BEFORE THE

GEORGIA PUBLIC SERVICE COMMISSION

In Re: Georgia Power Company's 2019 Rate Case	Docket No. 42516

Direct Testimony of
Melissa Whited and Ben Havumaki

On Behalf of
Sierra Club

October 16, 2019

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1. INTRODUCTION AND QUALIFICATIONS

Q Please state your name, title, and employer.

A Ms. Whited: My name is Melissa Whited. I am a Principal Associate at Synapse Energy Economics, located at 485 Massachusetts Avenue, Cambridge, MA 02139.

A Mr. Havumaki: My name is Ben Havumaki. I am an Associate at Synapse Energy Economics, located at 485 Massachusetts Avenue, Cambridge, MA 02139.

Q Please describe Synapse Energy Economics.

A Synapse Energy Economics (Synapse) is a research and consulting firm specializing in electricity and gas industry regulation, planning, and analysis. Our work covers a range of issues, including economic and technical assessments of demand-side and supply-side energy resources; energy efficiency policies and programs; integrated resource planning; electricity market modeling and assessment; renewable resource technologies and policies; and climate change strategies. Synapse works for a wide range of clients, including attorneys general, offices of consumer advocates, public utility commissions, environmental advocates, the U.S. Environmental Protection Agency, U.S. Department of Energy, U.S. Department of Justice, the Federal Trade Commission and the National Association of Regulatory Utility Commissioners. Synapse has over 30 professional staff with extensive experience in the electricity industry.

Q Please summarize your professional and educational experience.

A Ms. Whited: I have 10 years of experience in economic research and consulting. At Synapse, I have worked extensively on issues related to utility regulatory models and rate design. I have been an invited speaker in numerous industry conferences, including as a panelist for NARUC's Subcommittee on Rate Design at the 2018 Annual Meeting.

I have sponsored testimony before the California Public Utilities Commission, Massachusetts Department of Public Utilities, the Hawaii Public Utilities Commission, the Public Service Commission of Utah, the Public Utility Commission of Texas, the Rhode Island Public Utilities Commission, the Maine Public Utilities Commission, and the Federal Energy Regulatory Commission. I hold a Master of Arts in Agricultural and Applied Economics and a Master of Science in Environment and Resources, both from the University of Wisconsin-Madison. Prior to rejoining Synapse, I published in the *Journal of Regional Analysis and Policy*, analyzed state water efficiency policies while at the Wisconsin Public Service Commission, and conducted econometric analyses of energy efficiency and demand response cost-effectiveness. My resume is attached as Exhibit MW-BH-1.

A **Mr. Havumaki:** I am an economist with approximately three years of experience in the energy field. At Synapse, I focus on rate design, cost-benefit analysis, and other regulatory issues. Recent projects include comments filed in a Mississippi value of solar docket, and a technical brief for the Lawrence Berkley National Laboratory on best practices in cost-benefit analysis. Prior to being hired by Synapse, I worked for the World Bank on a consulting team that authored a field manual on cost-benefit analysis for practitioners in the Developing World. My master's thesis addressed energy system design in Mauritius, and this research contributed to a journal article published in the October 2019 edition issue of *Energy Policy*. I hold a master's in applied economics from the University of Massachusetts, where I received the Arthur MacEwan Award for Excellence in Political Economy. My resume is attached as Exhibit MW-BH-2.

Q **On whose behalf are you testifying in this case?**

A We are testifying on behalf of the Sierra Club.

Q Have either of you testified in front of the Georgia Public Service Commission previously?

A No.

Q What is the purpose of your testimony?

A The purpose of our testimony is to address Georgia Power Company's ("the Company") proposed rate design, focusing on the basic service charge (also known as a fixed customer charge) assessed to residential customers. The Company's proposal to dramatically increase this charge represents a substantial departure from its current practice. Our testimony explains that increasing the fixed charge by nearly 80 percent would violate the fundamental rate design principles of gradualism, equity, and efficient price signals. Further, such an increase would reduce customer control of their bills. These effects would disproportionately impact low-usage and low-income customers and decrease incentives for energy efficiency and distributed generation. We conclude our testimony with discussion of some alternative rates that would deliver the same revenue for the Company but would not produce such untoward results for low-income and low-use customers or otherwise violate key rate design principles.

2. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Q Please summarize your primary conclusions.

A Our conclusions are as follows:

1. The Company's proposed increase in the residential basic service charge of nearly 80 percent would result in rate shock for many customers, have inequitable impacts on customers, reduce customers' control over their bills, and reduce incentives for energy efficiency, conservation, and distributed generation.

a. Increasing a single rate component by nearly 80 percent does not meet the widely accepted rate design criterion of rate stability and would result in rate shock for many customers.

b. The Company's proposal does not adhere to the widely accepted rate design principle of promoting customer equity, since low-usage and low-income customers would be hit with the highest rate increases.

c. The Company's proposal does not adhere to the widely accepted rate design principle of providing customers with an incentive to use electricity efficiently, since a larger proportion of the customer's bill will be divorced from energy usage.

