

BEFORE THE PUBLIC SERVICE COMMISSION

STATE OF GEORGIA

**In Re: Georgia Power Company's
2025 Integrated Resource Plan**

and

Georgia Power Company's 2025 Application for the Certification, Decertification, and Amended Demand- Side Management Plan

Docket Nos. 56002

Docket No. 56003

DIRECT TESTIMONY OF YUNUS KINKHABWALA

Presented on behalf
of the Georgia WAND and Vote Solar

May 2, 2025

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1 I. INTRODUCTION AND QUALIFICATIONS

2 **Q1. PLEASE STATE FOR THE RECORD YOUR NAME, POSITION, AND BUSINESS ADDRESS.**

3 A1. My name is Yunus Kinkhabwala, PhD. I am a Senior Scientist at PSE Healthy Energy.
4 My business address is 1440 Broadway, Suite 750, Oakland, California, 94612.

5 **Q2. ON WHOSE BEHALF ARE YOU SUBMITTING THIS DIRECT TESTIMONY?**

6 A2. I am submitting this testimony on behalf of Georgia WAND and Vote Solar.

7 **Q3. PLEASE SUMMARIZE YOUR QUALIFICATIONS, EXPERIENCE, AND EDUCATION.**

8 A3. My work at PSE Healthy Energy involves analysis on energy transition pathways that
9 maximize health, affordability, accessibility, and environmental benefits. My main
10 research focus areas include: integrated resource modeling, air quality, fair and
11 affordable energy access, and energy efficiency.

12 **Q4. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

13 A4. The purpose of my testimony is to quantify the affordability impacts of residential
14 energy bills with a focus on customers that cannot afford their current bills.
15 Specifically, my goal is to:

- 16 • Evaluate trends in home energy costs and affordability statistics across different
17 socioeconomic and demographic segments of customers for Georgia Power.
- 18 • Define and calculate the *energy affordability gap*— the total dollar amount of
19 annual bill assistance needed to bring all households down to affordability
20 thresholds.
- 21 • Evaluate the potential of demand-side resources to improve affordability and
22 meet power needs.

23 **Q5. HOW DOES YOUR TESTIMONY RELATE TO GEORGIA POWER’S TESTIMONY?**

24 A5. Resource planning has multiple aims including providing reliable power and
25 minimizing emissions and health damaging pollutants. These aims are balanced with
26 choosing the cost-effective blends of resources to minimize the financial burden on
27 Georgia Power customers through rates. However, customers have additional options

beyond lower rates to reduce their bills including efficiency, self generation, time-of-use plans, fuel switching, electrification, and demand response incentives. Importantly, all of these options also influence the portfolio of resources as they reduce or shift demand. If adopted by low-income customers, these bill reducing measures can lower the financial strain on public services as well. As such, integrated resource plans should consider these strategic resources to improve affordability in addition to the traditional approach of choosing the most economical blend of utility-owned generation resources.

Q6. CAN YOU SUMMARIZE KEY POINTS FROM YOUR TESTIMONY?

A6. Yes. Three key points include:

1. Roughly a quarter of Georgia Power's residential customers (620,000) are energy cost burdened, which means they pay more than six percent of their income for home energy needs. The affordability gap estimates that \$540 million annually of the revenue collected from these households is unaffordable and must be covered in one form or another such as through bill assistance financed from other ratepayers or taxpayers.
2. The further development of demand-side strategy is an exciting and welcome one for Georgia Power. Strategic demand-side resources can bring down bills and meet energy goals simultaneously. These include community solar, efficiency and weatherization, heat pump adoption, customer sited solar and storage, and more. However, the scale of these efforts are smaller than they need to be. Given the large growth in demand, these efforts should be more ambitious and integrated with supply-side planning as they will simultaneously make the adoption of renewables more sustainable and reduce the impact of bills on the most vulnerable households.
3. Standard cost tests are used by Georgia Power to evaluate the cost effectiveness of efficiency programs. These are useful, but they can also be misleading. One component cost tests as performed by Georgia Power fail to capture is the additional

1 benefit of bill reduction interventions when applied to customers that cannot afford
2 their bills and are likely to fall into arrearage or even have their power shut off. For
3 many, demand-side solutions have the ability to lastingly reduce customer's bills,
4 which is more cost effective and sustainable than using bill assistance to pay for
5 unnecessarily high bills.

1 II. METHODOLOGY

2 **Q7. HOW DO YOU ESTIMATE RESIDENTIAL ENERGY COSTS FOR HOUSEHOLDS SERVED BY**
3 **GEORGIA POWER?**

4 A7. Estimating household home energy bills is complicated for multiple reasons. First,
5 actual customer billing data is not accessible due to privacy concerns. We therefore
6 rely on modeling and multiple sources of survey data to estimate energy usage. Second,
7 Georgia Power customers use a variety of fuels to operate their homes, and so all fuel
8 use should be considered to understand their impacts on household budgets. For
9 example, one household might use electricity to heat their home while another uses
10 natural gas. Considering electricity alone would be misleading as it would exclude gas
11 bills which are used to achieve the same objective of a warm home throughout the
12 winter.

13 Energy cost burden is typically calculated by dividing a household's annual total
14 energy bills by its gross income to obtain the fraction of income spent on residential
15 energy needs. PSE Healthy Energy has developed a regression model based on a variety
16 of geographic, demographic, housing-related, and climate variables to generate a
17 simulated portfolio of energy use for all residential buildings and households within
18 the Company's territory.

