

ENERGY BURDEN IN SOUTHSIDE VIRGINIA: A CASE STUDY

Written by

Elisabeth Chaves

Climate Equity Policy Fellow

Virginia Organizing



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EXECUTIVE SUMMARY

The Southside region has some of the highest average energy burden in Virginia. Census tracts in Brunswick, Charlotte, Halifax, Lunenburg, Mecklenburg, Nottoway, and Pittsylvania counties along with the City of Danville represented 21 of the top 50 Virginia census tracts for energy burden in 2018. All top 50 census tracts had energy burdens as high or higher than 14% of income for single-family, owner-occupied homes who relied on electricity to power their homes. Some of those households spent more than 25% of their income on energy costs.

Energy burden is highest for low-income households, for rural households, and for people of color. Low-income homes are often less energy efficient and require costly repairs before they can be weatherized. Further, in 2021, households across the state paid the 13th highest electricity bills in the country. High energy burden leads to energy insecurity and the possibility of utility shutoffs.

According to the National Energy Assistance Directors' Association, home heating costs will reach their highest in more than 10 years this coming winter with families paying 17.8% more to heat their homes. Moreover, one in six households are already in arrears on their energy bills.¹

Available energy assistance programs from the federal government or investor-owned utilities like Dominion Energy are unable to meet all of the need. In 2020, Virginia, through the federal Low Income Home Energy Assistance Program (LIHEAP), served only 29% of state income-eligible households, despite carrying over almost \$19 million in funding to the next fiscal year. Moreover, many households are unaware that energy assistance programs exist or, if aware, may not know that they qualify for this aid.

When Virginians cannot pay their utility bills and cannot get assistance doing so, their utilities may be shut off. In periods of extreme temperatures and for households with vulnerable members, including older people, young children, people with disabilities, and people with serious medical conditions, not having access to power can be life-threatening. Virginia is one of only seven states in the country without disconnection protections against cold and hot weather.

For households who have had their power shut off, getting that power restored can be very costly due to reconnection charges, required security deposits, late fees, and late penalties. This puts households further into debt and continues the cycle of poverty. Energy burden and energy insecurity are not just about whether a household has enough money to pay its bills. They are products of the type of home a household inhabits and its condition, economic opportunity in their communities, existing physical and mental health, increasing energy costs, and access to available assistance. Until rates are made more affordable and energy efficiency is increased for all households, moratoria on utility shutoffs for periods of extreme temperatures, crises, and vulnerable households are a necessary stopgap measure.

ENERGY BURDEN AFFECTS 1 IN 4 VIRGINIANS

Many households in Virginia struggle to pay their energy bills. In 2020, according to the Residential Energy Consumption Survey, 25% of Virginia households were energy insecure.² These households may live in older, energy-inefficient housing that is difficult to heat and cool. They may be renters and have little control over the types of appliances they use or the amount of insulation in the walls. They may be older or live with a disability and are on fixed incomes. They may find themselves between jobs or underemployed. They may live in urban areas in heat islands and contend with higher temperatures. Or they may live in rural areas and have older, larger homes in need of weatherization. To afford their bills, many may resist turning up the heat enough to be comfortable in winter or turning down the A/C, if they have it, to endure yet another heat wave. While keeping their thermostat hotter or cooler may help them keep their bills lower, the practice may also expose them to heat-related illnesses, excess indoor moisture, and mold growth. Like all Virginians, they pay some of the highest rates in the country³ and may not have access to cheaper, renewable energy sources. Because they struggle to pay their bills and at times may even be unable to do so, they risk having their electricity or gas shut off. This exposes them to evictions, job loss, mental and physical health impacts, and in worst cases, trips to the Emergency Room and even death.

Addressing the problem of energy-burdened households requires a multi-faceted approach that includes making energy bills more affordable; making homes more energy efficient, thereby reducing energy consumption; providing access to cheaper renewable energy; making enough energy assistance available to households in need; and, eliminating utility shutoffs during periods of extreme temperature or crisis and for households with vulnerable members, such as young children, older people, people with disabilities, and people with medical conditions requiring access to electricity.

ENERGY BURDEN AND LOW-INCOME HOUSEHOLDS

A household that spends more than 6% of its income on energy costs is said to be energy burdened.⁴ In the United States, the 2017 national median was 3.1% of income spent on energy costs.⁵ However, 25% of all households spent more than 6% of their income on energy in 2017, while 13% of all households spent more than 10% of their income on energy.⁶

Energy burden affects households disproportionately. The median energy burden for Black households is 43% higher than for non-Hispanic white households (4.2% vs. 2.9%) and for Hispanic households is 20% higher than for non-Hispanic white households (3.5% vs. 2.9%). Still, the greatest determining factor of high energy burden is income level. Low-income households spend a higher proportion of their income on energy bills than any other income group.⁷ This is despite spending less on energy per square foot of living space than other households and consuming less energy per capita.

National median energy burden for low-income households, with income at or greater than 200% of the Federal Poverty Level, is 8.1%. In Virginia, low-income households have a higher average energy burden of 10.4%.⁸ The national median increases to 8.7% for low-income households including a person with a disability and to 9.3% for low-income households including an older adult (65+). Further, low-income rural households have a 9% energy burden. Comparatively, the energy burden of households that are not low income is 2.3%.

When households are energy burdened, they face energy insecurity. Their utilities could be shut off for failure to pay their bills. According to the 2020 Residential Energy Consumption Survey, 27% of households experienced energy insecurity in 2020, and almost 10% of households kept homes at an unhealthy or unsafe temperature.⁹ Traditional energy burden metrics focusing on percentage of income spent on energy costs fail to account for households which avoid energy spending by keeping their homes at unhealthy or unsafe temperatures. When people limiting their energy consumption is taken into account, real energy burden may prove higher.¹⁰ Utilities may also disinvest in low-income neighborhoods, resulting in less reliable service with more frequent and longer power outages.¹¹

Losing power during extreme temperatures can be lethal, especially for vulnerable populations such as older people, young children, people with disabilities, and people with medical conditions requiring access to electricity. Access to energy is a critical human right. In the first year of the COVID pandemic, data from just 17 states revealed that utilities performed more than 1 million household shutoffs.¹² It is difficult to know how many households have their utilities shut off each year because many states, including Virginia, do not require utilities to publicly disclose how many households they have disconnected. However, a survey in January 2022 revealed that more than 28% of respondents reported being unable to pay their energy bill. Nearly 20% received a disconnection notice, and 13.5% had their energy service shut off. Moreover, more than 21% of respondents reported that during that winter they had to make tradeoffs between paying their energy bills and paying other expenses “on multiple occasions” (15%) or “all the time” (6%). Fourteen percent of respondents reported never having a comfortable temperature in their home, and 30% reported having a comfortable temperature only some of the time. More than a third of respondents had utility debt.¹³

