Issue: VA Energy Efficiency

Energy Efficiency in Virginia

Overview

Energy efficiency is the cheapest *and most achievable* way to meet Virginia's energy needs and address the threat of climate change.[1] Eliminating wasteful energy practices reduces consumption, which reduces demand, which reduces the need for fossil-fuel power plants and the resulting pollution they cause. Yet historically Virginia has lagged below the national average in energy efficiency spending and energy savings.[2] That poor performance can be directly attributed to resistance from Virginia's predominant utility, Dominion Energy. Some progress was made in 2018 with the passage of SB966, the Grid Transformation and Security Act (GTSA), requiring the utility to spend a specific amount on energy efficiency programs during the next decade. But Dominion continues to resist energy efficiency by undermining the implementation of the new policy. Achieving any meaningful progress will require vigilant oversight of the utility by the legislature—an unlikely scenario if the Republicans maintain a majority.

Dismal Status of Energy Efficiency in Virginia

In its annual comparison of the 50 states and D.C. on energy efficiency, the American Council for an Energy-Efficient Economy (ACEEE) ranked Virginia 33rd in its 2016 report, 29th in its 2017 report, and 26th in its 2018 report.[3] The ACEEE issues scores in six categories: utilities, transportation, buildings, CHP (combined heat and power, or "cogeneration"), state government, and appliances. Out of a potential total of 50 points, Virginia scored only 16 points in 2018.[4]

Virginia's Failing Scores in Energy Efficiency

Category	Points
Utilities	0.5 out of 20
Transportation	5 out of 10
Buildings	6 out of 8
CHP	0 out of 4
State government	4.5 out of 5
Appliances	0 out of 3
Total	16 out of 50

Utilities—0.5 out of 20 points[5]

Dominion Energy is among the worst utilities in the country on energy savings and on spending for energy efficiency programs. Although the state set a goal to reduce energy consumption by 10%, the legislature did not impose any regulations for achieving that goal, so utility compliance is voluntary. In 2018 the state adopted SB966, the Grid Transformation and Security Act (GTSA), requiring Dominion to spend $870 million on energy efficiency programs in the next ten years, but the law does not set specific or binding energy savings targets. Large customers are allowed to opt out of energy efficiency programs. Electric utilities are not allowed to decouple profits from sales in

Virginia, which means that the private-investor-owned utility (which strives to maximize profits for its shareholders) has *no* incentive to pursue energy efficiency.

Transportation—5 out of 10 points[6]

Virginia devotes substantial funding for transportation initiatives, integrates transportation and land use planning, and has a "complete streets" policy (safe access for all users—pedestrians, bicyclists, the disabled, motorists, transit users). However, Virginia has no statewide policy for tailpipe emission standards (only 5 counties require smog checks[7]), no incentives for high-efficiency vehicles, no policy on freight energy or greenhouse gas emissions, no policy on VMT (vehicle miles traveled), and no incentives to create low-income housing near public transit.

Buildings—6 out of 8 points[8]

Until September 2018, Virginia's residential building code was essentially stuck at 2009 energy efficiency levels. In 2014, Virginia adopted the 2012 International Energy Conservation Code (IECC). Commercial buildings had to comply with the 2012 IECC, but the state added so many weakening amendments for residential buildings that the residential building code more closely resembled the 2009 IECC than the 2012 version. Last year the state adopted the 2015 IECC, but included some weakening amendments for the residential building code.

Combined Heat and Power (CHP)—0 out of 4 points[9]

CHP methods capture the large quantities of heat generated by electric power plants that would otherwise be wasted and turn it into thermal energy (such as steam) that can be used for industrial processes, domestic hot water, or heating. Virginia has no state policies requiring energy savings or energy generation from CHP. The GTSA merely requires the utility to "consider" CHP in its next Integrated Resource Plan (a 15-year energy supply and demand forecast).