19 Our model builds on previously developed methods^{1,2} and includes the most
20 commonly used residential energy fuels in Georgia: natural gas, electricity, propane,
21 fuel oil, and wood. Predictive variables were extracted from the U.S. Energy
22 Information Administration's 2020 Residential Energy Consumption Survey (RECS)³

¹ Jihoon Min, Zeke Hausfather, and Qi Feng Lin. "A High Resolution Statistical Model of Residential Energy End Use Characteristics for the United States." *Journal of Industrial Ecology*. October 2010.
<https://doi.org/10.1111/j.1530-9290.2010.00279.x>

² Jones, C. and Kammen, D. M. "Spatial Distribution of US Household Carbon Footprints Reveals Suburbanization Undermines Greenhouse Gas Benefits of Urban Population Density." *Environmental Science & Technology* 48.2 (2014): 895-902. <https://doi.org/10.1021/es4034364>

³ U.S. Energy Information Administration. "Residential Energy Consumption Survey 2015."
<https://www.eia.gov/consumption/residential/data/2015/>

1 and matched with household-level data by census tract from the U.S. Census Bureau's
2 2017-2021 American Community Survey (ACS). Using the modeled energy
3 consumption dataset, we can generate the most accurate and fine-grained estimates of
4 household energy bills to date. All dollar values published here correspond to the year
5 2023 and rate estimates were estimated using reported sales and revenue from the year
6 2023 reported on EIA form 861.

7 We note that in the analysis below, we look at combined energy cost burdens,
8 inclusive of both electricity and other residential fuel costs. This allows for a fair
9 comparison between fully electrified households and those with mixed use of electricity
10 and other fuels. Along with including the most commonly used residential energy fuels,
11 the analysis also includes the most common residential end uses: space heating, space
12 cooling, water heating, and major appliances.
13

1 III. LANDSCAPE OF ENERGY AFFORDABILITY FOR GEORGIA POWER
2 CUSTOMERS

3 **Q8. WHAT IS THE PURPOSE OF THIS SECTION?**

4 A8. Here, we identify key statistics that quantify the extent of the financial burden
5 experienced by households with a focus on the costs that fall on customers that cannot
6 afford them.

7 **Q9. WHY IS ENERGY AFFORDABILITY IMPORTANT?**

8 A9. Energy bills strain households in a variety of aspects. For example, they lead to unsafe
9 energy use such as using kitchen stoves for heating, increase the risk of eviction and
10 homelessness, keep homes at uncomfortable or unsafe temperatures, and result in the
11 forgoing of other essential expenses such as medical care. However, energy bills can
12 be reduced in a cost-effective manner for many low-to-moderate income (LMI)
13 households.

14 **Q10. WHAT HAPPENS TO CUSTOMERS WHO ARE UNABLE TO AFFORD THEIR BILLS?**

15 A10. According to a recent report “[d]uring 2024, approximately 184,000 residential
16 customers were disconnected with nearly 137,000 (74%) of those customers paying to
17 restore their service – often the same or next day.”⁴ This shutoff rate of nearly 8 percent
18 of all residential customers clearly indicates an affordability crisis exists for Georgia
19 Power customers. Moreover, these shutoffs are deeply disruptive to households with
20 negative consequences to their health and well-being.⁵ During a shutoff, homes cannot
21 keep safe indoor temperatures and refrigerated food and medications can spoil,
22 resulting in costly waste for already financially stressed households. To restore power,

⁴ Auer, Emma. “Georgia Utility Watch to provide oversight for Georgia Power.” University of Georgia WUGA. April 2025. https://www.wuga.org/local-news/2025-04-08/georgia-utility-watch-to-provide-oversight-for-georgia-power?_amp=true

⁵ “Left in the Dark; Utility Disconnections in the United States.” Just Solutions Collective. December, 2024. <https://justsolutionscollective.org/left-in-the-dark-utility-disconnections-in-the-united-states/#6d22292f-fd97-4fa0-8330-a33f4e01457d>

households often need to redirect funds from other essentials costs including health thus forgoing necessities that can cause even more costly burdens later.

Q11. WHAT IS THE OVERALL CURRENT STATE OF ENERGY AFFORDABILITY FOR GEORGIA POWER COMPANY’S RESIDENTIAL CUSTOMERS?

A11. Approximately one quarter of the roughly 2.4 million households in 2023, 620,000, are energy cost burdened, meaning that they spent over six percent of their annual gross income on their energy bills. Six percent is a threshold that is generally considered high although other thresholds have been used as well.⁶ Nearly all of these households, 90 percent, have incomes lower than twice the federal poverty level.