In 2022 and 2023, it is likely that many Virginians will face even more difficulty paying their energy bills due to inflation and rising energy costs largely in response to the war in Ukraine.¹⁴ In September, the State Corporation Commission granted Dominion Energy a fuel rate increase that will translate to an additional \$14.93 for the average monthly bill.¹⁵ Appalachian Power is seeking a similar fuel rate increase that would boost its customers’ average monthly bills by \$20.17.¹⁶ Last May, Old Dominion Electric Cooperative, which supplies power to rural electric cooperatives in Virginia, announced a rate increase of about \$2.32 per month as a result of rising natural gas prices.¹⁷ Nationally, the U.S. Department of Energy projects that heating bills will rise 28% this winter for those on natural gas, 27% for those using heating oil, and 10% for those with electric heat.¹⁸

ENERGY BURDEN AND CLIMATE CHANGE

Climate change is exacerbating household energy burden and making energy insecurity more dangerous. Extreme heat makes it more difficult to maintain safe temperatures and/or increases energy consumption. The occurrence of heat waves is increasing, especially in cities where some communities must also contend with the urban heat island effect. Researchers predict that the US will experience 20-30 more days over 90 degrees Fahrenheit by 2050. Households exposed to extreme heat may suffer from illnesses such as heat cramps, heat exhaustion, and heatstroke. Heat can also exacerbate preexisting conditions such as cardiovascular, kidney, and respiratory diseases. In some cases, it can lead to hospital admissions and excess deaths.

CONTENDING WITH ENERGY BURDEN IN SELECT SOUTHSIDE COMMUNITIES

For this case study, we investigated energy burden, available energy assistance, and shutoff policies in seven Southside counties—Brunswick, Charlotte, Halifax, Lunenburg, Mecklenburg, Nottoway, Pittsylvania—along with the City of Danville. These counties and city were chosen because they have some of the highest energy burden in the state and poverty rates higher than the state average. Other than Danville, they are also largely older, rural populations. Low-income households in rural communities can spend as much as a quarter of their income on energy.¹⁹ Further, these are historically marginalized communities and of the 63 Census tracts comprising these areas, 33 of them, or more than half, have been designated as “Disadvantaged Communities” by the Department of Energy’s Energy Justice Mapping Tool.²⁰

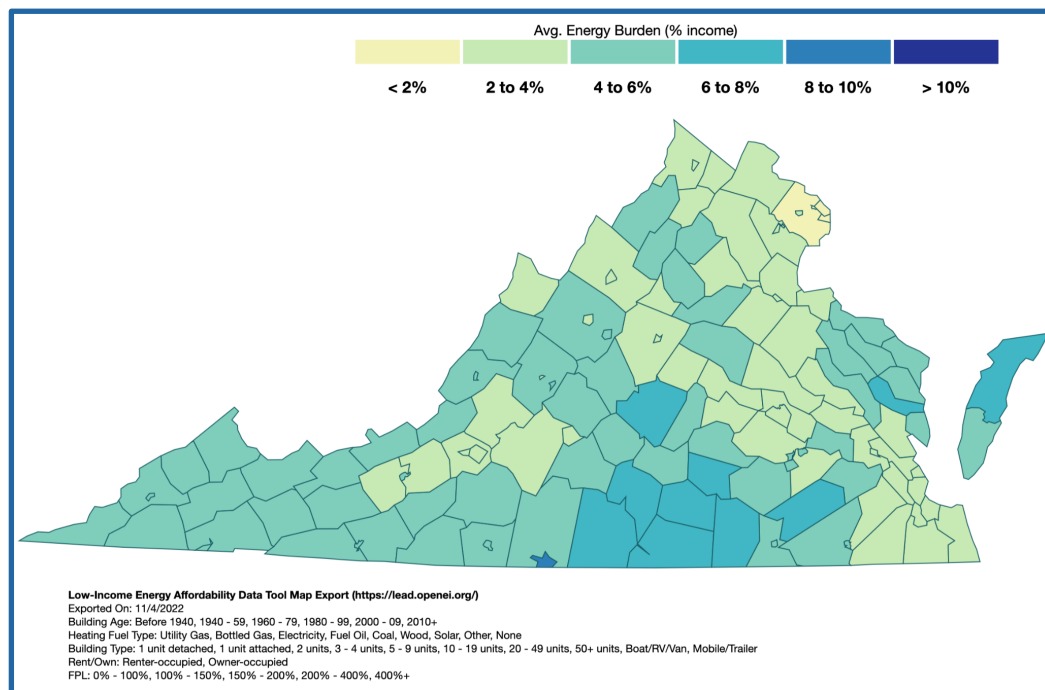
Table 2. American Community Survey 2020 Census Data for Select Southside Localities

| | Virginia | Brunswick | Charlotte | Halifax | Lunenburg | Mecklenburg | Nottoway | Pittsylvania | Danville |
|--|----------|-----------|-----------|----------|-----------|-------------|----------|--------------|----------|
| Average Energy Burden | 2% | 6% | 6% | 6% | 7% | 6% | 6% | 5% | 9% |
| Poverty | 10.20% | 19.50% | 24.10% | 15.20% | 14.90% | 17% | 16.90% | 15.10% | 23% |
| Median Household Income | \$80,963 | \$46,111 | \$40,924 | \$43,714 | \$45,884 | \$50,224 | \$49,983 | \$49,520 | \$37,147 |
| 65 years and over | 16.30% | 21.40% | 22.10% | 24.20% | 21.90% | 25.60% | 19.20% | 22.60% | 20.70% |
| Disabled Population | 12.40% | 19.40% | 20.30% | 20.60% | 20.40% | 19.40% | 20.20% | 18.10% | 19.50% |
| % Black or African American alone | 20% | 54.40% | 27.30% | 36% | 32.90% | 33.80% | 38.80% | 21.20% | 49.40% |
| % Hispanic or Latino | 10.20% | 2.70% | 2.60% | 2.50% | 6% | 3.10% | 4.80% | 3% | 4.50% |
| % White alone, not Hispanic or Latino | 60.30% | 40.80% | 68.10% | 59.60% | 58.50% | 60.70% | 54.50% | 74% | 41.60% |
| Employment Rate | 60.30% | 45.10% | 50.50% | 49.40% | 46.80% | 49.30% | 44.50% | 52.80% | 49.50% |

| | Virginia | Bruns. | Charl. | Halifax | Lunen. | Meckl. | Notto. | Pittsylv. | Danv. |
|-------------------------------------|-----------|--------|--------|---------|--------|--------|--------|-----------|--------|
| Bachelor's Degree or Higher | 41.80% | 14.80% | 13.90% | 16.10% | 12.50% | 23.10% | 15.50% | 15.20% | 18.40% |
| Without Health Care Coverage | 6.80% | 8.20% | 11.80% | 7.30% | 7.90% | 8.40% | 13.70% | 7.80% | 10% |
| Total Pop. | 8,642,274 | 15,849 | 11,529 | 34,022 | 11,936 | 30,319 | 15,642 | 60,501 | 42,590 |
| Population per square mile | 218.6 | 28 | 24.3 | 41.6 | 27.6 | 48.5 | 49.8 | 62.4 | 995.2 |