State government—4.5 out of 5 points[10]

Executive orders from multiple governors require specific percentage reductions in energy consumption in state buildings, benchmarking (measuring, tracking, and disclosing) energy consumption in state facilities, and the use of energy savings performance contracting by state agencies to finance energy efficiency measures. Agency policies and procedures support the purchase and use of fuel-efficient, low-emission, state-owned vehicles. The state has no policies for carbon cap-and-trade or for benchmarking energy consumption in residential or commercial buildings. The state did enable commercial—but not residential—Property Assessed Clean Energy (PACE) financing, although the state has no active PACE programs.

Appliances—0 out of 3 points[11]

Virginia has not set energy efficiency standards for appliances beyond those required by federal law.

Barriers to Better Efficiency Policies

Far and away Virginia's most predominant utility company, Dominion Energy is the single most significant barrier to achieving energy efficiency progress in Virginia. Dominion consistently ranks at the very bottom on national assessments of large utilities on energy efficiency efforts. In an independent survey conducted by Ceres in 2016, Dominion scored dead last out of the 30 largest investor-owned utilities.[12] In ACEEE's assessment of the 51 largest utilities in the U.S., Dominion scored 50th in 2017[13] and 48th in 2018.[14]

One of ACEEE's performance measures is the amount that a utility spends on energy efficiency as a percentage of its revenues. In all but one year over the last decade, Dominion has tied for last in ACEEE's scoring of the 50 states.[15] For example, in 2015, Dominion spent 0.5% of its revenues on energy efficiency, as compared to the national average for large utilities of 2.7%.[16]

Fundamentally the utility's business model conflicts with the objectives of energy efficiency. As a private-investor-owned company, Dominion's fiscal responsibility is to maximize the rate of return for its shareholders. The utility has an incentive to sell *more* electricity because its profits depend on total sales. Energy efficiency programs conflict with this incentive because they lower energy consumption and reduce utility revenues.[17]

The regulatory agency that oversees the utility, Virginia's State Corporation Commission (SCC), presents another obstacle. Getting energy efficiency programs approved in Virginia has been difficult to date. In its efforts to keep costs low for consumers, the SCC has required efficiency programs to pass multiple cost-benefit analyses with narrow definitions of "benefits."[18]

Another barrier is the policy for allowing large customers to opt out of energy efficiency programs. Excluding large businesses that consume high levels of energy reduces the total energy savings from the efficiency program, raises the cost of the program for the smaller users, and reduces the benefits for everyone.[19]

The legislature's failure to hold Dominion Energy accountable is another key factor. By far the largest campaign contributor to gubernatorial and state legislative candidates, Dominion Energy wields enormous influence over Virginia politics.[20] Rather than set policy by mandating performance measures, the Republican-led state legislature "suggests" policy and lets Dominion decide whether to comply. For instance, other states set mandatory Energy Efficiency Resource Standards requiring utilities to satisfy a specific percentage of the state's demand for energy through energy efficiency programs. In Virginia, the legislature set a goal to reduce energy consumption by 10%, but that goal is voluntary, not mandatory. As a result, very little progress has been made in realizing that goal.[21]

Notably, the rare bipartisan progress that was made in the GTSA came after the 2017 election when Democrats gained enough seats to make both houses of the state legislature close to being evenly split. Many of those new Democratic legislators pledged not to take any campaign contributions from Dominion.[22]

Imperfect Progress

In 2007 when the Republican-led General Assembly passed legislation restructuring the utility base rates, then-Democratic governor Tim Kaine approved the bill on the condition that the state legislature include a provision on energy conservation. That provision set a goal of reducing electricity consumption by 10% from 2006 levels by 2022. Through an executive order in 2015 then-Democratic governor Terry McAuliffe revised that goal to 10% by 2020. But those energy savings targets are voluntary goals, not mandatory requirements.[23] As a result, the utility is not meeting that goal. As of 2015, the state was only *one-tenth* of the way to meeting its energy savings goal.[24] In 2018 the Virginia Department of Mines, Minerals and Energy determined that the state was on track to achieving only one-third of the voluntary target even though the target has been in place for more than ten years.[25]