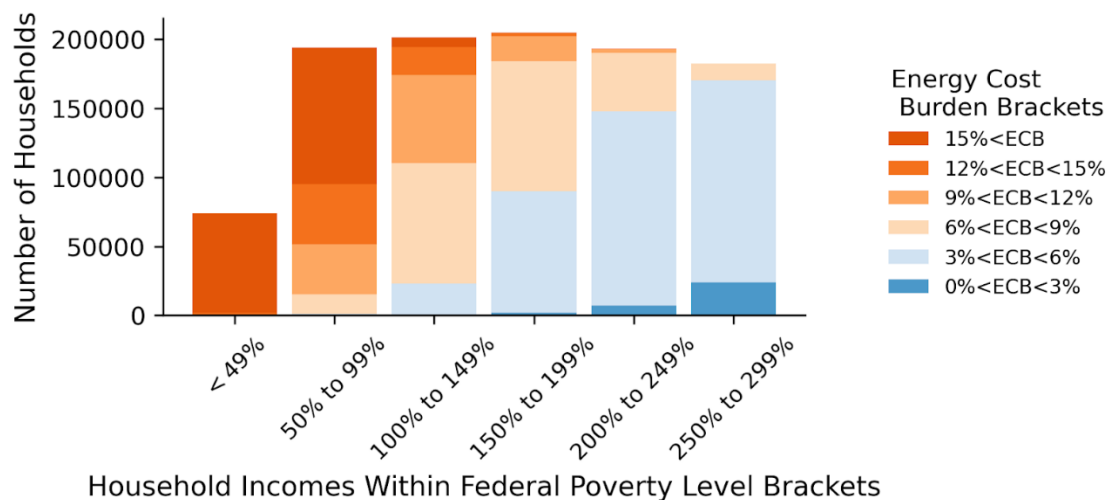


Figure 1: Number of households segmented by federal poverty level and energy cost burden brackets

The financial toll of these unaffordable bills is substantial. One financial statistic is known as the affordability gap⁷ which measures the dollar value of energy costs that are

⁶ The 6 percent threshold is derived from combining a 1981 amendment to the 1969 Housing and Urban Development Act, which states that housing costs, including utilities, should not exceed 30 percent of gross income, with a conventional rule of thumb that energy-related expenses should not exceed 20 percent of housing costs.

⁷ The concept was introduced by Fisher, Sheehan, and Colton, who have provided estimates of the energy affordability gaps down to the county scale across the U.S. for many years. Fisher, Sheehan, and Colton: Home Energy Affordability Gap. <http://www.homeenergyaffordabilitygap.com/>

greater than six percent of income that comes to \$540 million annually for Georgia Power customers. Another way to describe the affordability gap is through the example of bill assistance. A program that sets a cap on energy spending of six percent of any household's income and pays the rest through bill assistance, sometimes referred to as a percent of income plan, would need \$540 million annually. The breakdown of the gap by federal poverty level brackets is shown in **Figure 2**.

We note, however, that six percent is a lower threshold as many households are further strained by other non-discretionary expenses that are not captured by this data, and so this affordability gap is likely a conservative estimate. We note that this sum does not account for Georgia Power's income-qualified discount of \$33.50/month. We account for this separately as it represents one method for paying for this affordability gap and because we do not have data for the full enrollment in this program.

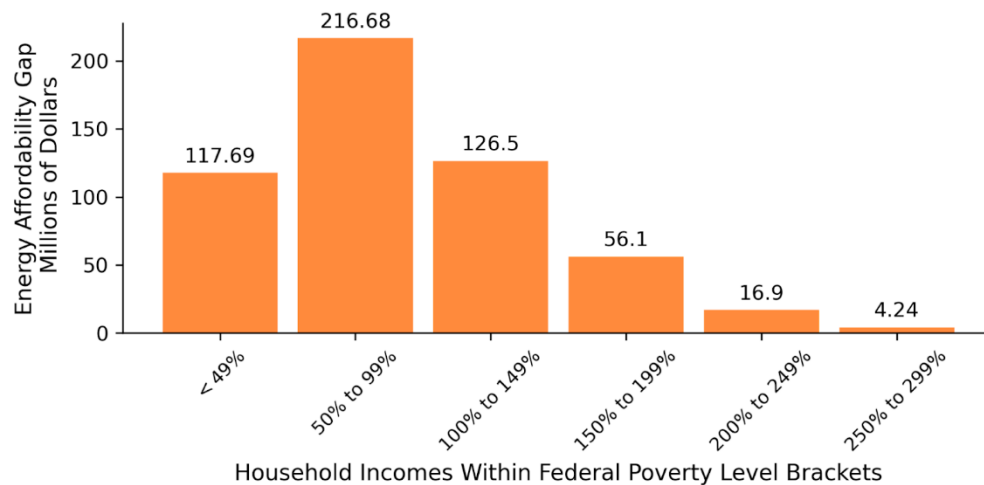


Figure 2: Cumulative affordability gap for households within federal poverty level brackets.

Q12. WHAT ARE ENERGY BILLS SPENT ON?

A12. The vast majority of spending for energy is for electricity, as seen in Figure 3. Nearly half of energy bills (47%) are for space heating and space cooling in nearly equal parts (\$1.3 billion and \$1.15 billion total). As such, sealing the envelope of homes and

improving the efficiency of heating and cooling systems, in most cases at the same time with modern heat pumps, is a major bill reduction strategy given their large gains in efficiency. Water heating is the next largest end use and also a key appliance to retrofit given recent advances with heat pump water heaters and the potential for load shifting with water heaters.