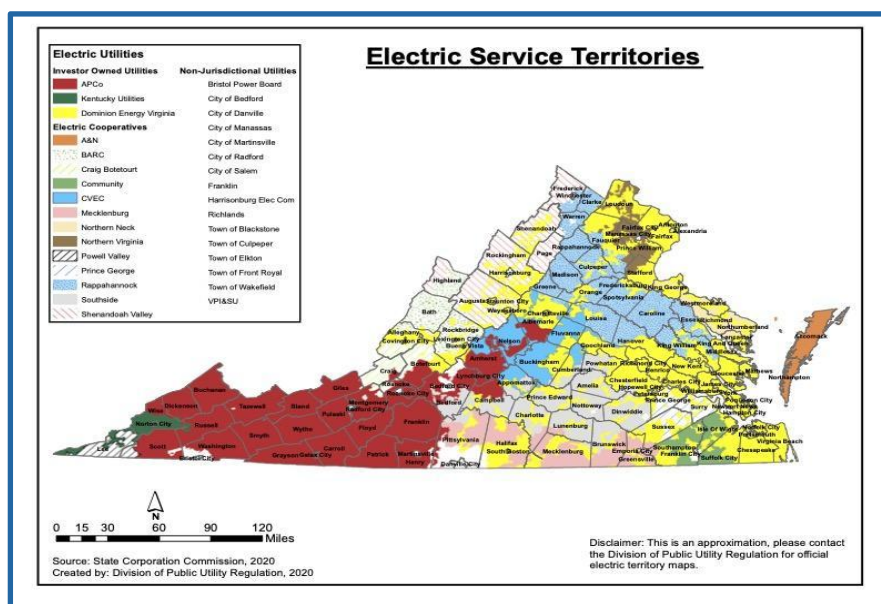
Data from the Department of Energy's Low-Income Energy Affordability Data (LEAD) Tool highlights the average high energy burden experienced in Southside Virginia, as seen in the map below. Digging down to the census tract level reveals energy burden extremes in each of these counties and, in particular, the City of Danville. Of the 20 Virginia census tracts with the highest energy burden in the state, 11 were located in the City of Danville in 2018. Energy burdens were 18-27% of income in these tracts, and their average annual energy cost was greater than \$4000 in each of those tracts. In fact, tracts in these counties and Danville represented 21 of the top 50 Virginia census tracts for energy burden. All top 50 census tracts had energy burdens as high or higher than 14% of income.²¹

Map 2. Average Energy Burden in Virginia



These localities are also served by a representative mix of utility types with an investor-owned utility (Dominion Energy), two rural electric cooperatives (Mecklenburg Electric Cooperative and Southside Electric Cooperative), and a municipal utility (Danville Utilities). Investor-owned utilities and rural electric cooperatives are governed by the State Corporation Commission and its Division of Energy Regulation, while municipal utilities are governed at the local level. The scope of the case study does not include the gas utility serving the area (Columbia Gas) nor any providers of heating oil or other fuel types.