However, in 2018 the legislature passed SB966 (GTSA), which requires Dominion Energy to spend $870 million on energy efficiency programs during the next ten years.[26] The bill also relaxes the cost-benefit analysis process for approving efficiency programs proposed by the utility.[27]

Although a positive development, this law is inadequate. The main criticism is that the law measures success by how much the utility *spends* rather than by the amount of energy that the utility *saves*. The utility and the SCC get to decide how the money is spent. Once again the legislature set no binding targets for reductions in energy consumption, so there is no incentive to ensure that the programs will be effective. The legislature continues to avoid holding the utility accountable for its performance based on measurable mandatory results.[28]

Dominion has already shown that it is not fully committed to implementing even this relatively weak law. During regulatory hearings Dominion included “lost revenues” as part of the $870 million for the energy efficiency programs. In other words, instead of spending $870 million outright, the utility wanted to include the loss of sales resulting from reduced energy usage and sunk costs from past investments in power plants and pipelines as part of the amount spent on energy efficiency. Although the utility is legally allowed to recover lost revenues, this cynical move would have undermined the intent of the law. Only after intense public outcry and pressure from the governor, lawmakers, and environmental groups did Dominion relent.[29]

Furthermore, Dominion completely ignored the mandates of the GTSA in its Integrated Resource Plan (IRP)—a 15-year forecast of how much electricity will be needed and how the utility plans to meet that demand. In December 2018, the SCC rejected Dominion’s IRP because the utility had overinflated future demand for electricity and had not factored in how the GTSA energy efficiency programs would decrease demand. Dominion used those inflated projections to justify the construction of too many power plants, gas pipelines, and gas peaker plants (which are the most expensive option for meeting electricity needs during periods of high demand). Dominion’s omission is not surprising since building and operating fossil-fuel facilities are the main sources of Dominion’s income generation.[30]

State regulators, however, have implemented the requirements of GTSA in the program approval process. In May 2019, the SCC approved all 11 energy efficiency programs proposed by Dominion. Because the GTSA loosened the hurdles in the evaluation process, the SCC had to allow those programs even though they passed only three, rather than the previous four, cost-benefit tests.[31]

Reasons and Recommendations for Improving Energy Efficiency Policies

The list of reasons to support energy efficiency programs is long and broad:[32]

- **Lowest cost**—Energy efficiency and conservation is the most cost-effective way to meet the demand for energy in Virginia. The cost of efficiency programs is one-half to one-fourth the cost of other new electricity sources, such as building new power plants.
- **Lower electric bills**—If consumers wasted less energy, they would use less electricity and have lower bills. With lower demand, the utilities would not have to build new power plants, natural gas pipelines, or gas peaker plants, which would further reduce customer bills by reducing the need for additional charges above the base rate.
- **Conservation of natural resources**—Using less energy reduces the need to build fossil-fuel power plants and pipelines, thereby reducing environmental impacts on land, water, and air.

- **Climate change mitigation**—Less dependence on fossil fuels reduces greenhouse gas emissions.
- **Health benefits—**Lower emissions would lessen the incidence and severity of health problems associated with air pollution.
- **Job creation**—The energy efficiency industry currently supports 76,621 jobs in Virginia.[33] Another 38,000 could be added by 2030 if the state adopted better energy efficiency policies.
- **Economic competitiveness**—Efficiency policies would attract large businesses (including data centers) that want to reduce their use of fossil-fuel energy and control their energy costs.