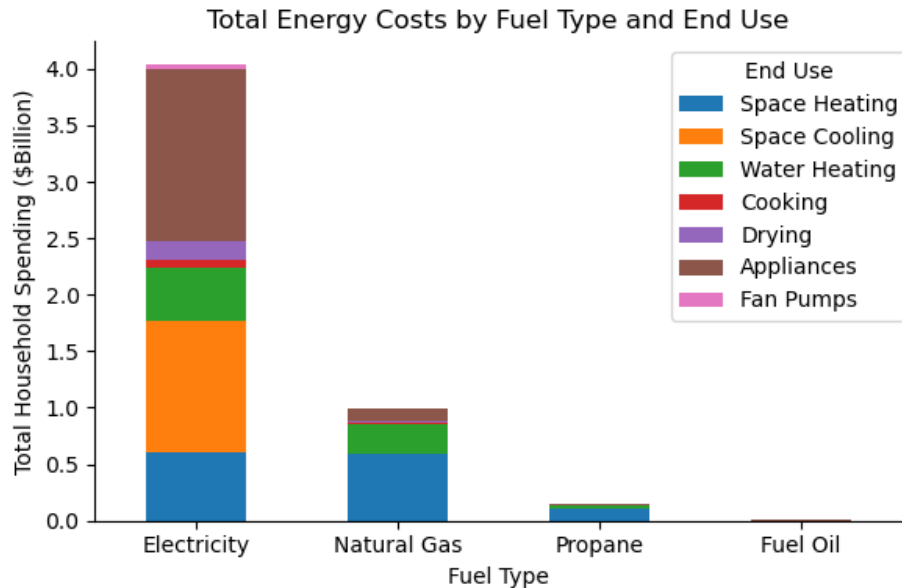


Figure 3: Total home energy costs broken down by end use (colors) and energy source.

We note that energy costs for transportation are outside the scope of this testimony. However, with the growth of affordable electric vehicles, the reduction in annual costs to charge an EV compared to fueling an internal combustion engine makes a substantial impact on household budgets. Moreover, the charging of EVs is highly flexible and can result in greater reductions in transportation costs if a utility provides financial incentives to charge when energy is abundant.

Q13. IS THERE SUFFICIENT BILL ASSISTANCE AVAILABLE FROM EXISTING PROGRAMS?

A13. No. This affordability gap estimates an annual sum that must be paid, whether it is through bill assistance, increased investments in demand side LMI bill reduction, or through accounts going into arrears carried by the rest of ratepayers. While bill assistance crucially provides direct financial support to make bills more affordable,

1 current programs cannot cover the entire affordability gap. First, Georgia Power offers
2 \$33.50 per month as an income-qualified discount for qualified households, which can
3 substantially decrease the affordability gap. However, not everyone who is cost
4 burdened qualifies for this discount. Only a small subset of households that are energy
5 cost burdened qualify for this discount.⁸

6 Outside of this discount, multiple state and federal programs provide energy bills
7 assistance for low-income customers. The largest source of funding to our knowledge
8 is the federal Low-Income Home Energy Assistance Program (LIHEAP), which
9 distributed roughly \$83 million for heating and cooling assistance for FY 2025.⁹ We
10 note this sum can only cover 15 percent of the entire affordability gap

11 **Q14. WHAT ARE THE GEOGRAPHIC TRENDS IN ENERGY AFFORDABILITY?**

12 A14. In **Figure 4**, we map affordability statistics across Georgia at the census tract scale.
13 While costs are lower in the south, incomes are also lower so that communities with
14 very high typical costs burdens are found throughout the territory. The same figures are
15 zoomed in for the Atlanta region in **Figure 5**, where roughly half of the customers live.
16 This figure highlights that much of the affordability burden is found concentrated in
17 certain communities in the Atlanta region. In these more urban areas, cost burdened
18 households more often rent their homes and live in multifamily housing units. Outside
19 of Atlanta, cost burdens are more often found in single family homes. We further note
20 that certain segments are typically more burdened. For example, households in mobile
21 homes represent 6 percent of the total, but 12 percent of the total gap. As such,
22 programs targeting these households in these homes can be effective for improved
23 affordability.

⁸ “Utility assistance programs”. State of Georgia Public Service Commission. Accessed May 1, 2025.

<https://psc.ga.gov/about-the-psc/consumer-corner/consumer-advisories/utility-assistance-programs/>

⁹ United States Government Administration for Children and Families. “FY 2025 First Award of \$3.6 Billion of Regular LIHEAP Block Grant Funds Plus \$100.1 Million of LIHEAP Infrastructure Investment and Jobs Act (IIJA) Funds to States and Territories”. Accessed May 1, 2025.

https://acf.gov/sites/default/files/documents/ocs/CORR_LIHEAP_1stFundingReleaseAtt1_StatesTerrs_FY2025_2.pdf