Map 3. Electric Service Territories in Virginia

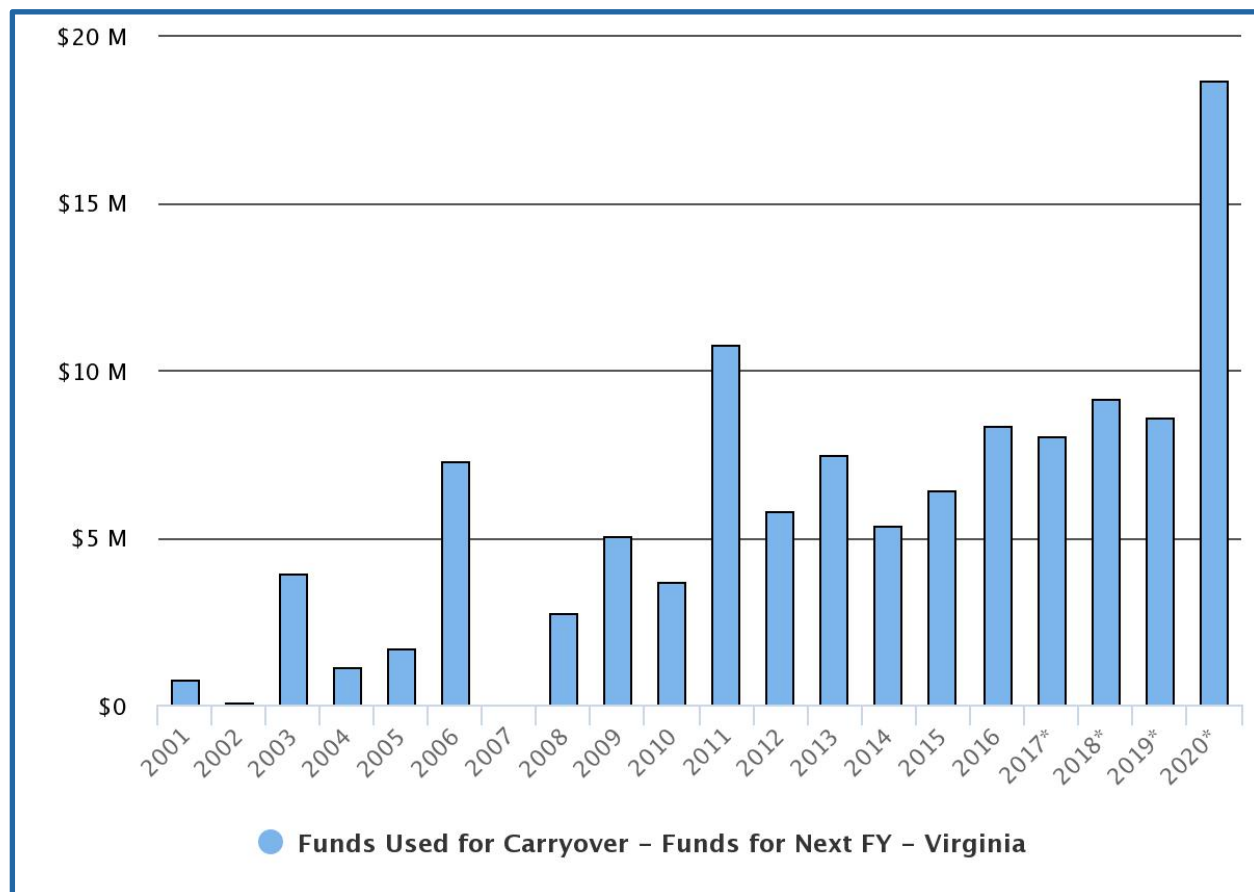


AVAILABLE ENERGY ASSISTANCE

Energy assistance programs exist to help households in need. Utilities are the single largest source of funding for low-income energy programs, providing 41% of total assistance through ratepayer-funded low-income bill assistance and 10% of the total through ratepayer-funded low-income energy efficiency programs. Federal agencies provide another 44% of the total, with 40% from the Low-Income Home Energy Assistance Program (LIHEAP) for bill assistance, 2% from LIHEAP for efficiency, and 2% from the Department of Energy for the Weatherization Assistance Program (WAP). Funding from state and local contributions and nonprofits make up the remaining 5%. Still, this assistance is not enough to support all households in need. For example, in 2020, through LIHEAP, Virginia served only 29% of state-income eligible households. In 2019, this number was 31%. However, Virginia served just 15% of federal-income eligible households.²² Since the program's creation, LIHEAP funding has fallen well short of need. For Fiscal Year October 2021 to September 2022, Virginia received a record \$179.1 million thanks to the American Rescue Plan.²³ Comparatively, Virginia received \$99.8 million in 2018, \$100.5 million in 2019, and the increased amount of \$127.3 million in 2020 due to available COVID-related funding. Senators Mark Warner and Tim Kaine recently announced that Virginia will receive \$115.7 million in federal funding for LIHEAP in 2023, an increased amount over pre-pandemic years but much less than the two previous years.²⁴

No state may carryover more than 10% of its funding to the following fiscal year.²⁵ However, Virginia carried over almost \$19 million, more than 15% of its funding from 2020 to 2021, because 100% of supplemental CARES funds were allowed to carry over.

Table 1. Annual Carryover of LIHEAP Funds in Virginia, 2001 to 2020



If there is clear demand for funds every year, then all funding should be distributed rather than carried over. If it is not being distributed, then barriers to participation should be investigated and addressed.

Barriers to participation can include: 1) lack of awareness, 2) language barriers, 3) confusion about eligibility rules, and 4) application procedures. A study also found many people believe they are ineligible due to employment or immigration status or because they fear they will have to “pay the money back.”²⁶

In Southside, like elsewhere in Virginia, federal energy assistance is available through the Department of Social Services (DSS), which distributes available LIHEAP funds. Four types of funds are available: 1) fuel assistance; 2) crisis assistance; 3) cooling assistance; and, 4); weatherization assistance.²⁷ Access to this funding is limited by several factors. First, as mentioned above, federal funding of LIHEAP falls short of need. Second, households must meet state eligibility requirements and have a gross monthly income no greater than 150 percent of the federal poverty level.²⁸ Third, households must apply during available time windows. For fuel assistance, applications are accepted from the second Tuesday in October through the second Friday in November. Crisis assistance is available between November 1 and March 15, and cooling assistance is available between June 15 and August 15. **As climate change warps traditional hot and cold seasons, these windows of**

availability may not align with need; for example, cooling assistance may be needed before June 15 and after August 15. Moreover, crisis assistance, in particular, is only available until DSS runs out of money.

Access to funding is also limited by program awareness. Not all households in need know that this help is available to them or that they would qualify. Because local DSS offices operate independently from the state office, dissemination of EAP information may vary in each community depending upon how much outreach the local office and/or local non-governmental organizations conduct. **Due to the large amount of EAP funds not reaching households in need and instead being carried over from year to year, see Table 1 above, local outreach efforts should be improved.**

As noted above, energy assistance through DSS makes up a little less than half of all available energy assistance. Making up the other half is assistance provided by utilities themselves. For Southside, utility-provided direct bill-paying assistance comes in the form of Dominion's EnergyShare program. Which and how much other assistance is available can depend upon who a customer's utility provider is. Assistance can range from direct bill payment assistance and energy efficiency programs to measures that may make paying bills more manageable. The latter, however, do not reduce a household's energy burden.

- As a large investor-owned utility, Dominion offers a range of assistance programs. Its largest program for direct assistance bill payment is EnergyShare, which is available to qualifying customers of any utility within the service area covered by the program. Households can apply for funds at local EnergyShare agencies such as the Salvation Army, DSS, and other community action agencies. Dominion makes allotments of assistance to these agencies throughout the heating and cooling seasons. It is unclear whether an agency knows in advance how much funding will be made available and whether depleted funds will be replenished to meet all the need. In 2020-21, 15,000 households across the state received EnergyShare bill payment assistance, and 1,800 homes were weatherized in some fashion.²⁹

In addition to EnergyShare, Dominion also offers its customers, subject to eligibility, Budget Billing, which evens bills across the year to avoid spikes during high energy consumption months; short-term payment extensions; and long-term payment plans.³⁰ Additionally, other programs include Senior Cool Care, providing free, single-room air conditioners to those who qualify; HVAC Health and Safety Program, increasing energy efficiency for low and moderate income customers; Income & Age Qualifying Energy Efficiency Program, providing no cost energy efficient upgrades to qualified customers; and, the Income and Age Qualifying Solar Program.

- The rural electric cooperatives, Mecklenburg and Southside, make fewer resources available to their members in need of assistance. Mecklenburg points its members to the Weatherization Assistance Program but also offers Budget Billing, "during these economic times,"³¹ as well as PrePay. Members must have a zero balance before they can enroll in Budget Billing, and when the cost of service equals or exceeds the balance in a member's PrePay account, service will be suspended. Southside directs its members to DSS, the 211 hotline to locate available energy assistance, and Dominion's EnergyShare program: "a one-time financial assistance to pay a fuel/energy bill" available after members have exhausted other avenues of assistance.³² It also offers Budget Billing for customers with good credit history and a PrePay option. No overtime or disconnect fees apply when power is reconnected after a PrePay account is exhausted and then refilled.
- Danville Utilities offers customers an Equal Payment Plan if they have no more than one bill more than 35 days past due. Customers can also request a "preferred due date." This allows their bill's regular due date to be extended by up to 10 days without accruing penalties for late payment. Customers making this

request must have a zero balance, and such requests are reviewed on an individual basis. Danville Utilities also may grant payment extensions on a case-by-case basis if a customer contacts the utility within 10 days after the bill due date. Extensions are only granted to customers with a 12-month billing history and who have a good pay record. Additionally, the utility offers Home\$ave, a residential energy efficiency rebate program.