Many other states use the following recommended policies for promoting energy efficiency:[34]

- **Mandatory energy efficiency resource standards (EERS)**—Many states require utilities to achieve a certain level of annual energy savings. As noted above, Virginia has a *voluntary* goal for reducing energy consumption, which is not being met.
- **Utility spending goals**—Some states require utilities to spend a specific percentage of their overall revenue on energy efficiency programs. In Virginia the GTSA set a specific dollar amount instead of a percentage, and that amount is insufficient since Dominion has historically been at the very bottom in national rankings in that category.
- **Decoupling**—Decoupling is a way to separate utility profits from sales so that utilities do not have an incentive to sell more electricity. Instead, regulators review and adjust electric rates frequently to ensure that utility revenue is neither more nor less than what is needed to cover costs and a fair rate of return for investors. Virginia allows decoupling for gas, but not electricity.
- **Modern cost-effectiveness tests**—More energy efficiency programs are approved in regulatory proceedings when the tests to gauge the cost effectiveness of the programs include a broader range of benefits, such as health and environmental factors. Historically, energy efficiency programs have been difficult to implement in Virginia because the SCC has applied very stringent cost-benefit tests.
- **Innovative financing**, such as:
  <u>On-bill financing</u>—Some states allow customers to pay back the utility over time on their energy bill for the cost of home energy efficiency improvements when they cannot afford to pay for those improvements up front.
  <u>Property Assessed Clean Energy (PACE)</u>—PACE programs provide long-term loans to property owners for energy efficiency, renewable energy, and water conservation improvements. PACE loans have no up-front costs (100% of the cost can be financed); repayment is made through the property tax bill; the assessment is attached to the property, not to the owner, when it is sold; and the term (up to 30 years) results in lower payments than most home improvement loans. PACE programs are enabled by the state legislature and codified at the local government level. Usually private lenders provide the financing and administer the program. Virginia has enabled commercial, but not residential, PACE programs, but none are active.
  <u>Energy Savings Performance Contracts</u>—This type of financing allows large public and private customers to make energy efficiency improvements without affecting their capital budgets. The customer contracts with an energy service company to design, build, install, and sometimes operate and maintain energy efficiency projects. The customer pays off the cost of those improvements with the amount saved from reduced energy consumption. The energy service company guarantees that the energy savings amount will be equal to or greater than the cost of the project over the term of the contract.

- **Benchmarking**—Benchmarking programs require large energy users to submit periodic reports of their energy consumption. The reports increase awareness of energy use and lead to energy efficiency practices and improvements. Local governments typically adopt benchmarking programs, but because of the Dillon Rule (which preempts local government independent action), localities in Virginia cannot implement benchmarking without approval from the state legislature. Currently state law does not allow mandatory benchmarking by local governments in Virginia.

Electric Bills versus Electricity Rates[35]

Dominion Energy's claim that Virginia has low electricity rates is misleading. Residential electricity bills in Virginia are the *10th highest in the nation*. Higher bills are linked to Dominion's electricity rate structure. Dominion's base rate—the one they publicize—comprises only 60% of residential bills. The utility is allowed to add additional charges on top of that base rate for things like recouping the costs incurred in building new power plants.

Before 2007, Dominion's base rate included the total cost of providing electricity service to its customers, including all operating and construction costs. The one exception was fuel costs. However, in 2007, the state legislature allowed the utility to revise its rate structure, and the utility was allowed to separate costs for new capital projects from the base rate. Since 2007, the utility may impose additional charges called Rate Adjustment Clauses (RACs or "riders") over and above the base rate. During the period from 2006 to 2016, residential bills increased by 30%. The single most influential factor driving this increase was Dominion's rate adjustment increases for new power plants.

If Virginia had the political will to implement mandatory energy efficiency policies and programs, the demand for electricity would drop, as would the need for new power plants. Then customer electric bills would be lower across the state. However, as long as Dominion Energy's success is measured by the amount of energy they sell—rather than what they save—the utility has absolutely no motivation to participate in voluntary energy efficiency goals, thus making a continued mockery of these critical programs.

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