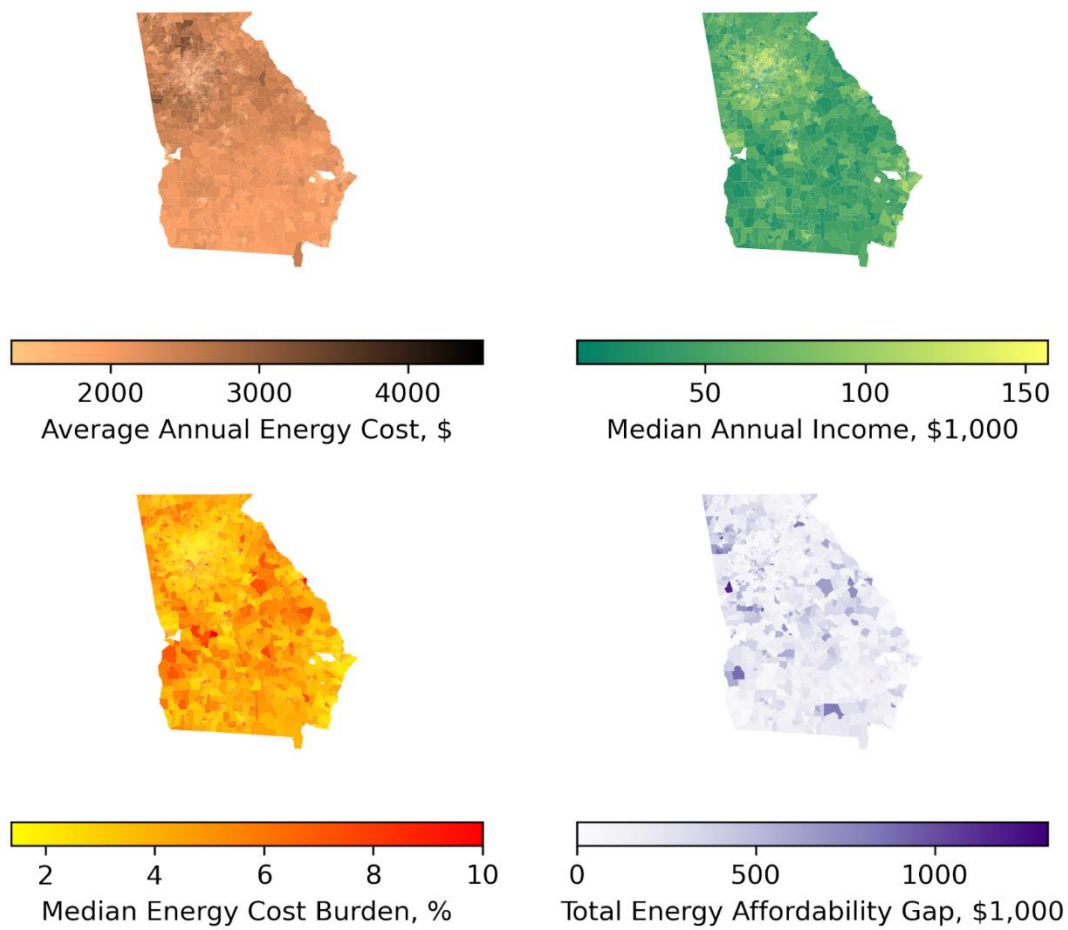


Figure 4: Geographic affordability trends for Georgia Power customers at census tract scale.

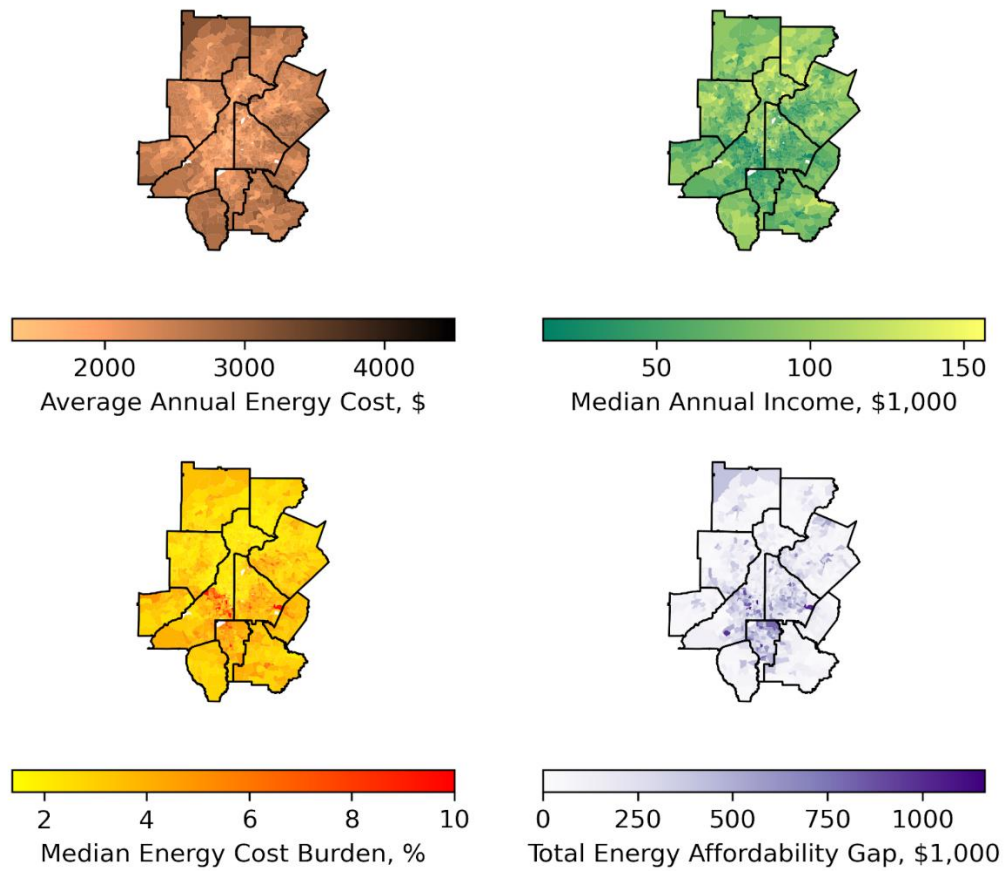


Figure 5: Geographic affordability trends for Georgia Power customers in the Atlanta region at census tract scale. Black outlines are county borders.

1 IV. REDUCING THE AFFORDABILITY GAP AND MEETING ENERGY NEEDS
2 THROUGH TARGETED ENERGY INVESTMENTS

3 **Q15. HOW DOES AFFORDABILITY IMPACT RESOURCE PLANNING?**

4 A15. Currently, resource planning is conducted separately from discussions of how revenue
5 is collected. However, this disconnect misses opportunities to identify strategies that
6 can simultaneously improve affordability and meet energy needs. This is because
7 resources that directly impact customer bills are typically owned, at least in part, by
8 customers and excluded from these resource plans. In the following questions, we
9 identify how energy and affordability can be improved through certain programs.