While energy burden can be temporarily relieved through energy assistance programs, a long-term strategy is making households more energy efficient to reduce energy bills. Despite more efficient building techniques, much affordable housing or low-income housing in the United States remains energy inefficient.³³ Homes in rural communities, older homes, public housing, and multifamily housing tend to have higher energy burdens. **However, investment in energy efficiency measures for low-income households is low. For instance, states on average rarely spend more than 15% of LIHEAP funds on weatherization.**³⁴ Further, a 2018 report found that only 6% of all US energy efficiency spending in 2015 went to low-income programs.³⁵ The share of utility energy efficiency funding that goes to low-income households is less than the percent of utility customers who are low-income.³⁶

In part, underinvestment in energy efficiency for low-income households can be attributed to an inability to weatherize some percentage of these homes until needed repairs are made. While federal EAP funding is administered at the state level through local DSS offices, the federal WAP is administered by Virginia's Department of Housing and Community Development (DHCD).³⁷ Thanks to Virginia's participation in the Regional Greenhouse Gas Initiative (RGGI), the DHCD is now able to make additional funds available for Weatherization Deferral Repair. These funds help low-income households who have been deferred from receiving WAP funds because their homes first require necessary repairs to make weatherization worthwhile. The most common issues causing WAP deferrals include leaking roofs, minor structural issues, biological contaminants like mold, non-operational or unsafe HVAC units, moisture issues, faulty electrical, and faulty plumbing.³⁸ **Maintaining Virginia's participation in RGGI will allow the Weatherization Deferral Repair program to continue and likely increase the funding available for it in the near term, thereby expanding its reach.**

Spending more money on energy assistance, particularly crisis assistance, rather than energy efficiency treats the symptom rather than the disease. A study in Virginia found that with green building incentives and practices, households could save \$648 per year on average, translating to 9.3% of annual income saved for extremely low-income households, 5.6% for very low-income, and 3.5% for low-income households.³⁹ Further, if low-income housing was as energy efficient as the average U.S. home, 25% of low-income energy burden could be eliminated.⁴⁰

UTILITY SHUTOFF POLICIES

When a household is unable to pay its energy bill, it faces the risk of having its power shut off. If that occurs, the household must then pay its past due bill(s); a late payment charge on any outstanding bills—1.5% of the outstanding balance assessed monthly; a fee to have the service reconnected; often a security deposit, if one hasn't been required already; and, at some utilities, also a delinquent payment fee or penalty in order to have service restored. These charges can be steep and sometimes insurmountable or, at a minimum, add to the debt burden of the household. Each utility sets its own policies around shutoffs which are explained in the utility's Terms & Conditions, as filed with the Division of Energy Regulation at the SCC. The extent to which customers are

made aware of these Terms & Conditions is unknown. Moreover, as mentioned previously in this study, the number of shutoffs performed by the utilities each year is also unknown as current law in Virginia does not require utilities to report how many shutoffs they perform and who is affected by them.

According to the Code of Virginia § 56-247.1, no electric or gas utility shall terminate a customer's service without 10 days' notice by mail to the customer. Further, every public utility shall provide its residential customers one full billing period to pay for one month's local or basic services, before initiating any proceeding against a residential customer for nonpayment. Still, late fees may be accrued for bills not paid by their due date. Notice by mail, whether in a separate mailing or on the monthly bill, can be insufficient. Before the advent of smart meters, a technician from the utility was required to visit the home in order to make the disconnection. That in-person visit presented an opportunity for the household to make payment before being disconnected. For households who missed their mailed notice, the visit was crucial for giving them a chance to keep their power on.⁴¹

Apart from concerns over notice, utility disconnections can be extremely expensive. The Division of Energy Regulation rules allow investor-owned utilities and rural electric cooperatives to request a security deposit because service is provided in advance of billing and payment.⁴² Once a customer has timely paid their bills for one year, the deposit will be refunded.⁴³ However, if a customer is late paying their bill and experiences a shutoff, the utility can require a security deposit before restoring service. This can make it even more difficult for a customer to have service restored. Danville Utilities may also require a security deposit from customers who are subject to disconnection but have not yet been shut off.

Table 3 below identifies the various fees and charges Southside households may face to have their power restored after a shutoff. In addition to the fees already mentioned, Danville Utilities also charges a delinquent payment fee on bills unpaid after 35 days past due. Further, after electric service is disconnected for failure to pay, a Danville Utilities customer may next have their natural gas and water shut off if the delinquency remains unpaid after 10 days of the disconnection of the electric service. Dominion's Terms & Conditions state that when electric service is disconnected for failure to pay, "there shall then become due and payable, in addition to the bills in default, an amount equal to the monthly minimum charge for the unexpired term of the agreement, not as a penalty, but in lieu of the income reasonable to be expected during the unexpired term of the agreement."⁴⁴ Southside's Terms & Conditions state that "upon disconnection of service for any reason, the Customer shall be sent a final bill at the next regular billing cycle showing the outstanding amount owed after deducting all applicable credits. If the debt is not paid within thirty (30) days, additional charges may be incurred."⁴⁵ Danville Utilities makes clear that its delinquent payment fee is \$50. What the amount of Southside's "additional charges" may be is not specified.

Note also in the table the high charges from the electric cooperatives for restoring power after hours. These large amounts make it less likely that a low-income customer would seek to have their power restored outside regular business hours, thereby putting them in dangerous situations if temperatures become extreme over weekends and holidays.

What is also unspecified is the exact cost incurred by these utilities to shut off a household's electricity and whether that amount is equivalent to the reconnection charge and any other applicable fees. Again, with the use of smart meters, disconnections can be handled remotely without requiring a service call. How many of the customers of these utilities have smart meters installed is not publicly available information.

Table 3. Service Restoration Fees

| Utility | Reconnect charge | Reconnect charge (non-biz hours) | Security Deposit Required? [^] | Late Payment Charge ^{^^} | Delinquent Payment Fee/Penalty | Collection Fee |
|--------------------|------------------|----------------------------------|---|-----------------------------------|--------------------------------|----------------|
| Danville Utilities | \$50 | \$60* | Yes | 1.5% | \$50 | |
| Dominion | \$22.27 | \$57.60 | Yes** | 1.5% | *** | |
| Mecklenburg EC | \$40 | \$170 | Yes | 1.5% | | \$35 |
| Southside EC | \$45 | \$150 | Yes | 1.5% | **** | \$30 |

[^]On average, the utilities may require a security deposit not greater than the estimated billing for the two highest consecutive months' service. Some allow this deposit to be paid in installments.

^{^^}Common to all the utilities, a Late Payment Charge of 1.5% per month is assessed on past due bills until payment is made.

*After Hours service calls are \$60. It is unclear whether an After Hours charge would be added to the Service Restoration Fee (\$50) if the restoration was made outside regular business hours.

**Dominion may require a security deposit, but it is unclear if a security deposit would always be required after a shutoff in order to restore service.

