, applying that growth rate to something that starts at a bigger place is harder. The country is much more populated and building infrastructure is harder today than it was then. But the basic focus of our industry on providing this critical service to our customers hasn't changed one bit. If anything, our focus has gotten greater, or certainly a lot safer; the technology that we use in operating the grid has advanced an enormous amount. What hasn't changed is our commitment to reliability. And that's what gives me great confidence that we're going to be able to do this. ◆

"WE'RE MOVING RAPIDLY, AND WE'RE HAPPY TO MOVE AS FAST AS WE CAN AS LONG AS WE'RE MAINTAINING RELIABLE, AFFORDABLE AND INCREASINGLY CLEAN ENERGY."

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