10 **Q16. HOW DOES YOUR TESTIMONY RELATE TO DEMAND-SIDE RESOURCE COST TESTS?**

11 A16. There are multiple resource cost tests that Georgia Power estimates. However, the only
12 results shown in the IRP itself are the Total Resource Cost (TRC) test and the Rate
13 Impact Measure (RIM) test. The TRC ignores bill impacts and solely considers
14 technology costs while the RIM test treats bill savings as a negative as it decreases
15 revenue instead of a positive as adopters pay less. Neither test accurately captures the
16 advantage of bill savings to customers adopting bill savings measures. Nor do they
17 capture the benefits of demand-side programs that both help meet energy needs and
18 reduce bills for the quarter of customers that do not have enough to pay their bills in
19 the first place.

20 **Q17. HOW CAN SPACE HEAT PUMPS HELP ADDRESS AFFORDABILITY AND ENERGY CONCERNS?**

21 A17. As shown in **Figure 3**, nearly half of energy bills come from space heating and cooling.
22 Georgia is already a leader in adoption of space heat pump technology, due in large
23 part because it is economical. However, there are many that still use resistive heating
24 or propane to heat their homes. These are disproportionately low-income households
25 who lack the capital to make these improvements or do not own their own homes even
26 when they pay for themselves through reduced energy bills. For example, using

Residential Energy Consumption survey data collected through 2020,¹⁰ we find a disparity for those who use efficient heat pumps between higher and lower income households. Specifically, for just households that use electricity for heating, 44% of those with incomes greater than twice the federal poverty level households used heat pumps, while that number drops to 35% for households with incomes less than twice the federal poverty level. While both of these numbers are certainly higher now, these disparities may still remain.

The penetration of heat pumps matters because they can provide large bills savings as shown in **Figure 6**. Currently, Georgia Power offers up to \$1,000 in rebates for space heat pumps and further incentives from the Inflation Reduction Act through the Home Electrification and Appliance Rebates (HEAR) offer up to \$8000 for income eligible households.¹¹

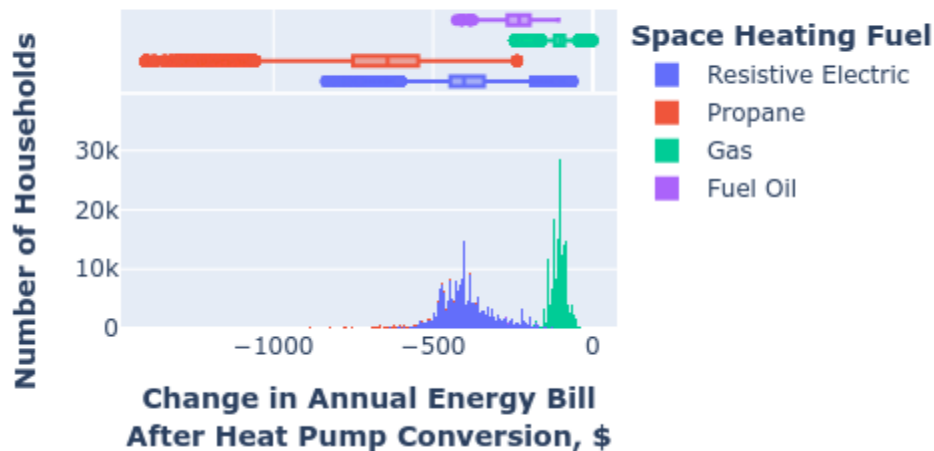


Figure 6: Distribution of heating bill changes after heat pump conversion. Negative values represent savings. This does not include additional savings from upgrades to existing cooling systems.

¹⁰ United States Energy Information Agency. “Residential Energy Consumption Survey”. Accessed May 1, 2025. <https://www.eia.gov/consumption/residential/data/2020/>

¹¹ State of Georgia. “Georgia’s Home Energy Rebates”. Accessed May 1, 2025. <https://energyrebates.georgia.gov/home-electrification-and-appliance-rebates>

1 Vitally, upgrades from resistive to heat pump technology represent a large opportunity
2 to minimize winter demand peaks. Simultaneously, due to increased efficiency for
3 cooling as well, these conversions would result in reduced summer demand peaks as
4 well.

5 **Q18. HOW CAN HOT WATER HEAT PUMPS HELP ADDRESS AFFORDABILITY AND ENERGY**
6 **CONCERNS?**

7 A18. Hot water heaters are the third largest end use after space heating and cooling. Heat
8 pump hot water heaters can be two to three times more efficient than resistive heating
9 thus realizing large savings both for energy and cost. Moreover, they are flexible loads
10 that can run at optimal times as water can be heated and stored with no impact on
11 households. While I commend the \$1,000 rebate for the adoption of heat pump hot
12 water, there is a demand response opportunity being missed in which customers can be
13 incentivized to allow the utility to manage their hot water heaters. While time-of-use
14 rates exist, many households are not sophisticated enough to take advantage of them
15 and a demand-side aggregator of these and smart thermostats would be able to more
16 efficiently time hot water heating to achieve greater peak reduction and grid resilience.