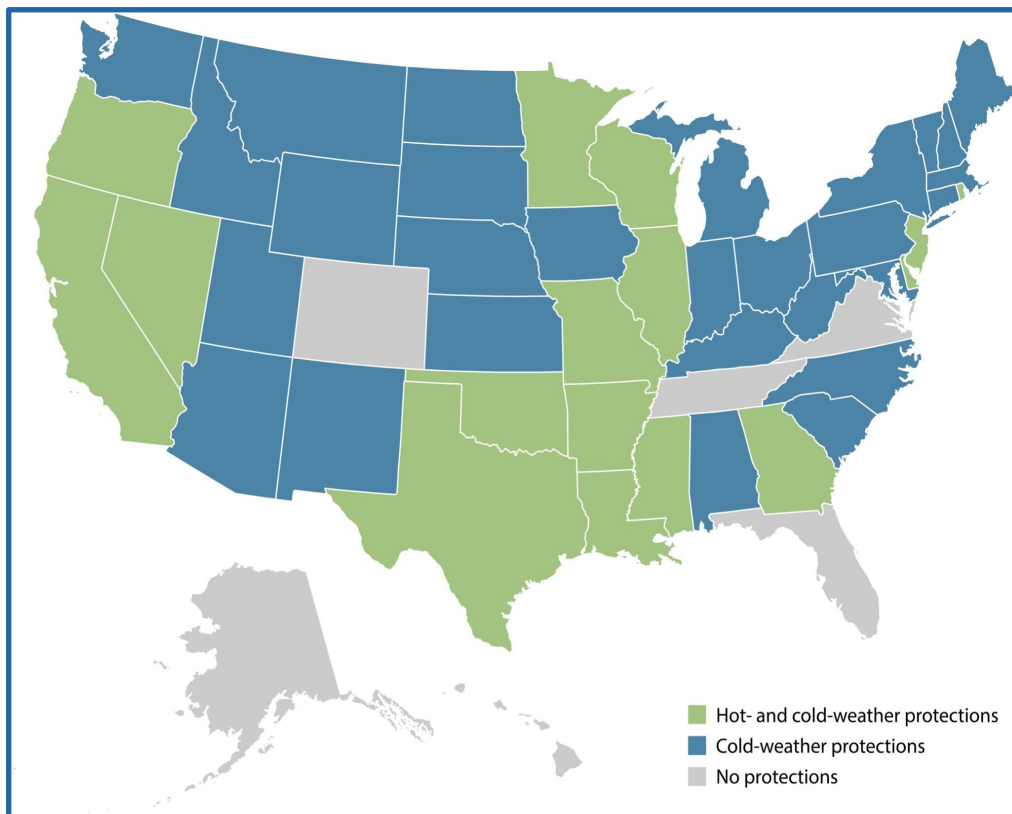
***Dominion's Terms & Conditions state that whenever service is shut off for non-payment "there shall then become due and payable, in addition to the bills in default, an amount equal to the monthly minimum charge for the unexpired term of the agreement, not as a penalty, but in lieu of the income reasonably to be expected during the unexpired term of the agreement."

****After a shutoff, if the customer's outstanding debt is not paid within 30 days, additional (unspecified) charges may be incurred.

EXISTING SHUTOFF PROTECTIONS

In addition to improving energy efficiency for low-income households, ensuring affordable energy through fairer rates and access to cheaper renewable energy would also greatly reduce energy burden. Until bills are more affordable, households should not suffer energy insecurity during periods of extreme weather, during crises like the COVID pandemic, or if the household contains a vulnerable member. Moratoria on shutoffs for such conditions or households are a necessary but insufficient measure to keep people safe and to reduce energy insecurity. **Virginia is one of only seven states in the country to have no weather-related disconnection protections.**

Map 1. Weather-Related Disconnection Protections Across the United States⁴⁶



Four general categories of disconnection protections may exist: 1) financial considerations; 2) procedures regarding notification; 3) vulnerable populations; and 4) extreme temperatures. As noted above, while Virginia does not have disconnection protections for cold or hot weather, it does provide a limited protection for households where an individual has a serious medical condition. In that case, if the condition is on file, with a form signed by a physician and updated annually, the household is given an additional 30 days to make payment before services are disconnected.⁴⁷ Beyond that limited protection, no other protections are required by the state.

Danville Utilities is the only utility operating in these Southside communities to offer any further disconnection protection. Danville Utilities will not “knowingly disconnect any service for an individual with a serious medical condition.” Still, accounts with serious medical condition designation are subject to the assessment of penalties, late fees, and overdue collection processes “up to and including *restricted* power until sufficient payment is made” (emphasis supplied). It also will not perform shutoffs on days where the National Weather Service report for Danville projects temperatures to be below 32 degrees or higher than 100 degrees, a temperature threshold that is arguably too high.⁴⁸ Danville Utilities also will not disconnect a service for non-payment after 1:00 p.m., or on the day before the weekend or a municipal holiday.⁴⁹ The Terms & Conditions of the other utilities do not make clear if shutoffs would occur on Fridays or holidays. However, it is understood that the Division of Energy Regulation encourages utilities not to perform shutoffs at those times.

CONCLUSION

High energy burdens can impact residents' physical health and comfort, their mental health, and their ability to escape cycles of poverty. Energy burden and energy insecurity are not just about whether a household has enough money to pay its bills. They are products of the type of home a household inhabits and its condition, economic opportunity in their communities, existing physical and mental health, increasing energy costs, and access to available assistance. Providing better protections against utility shutoffs is a critical measure to reduce energy burden and increase energy security immediately. Long-term solutions will involve more investment in energy efficiency for low-income households (including by making homes eligible for weatherization), reduced energy costs by making utility bills more affordable, greater access to cheaper renewable energy, and sufficient energy assistance to meet demand. Households in Southside should not have to pay more than 10% of their income, and for some closer to 20% of their income, to meet their energy needs.

APPENDIX A

Census Tract Data from Disadvantaged Communities Reporter

<https://energyjustice.egs.anl.gov>

| Census Tract/ Geography ID | County | Disadvantaged? | Energy Burden |
|-------------------------------|-----------|----------------|---------------|
| 51025930100 | Brunswick | No | 6% |
| 51025930201 | Brunswick | Yes | 7% |
| 51025930203 | Brunswick | Yes | 6% |
| 51025930300 | Brunswick | Yes | 6% |
| 51037930100 | Charlotte | Yes | 6% |
| 51037930200 | Charlotte | Yes | 6% |
| 51037930300 | Charlotte | Yes | 6% |
| 51083930100 | Halifax | No | 7% |
| 51083930201 | Halifax | Yes | 7% |
| 51083930202 | Halifax | Yes | 6% |
| 51083930301 | Halifax | Yes | 6% |
| 51083930302 | Halifax | No | 5% |
| 51083930400 | Halifax | No | 5% |
| 51083930500 | Halifax | No | 4% |
| 51083930600 | Halifax | Yes | 6% |
| 51111930100 | Lunenburg | Yes | 7% |

| | | | |
|-------------|--------------|-----|-----|
| 51111930200 | Lunenburg | Yes | 7% |
| 51111930300 | Lunenburg | No | 7% |
| 51117930101 | Mecklenburg | Yes | 6% |
| 51117930102 | Mecklenburg | No | 10% |
| 51117930200 | Mecklenburg | Yes | 5% |
| 51117930300 | Mecklenburg | No | 5% |
| 51117930400 | Mecklenburg | Yes | 7% |
| 51117930500 | Mecklenburg | No | 6% |
| 51117930600 | Mecklenburg | Yes | 6% |
| 51117930700 | Mecklenburg | No | 8% |
| 51117930800 | Mecklenburg | No | 6% |
| 51135980100 | Nottoway | No | 0% |
| 51135000100 | Nottoway | Yes | 6% |
| 51135000200 | Nottoway | No | 6% |
| 51135000300 | Nottoway | Yes | 6% |
| 51143010100 | Pittsylvania | No | 6% |
| 51143010200 | Pittsylvania | Yes | 5% |
| 51143010300 | Pittsylvania | No | 6% |
| 51143010400 | Pittsylvania | No | 4% |
| 51143010500 | Pittsylvania | No | 5% |
| 51143010600 | Pittsylvania | No | 5% |
| 51143010700 | Pittsylvania | No | 6% |
| 51143010801 | Pittsylvania | No | 4% |
| 51143010802 | Pittsylvania | Yes | 5% |
| 51143010900 | Pittsylvania | No | 5% |
| 51143011001 | Pittsylvania | No | 5% |
| 51143011002 | Pittsylvania | No | 4% |
| 51143011100 | Pittsylvania | No | 5% |
| 51143011200 | Pittsylvania | Yes | 10% |
| 51143011300 | Pittsylvania | No | 4% |
| 51143011400 | Pittsylvania | Yes | 4% |

| | | | |
|-------------|----------|-----|-----|
| 51590000100 | Danville | Yes | 8% |
| 51590000200 | Danville | Yes | 9% |
| 51590000300 | Danville | Yes | 15% |
| 51590000400 | Danville | Yes | 18% |
| 51590000500 | Danville | Yes | 11% |
| 51590000600 | Danville | Yes | 11% |
| 51590000700 | Danville | No | 6% |
| 51590000800 | Danville | Yes | 8% |
| 51590000900 | Danville | Yes | 10% |
| 51590001000 | Danville | Yes | 12% |
| 51590001100 | Danville | Yes | 12% |
| 51590001200 | Danville | Yes | 8% |
| 51590001301 | Danville | Yes | 4% |
| 51590001302 | Danville | Yes | 7% |
| 51590001400 | Danville | No | 4% |
| 51590980100 | Danville | No | 0% |

¹ NEADA Press Release, "Home Heating Costs Reach Highest Level in More than 10 Years Families will Pay 17.8% More for Home Heating this Winter," (10/18/2022), available at <https://neada.org/wp-content/uploads/2022/10/Winter-2022-23-PR.pdf>.

² U.S. Energy Information Administration, Office of Energy Demand and Integrated Statistics, Form EIA-457A of the 2020 Residential Energy Consumption Survey. Energy insecurity factors include: reducing or forgoing food or medicine to pay energy costs; leaving home at unhealthy temperature; receiving disconnect or delivery stop notice; unable to use heating equipment; and, unable to use air conditioning equipment.

³ According to 2021 data from the Energy Information Administration, Virginia had the 13th highest residential electricity bills in the U.S. and the third highest in the South Atlantic (DE, D.C., FL, GA, MD, NC, SC, VA, WV) with an average monthly bill of \$130.92. Comparatively, the U.S. average monthly bill is \$121.01. [Data from forms EIA-861 schedules 4A-D, EIA-861S and EIA-861U.] Dominion customers have seen their rates increase by \$46.34 from July 1, 2007 to July 1, 2022 with RACs responsible for \$30.92 of that increase. Appalachian Power customers saw a rate increase of \$55.64 over the same period with RACs responsible for \$35.13 of that increase. See, Virginia State Corporation Commission's "Status Report: Implementation of the Virginia Electric Utility Regulation Act Pursuant to § 56-596 B of the Code of Virginia," September 1, 2022, pp. 6-10.

⁴ This measure is based on the premise that a household should spend no more than 30 percent of its income on housing expenses and that utility costs should make up no more than 20 percent of total housing expenses.

⁵ Ariel Dreihobl, Lauren Ross, and Roxana Ayala, "How High Are Household Energy Burdens?: An Assessment of National and Metropolitan Energy Burden across the United States," American Council For Energy-Efficient Economy (September 2020), pp. 1-69, available at <https://www.aceee.org/sites/default/files/pdfs/u2006.pdf>.

⁶ Ibid.

⁷ Marilyn A. Brown et al., "High Energy Burden and Low-Income Energy Affordability: Conclusions From a Literature Review," *Prog. Energy* 2 (2020), pp. 1-35.

⁸ U.S. Dept. of Energy Low-income Energy Affordability Tool, available at <https://www.energy.gov/eere/slsc/maps/lead-tool>.

⁹ U.S. Energy Information Administration, Office of Energy Demand and Integrated Statistics, Form EIA-457A of the 2020 Residential Energy Consumption Survey.

¹⁰ Shuchen Cong, et al., "Unveiling Hidden Energy Poverty Using the Energy Equity Gap," *Nature Communications* (2022)13:2456, <https://doi.org/10.1038/s41467-022-30146-5>.

¹¹ Tom Perkins, "'Utility Redlining': Detroit Power Outages Disproportionately Hit Minority and Low-Income Areas," *The Guardian*, October 6, 2022, available at <https://www.theguardian.com/inequality/2022/oct/06/detroit-power-outages-impact-minority-low-income-neighborhoods>

¹² Greer Ryan, "Power Crisis: Despite Transparency Failures, Utility Information Reveals Major Home Shutoff Problem," Center for Biological Diversity, Updated June 2021, available at <https://www.biologicaldiversity.org/programs/energy-justice/pdfs/Power-Crisis-Report-June-2021.pdf>

¹³ Sanya Carley, David Konisky, and Trevor Memmott, "Household Energy Insecurity Survey, Winter 2021-2022," Indiana University, Bloomington, available at <https://energyjustice.indiana.edu/doc/ejl-energy-insecurity-report-winter-2022.pdf>

¹⁴ Judith Graham, "Rising Prices Threaten Older Adults' Limited Budgets," *Kaiser Health News*, September 9, 2022, available at <https://www.governing.com/finance/rising-prices-threaten-older-adults-limited-budgets>

¹⁵ <https://www.scc.virginia.gov/newsreleases/release/SCC-OKs-Dominion-Fuel-Rate-Increase>

¹⁶ <https://www.scc.virginia.gov/newsreleases/release/SCC-Seeks-Input-on-APCo-Fuel-Factor-Request>

¹⁷ <https://www.wdbj7.com/2022/05/03/some-virginia-electric-rates-going-up/>

¹⁸ <https://www.reuters.com/world/us/us-home-heating-bills-expected-surge-this-winter-eia-2022-10-12/>

¹⁹ Brown 2020, p. 20.