17 **Q19. HOW CAN RESIDENTIAL DEMAND RESPONSE HELP ADDRESS AFFORDABILITY AND ENERGY**
18 **CONCERNS?**

19 A19. Demand response involves financial incentives for customers to reduce or shift their
20 energy consumption when demand is at its peak. For households, this is typically done
21 through devices including vehicle chargers, smart thermostats, and water heaters that
22 can be controlled remotely to shift or reduce usage with minimal to no inconvenience
23 to households. These financial incentives can reduce their bills with minimal disruption
24 to their lives while also serving the broader grid.

25 **Q20. HOW CAN MANAGED CHARGING OF ELECTRIC VEHICLES HELP ADDRESS AFFORDABILITY**
26 **AND ENERGY CONCERNS?**

1 A20. There are roughly 92,000 EV¹² vehicles registered in Georgia and they represent a
2 steadily growing market share currently around 8 percent of new vehicles.¹³ Using a
3 conservative estimate of 50kWh for each vehicle, that represents roughly 4,600 MWh
4 of battery storage capacity currently on the road or parked. For comparison, the IRP
5 proposes a sizeable addition of 2,065 MW of storage, which would be equal to 8,260
6 MWh of storage if that were the most common variety of four-hour storage. Moreover,
7 assuming 4 MWh¹⁴ of consumption a year per vehicle, that represents 368 GWh of
8 annual demand that is highly flexible. As such, tapping into these existing and rapidly
9 growing demand, storage, and capacity resources is excellent and has the potential to
10 significantly impact supply-side strategies as well.

11 Importantly, these resources pose an excellent win-win for Georgia ratepayers.
12 Price incentives to encourage EV owners to charge when clean and cheap energy is
13 abundant will reduce transportation costs, the second largest cost to households on
14 average after housing according to the Bureau of Labor Statistics. It can also, however,
15 benefit other ratepayers as supply side can more easily accommodate the more
16 affordable intermittent resources. However, to realize this potential requires the correct
17 modeling and initiatives which do not currently exist.

18 Georgia Power is proposing or currently pursuing two pilot programs. The first is
19 aimed at managing when charging occurs and the second incorporates vehicle batteries
20 to supply power to loads and/or the grid (V2X). Both are exciting endeavors. The first
21 managed charging program can rapidly scale as it can require minimal capital
22 investment. Goals for the rapid adoption of these programs should be laid out to ensure
23 their rapid growth. The second V2X effort will take more effort due to increased capital

¹² United States Department of Energy. “Electric Vehicle Registrations by State”. Accessed on May 1, 2025.
<https://afdc.energy.gov/data/10962>

¹³ Atlas Public Policy and the Southern Alliance for Clean Energy. “EV Momentum in Georgia”. Accessed on May 1, 2025. <https://www.cleanenergy.org/wp-content/uploads/SACE-One-Pager-Georgia-2024.pdf>

¹⁴ Zargary, Shelli. “How Much Electricity Does an Electric Car Use?”. GenCell Energy. November 12, 2023.
<https://www.gencellenergy.com/resources/blog/ev-charging-power-car-electricity-usage/>

1 investments in bi-directional charging, but can become a key and revolutionary
2 component of an energy future. Importantly, V2X can also provide energy resilience
3 in the event of outages such as those from natural disasters.

4 **Q21. HOW CAN RESIDENTIAL SOLAR AND STORAGE IMPACT AFFORDABILITY?**

5 A21. Residential solar directly reduces electricity bills. In Georgia, this is essential given that
6 electricity dominates energy bills and has abundant sunshine. Moreover, space cooling,
7 one of the leading energy costs, is often highest in demand when the sun is shining.
8 Nationwide, customers who adopt solar can experience significant savings over the
9 lifetime of their systems, especially if they electrify their homes and adopt electric
10 vehicles. The additional incentives to pair solar with storage will increase the
11 usefulness of these installations for the grid. This will require sufficient financial
12 incentives as well as systems to optimize the usage of distributed storage which cannot
13 pay for itself as solar can unless its services are used and fairly paid for. Moreover, this
14 provides essential energy resilience to outages such as those caused recently by
15 Hurricane Helene.

16 Adoption of rooftop solar to date, however, has been limited by residential
17 customers due to a cap for access to net metering. The RNR net metering program from
18 the 2019 Georgia Power rate case capped rooftop solar customer participants to just
19 5,000.¹⁵ As such, homeowners who wish to build resilience to outages and reduce their
20 bills through adoption of solar cannot do so. I estimate roughly 46 percent of customers
21 that are energy cost burdened own their own homes and would benefit from fairly
22 compensated residential solar if it were available. Lower adoption rates also means that
23 Georgia homeowners are not accessing federal solar incentives at the same rate as
24 residents of other states.

25 **Q22. HOW CAN COMMUNITY SOLAR AND STORAGE IMPACT AFFORDABILITY?**

¹⁵ Fischer, Anne. "Georgia commission fails to expand solar net metering program". PV Magazine. December 21, 2022. <https://pv-magazine-usa.com/2022/12/21/georgia-commission-fails-to-expand-solar-net-metering-program/>

1 A22. Community solar involves programs where households take part remotely in nearby
2 solar and storage facilities. For many households, such as renters, this is the only way
3 they can take part in distributed generation. For Georgia Power customers, they pay
4 directly to Georgia Power a monthly subscription rate to access power to blocks of
5 solar. One program, financed by support from corporate sponsors, reduces the costs for
6 participation by roughly 75 percent which could lead to significant bill savings.¹⁶
7 Unfortunately, this program is limited to only 5,000 income-qualified customers, less
8 than one percent of the households that are energy cost burdened. Moreover, as reported
9 recently, this program has not enrolled income-qualified subscribers due to a lack of
10 corporate sponsors which is not a sustainable model.¹⁷

11 In other states, there are markets of community solar options that allow for non-
12 utility ownership that can compete for customers and offer mandated guaranteed
13 discounts to low-income customers. Some of these programs are able to scale up
14 quickly with no risk incurred for energy cost burdened customers and without reliance
15 on sponsorships.