²⁰ See, Appendix A for a full list of the census tracts in the case study region. "DOE's working definition of disadvantage is based on cumulative burden. There are thirty-six (36) burden indicators that reflect fossil dependence, energy burden, environmental and climate hazards, and socio-economic vulnerabilities. To be considered a DAC, a census tract must rank in the 80th percentile of the cumulative sum of the 36 burden indicators and have at least 30% of households classified as low-income." <https://energyjustice.egs.anl.gov>

²¹ Low-Income Energy Affordability Data (LEAD) Tool Map Export (<https://www.energy.gov/eere/slsc/maps/lead-tool>), courtesy of Clean Energy Advisory Board 2021 Annual Report, published January 1, 2022, available at https://www.energy.virginia.gov/renewable-energy/documents/CEAB/Reports/CEAB_Annual_Report_2021_FINAL-TO-GA.pdf. The LEAD Tool Map data (housing only) comes from the U.S. Census Bureau's American Community Survey 2018 Public Use Microdata Samples. The Clean Energy Advisory Board's report included energy burden for owner-occupied housing, detached housing using electricity for power. These energy burden figures differ from what is reported in Appendix A using the Disadvantaged Communities Reporter tool which also uses LEAD data but with different parameters. Still, a census district in Danville has an average energy burden of 18% when all housing and fuel types are taken into account.

²² At its height, LIHEAP served 22% of eligible households in FY2010 as a result of supplemental funding following the Financial Crisis. Scott Bechler, "How a Decades-Old Federal Energy Assistance Program Functions in Practice: A Deep Dive into LIHEAP." NI PB 21-01. Durham, NC: Duke University. To be eligible for heating, cooling, and crisis assistance, Virginia requires that household income not exceed 150% of federal poverty level. For a 4-person household, maximum income cannot exceed \$3,469.

²³ <https://www.whitehouse.gov/wp-content/uploads/2022/01/LIHEAP-Virginia.pdf>

²⁴ <https://www.kaine.senate.gov/press-releases/warner-and-kaine-announce-over-115-million-in-federal-funding-to-lower-virginians-home-heating-costs-this-winter>

²⁵ For reference, Virginia carried over a little more than \$9 million from FY 2018 to FY 2019, and about \$8.5 million from FY2019 to FY2020. LIHEAP in Virginia 2020, available at <https://liheappm.acf.hhs.gov/>. Data current as of 8/11/21.

²⁶ Maria Castillo and Joe Daniel, "By the Numbers: Low-Income Energy Assistance," Rocky Mountain Institute (August 22, 2022), available at <https://rmi.org/by-the-numbers-low-income-energy-assistance/>

²⁷ <https://www.dss.virginia.gov/benefit/ea/>.

²⁸ Additionally, to qualify for cooling assistance, a household must contain at least one vulnerable individual age 60 or over, living with a disability, or under age 6.

²⁹ Dominion Energy EnergyShare Annual Report 2020-2021, available at <https://rga.lis.virginia.gov/Published/2021/RD265/PDF>.

³⁰ The Percentage of Income Payment Plan, authorized by the Virginia Clean Economy Act in 2020, will be available starting in Fall 2023.

³¹ <https://www.meckelec.org/budget-billing>

³² This may be a mischaracterization of the program as customers can apply for assistance at least once during the heating season and again in the cooling season. Once a customer hits the maximum funding available to a household during a season, they cannot apply again.

³³ Brown et al. 2020, p. 6.

³⁴ Bechler 2021.

³⁵ Drehobl, Ross, and Ayala 2020.

³⁶ Brown et al. 2020, p. 8.

³⁷ An argument has been made that the siloing of LIHEAP funding between different agencies contributes to the emphasis on short-term assistance over long-term improvements in reducing energy burden.

³⁸ “Virginia Weatherization Deferral Repair Program Guidelines, 2021 - 2022,” available at <https://dhcd.virginia.gov/sites/default/files/Docx/hiee/dhcd-weatherization-deferral-repair-program-guidelines.pdf>

³⁹ Ibid., p. 19.

⁴⁰ Drehobl, Ross, and Ayala 2020, p. 19.

⁴¹ Kathiann M. Kowalski, “Ohio advocates say there’s still a need to knock on doors before utility shutoffs,” *Energy News Network* (January 14, 2022), available at <https://energynews.us/2022/01/14/ohio-advocates-say-theres-still-a-need-to-knock-on-doors-before-utility-shutoffs/>

⁴² A utility may only require an amount equal to an estimated two months’ usage. Danville Utilities uses minimum deposit amounts for customers with no available billing history. For electric service only, the required deposit is \$200. For deposit amounts greater than \$40, utilities governed by the Division of Energy Regulation must allow the customer to make at least three monthly equal payments. According to their Terms & Conditions, Mecklenburg Electric Cooperative allows security deposits to be paid in three monthly installments only when they exceed \$75, and Southside Electric Cooperative will only allow them to be paid in installments when they exceed \$100. It is unclear why the nonprofit cooperatives have raised the minimum from \$40 to \$75 (Mecklenburg) and \$100 (Southside) when 20VAC5-10-20 requires all public utilities to set the minimum at \$40. A different provision setting interest rates on security deposits in 20VAC5-10-20 distinguishes between investor-owned utilities and nonprofit utilities to establish different rates. However, the provision setting the minimum for deposits to be paid in installments makes no such distinction.

⁴³ 20VAC5-10-20.

⁴⁴ Section XVI, para. F, Discontinuance of Electric Service, Virginia Electric and Power Company’s “Terms & Conditions,” effective January 19, 2016, available at <https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/terms-and-conditions/vatc16ra.pdf?rev=d9613a2e943546a8b11e7fef9e97aaa0&hash=0C540990E845426F71C5EA583CB2F119>

⁴⁵ Section VIII, subsection B, Discontinuance of Electric Distribution Service, Southside Electric Cooperative’s “Terms & Conditions for Providing Electric Distribution Service,” effective September 15, 2020.

⁴⁶ Courtesy of J. Davidson, Appalachian Voices; Source: Energy Justice Lab, Indiana University.

⁴⁷ 20VAC5-330-40

⁴⁸ Danville Utilities “Service Policies & Procedures,” effective February 22, 2021, p. 10.

⁴⁹ Ibid.