16 **Q23. HOW DOES GEORGIA POWER’S CUSTOMER PROGRAMS COMPARE TO SIMILAR UTILITIES?**

17 A23. Demand response for households in Georgia Power is small, however, and thus has
18 ample capacity to grow quickly. Below are some comparisons to illustrate.

- 19 • The state of Georgia is tied for 34th in ranking according to the ACEEE state
20 efficiency scorecard. This suggests a great deal of efficiency is still available to
21 reduce bills and demand.
- 22 • Georgia Power only offers a one-time rebate (up to \$75) on smart thermostats.

23 Other similar utilities have long standing programs that allow them to control these

¹⁶ Georgia Power. “Income-Qualified Community Solar”. Accessed May 1, 2025.

<https://www.georgiapower.com/residential/save-money-and-energy/products-programs/residential-solar-solutions/community-solar/income-qualified-community-solar.html>

¹⁷ Lutz, Meris. “Could ‘community solar’ boost renewable energy in Georgia and lower bills?” The Atlanta Journal-Constitution. September 19, 2024. <https://www.ajc.com/news/business/could-community-solar-boost-renewable-energy-in-georgia-and-lower-bills/NL4NFRAFYFD5XDBOQJSU4NEWE4/>

thermostats for brief intervals to reduce demand and meet power needs. For example, Duke in North Carolina offers an initial \$150 to enroll in the program and \$50 annually to stay enrolled.

- Incentives for smart EV charging are already established for other territories. Georgia Power is still in the pilot stage.
- Georgia does not have any non-utility owned community solar.
- Currently, I am not aware of any Georgia Power demand response programs to manage heating, cooling, and hot water systems to shift demand.
- While Georgia Power itself owns significant amounts of solar, its customers own less than in similar territories. This misses an opportunity for Georgia households to take advantage of incentives and experience bill savings directly as well as build energy resilience.

Q24. WHAT ARE OTHER BENEFITS OF DEMAND-SIDE RESOURCES?

A24. In addition to affordability benefits, there are other benefits of demand-side programs. First, they reduce emissions and thus avoid climate impacts and health impacts from reduced air quality. Second, resources such as solar and storage and V2X can provide vital energy backup in the event of outages such as the crippling outages recently experienced as a result of disasters such as Hurricane Helene in which 1.5+ million Georgians lost power. I commend Georgia Power's "additional incentives for municipalities, universities, schools, and hospitals ("MUSH") segments" for energy storage as these facilities can provide critical services in the event of an outage and should be among the first to have backup energy storage facilities. In terms of affordability, it will be further essential that storage and solar located at the community-serving facilities are fully utilized and incentivized accordingly as any bill savings can be redirected to the primary functions of these facilities. For example, energy costs are typically the largest expense for schools after staff. As such, reductions in school

energy bills can be used for programs that benefit student safety and learning. Lastly, home improvements often lead to more comfortable and safer homes.

Q25. CAN YOU SUMMARIZE ANY RECOMMENDATIONS FOR THIS IRP?

A25. I commend the development of existing and new demand-side resources. These resources represent a rapidly improving suite of technologies with low risks and large potential benefits for both households and the grid itself. However, there is a great potential to do more and acting now is essential to lay the groundwork for increased demand-side capacity and empowering a more affordable and reliable future for all. Following are a few recommendations or key remarks I have with respect to the IRP:

- Increase the enrollment in the net metering solar program with a priority for income-qualified customers.
- Generate scenarios and sensitivities with substantially higher penetration of demand side management resources including higher efficiency, customer sited solar and storage, community solar, and residential demand response technologies. These demand side resources can play a significant role in power planning if they are allowed to do so in the models. This should eventually lead to an integrated system planning approach where generation, transmission, distribution, and demand-side management all work together to find the pathway that realizes the greatest benefits for Georgia residents.
- Rename the “Capacity and Affordability Case Study” to remove the term “Affordability” as this term is misleading since it is not clear to whom this is more affordable. Affordability would require more analysis of bills and segmented impacts as discussed in the following recommendation.
- Share more data on customer arrearage and power shutoffs and identify how targeted demand-side resources at low-income households can be used to reduce both of these.

- Increase and diversify the offering of community solar for low-income households with guaranteed discounts that do not rely solely on corporate sponsorship.
- As systems are put in place for managed smart EV charging, also build programs for management of residential thermostats and hot water heaters. Moreover, set clear minimum targets to ensure rapid development of these vital resources and how to increase their adoption by low-income households.

Q26. DOES THIS CONCLUDE YOUR TESTIMONY?

A26. Yes.

VERIFICATION

The undersigned, Yunus Kinkhabwala, affirms under the penalties of perjury that the answers in the foregoing Direct Testimony in Docket Nos. 56002 and 56003 before the Georgia Public Service Commission are true to the best of his knowledge, information, and belief.

Yunus Kinkhabwala

Yunus Kinkhabwala

PSE Healthy Energy, on behalf of

GA WAND and Vote Solar