2. The Company fails to demonstrate that increasing the basic service charge is necessary to recover its revenue requirement.

   a. The Company fails to demonstrate that increasing the basic service charge is required for it to collect needed revenues.

   b. The Company fails to demonstrate that customer adoption of distributed solar or energy efficiency is creating material inequities on its system. Indeed, there are currently only about 2,000 customer-sited solar generation systems on the Company's grid, with approximately 1,200 belonging to customers on the standard residential tariff. These systems provide valuable energy to the grid on hot summer days when demand is at its highest.[1]

3. The Company's calculated customer-related costs are based on the Minimum Distribution System methodology, which includes portions of the secondary distribution system, rather than costs that are directly customer-related. When calculated using the Basic Customer Method, the customer-related costs are much lower.

[1] *See* Company response to data request STF-PIA-7-18, available at https://psc.ga.gov/search/facts-document/?documentId=178360, Document filing #178360.

Q Please summarize your recommendations.

A We recommend that the Commission reject the Company's proposed increase in the basic service charge and retain the existing basic service charge of $10.00 in order to avoid rate shock, protect low-income and low-usage customers, encourage adoption of efficient technologies and distributed generation, and allow customers greater control over their bills.

In addition, we recommend that the Commission direct the Company to use the Basic Customer Method for determining customer-related costs. This is a widely accepted approach that more accurately accounts for the portion of system costs that vary with the number of customers, rather than with other drivers such as energy or demand.

Q Are you sponsoring any exhibits with your testimony?

A Yes. We are sponsoring three exhibits. Exhibit MW-BH-1 contains Ms. Whited's resume, Exhibit MW-BH-2 contains Mr. Havumaki's resume, and Exhibit MW-BH-3 contains excerpted text from *Principles of Public Utility Rates* by James Bonbright.

3. OVERVIEW OF GEORGIA POWER'S RATE DESIGN PROPOSAL

Q Please summarize Georgia Power's proposal.

A Georgia Power has requested a $563 million increase in overall revenue requirements, which includes an increase in base revenue requirements of $367 million, effective January 1, 2020.[2] As a component of this increase, the Company has proposed major changes to its rate structure for the Domestic group with a substantial rise in the basic service charge.

[2] *See* Direct testimony of Larry T. Legg at 5.

Q How would residential rates change under the Company's proposal?

Residential customers would see monthly fixed charges increase by nearly 80 percent over three years. From its current level of $10.00 per month, the basic service charge is to be increased to $14.90 per month in 2020, $16.95 per month in 2021, and $17.95 per month in 2022.[3]

Meanwhile, energy charges will only rise modestly. Customers on the most common residential rate, R-22, would see energy charges rise by only about 2.5 percent as they are transitioned to the new R-23 rate. While the energy charges on the other residential rates are all set to increase by slightly different measures, in all cases the relative changes to energy rates pale in comparison to the proposed increase to the basic service charge.

Table 1. Summary of Proposed Changes to Schedule R Ratesbelow presents the Company's proposal for R-23.

Table 1. Summary of Proposed Changes to Schedule R Rates

Season	Component	Current	Proposed	Increase
	Basic Service Charge	$10.00	$17.95	79.5%
Summer	Energy: 0-650 kWh	$0.057	$0.058	2.5%
	Energy: 651-1000 kWh	$0.094	$0.096	2.5%
	Energy: 1001+ kWh	$0.097	$0.100	2.5%
Winter	Energy: 0-650 kWh	$0.057	$0.058	2.5%
	Energy: 651-1000 kWh	$0.049	$0.050	2.4%
	Energy: 1001+ kWh	$0.048	$0.049	2.5%

Q How will the Company's rate design change the relationship between the various rate elements?

A The proposed rate design radically changes the relationship between rate elements by increasing the basic service charge by a far greater measure than the volumetric energy charges.

[3] *See* Direct Testimony of Larry T. Legg, Exhibit LTL-1. Note that 2021 and 2022 values are estimated.

4. THE COMPANY'S CASE FOR INCREASING THE BASIC SERVICE CHARGE

Q Why is the Company proposing to increase the residential basic service charge by nearly 80 percent?

A The Company argues for the proposed increase to promote efficiency. According to Company witness Larry T. Legg, "…implementing this adjustment will better align prices with costs and, in turn, send better price signals to customers. It will also result in more economically sound rate designs that will encourage more efficient use of Georgia Power's electric system."[4]

Q Do these reasons point to a need for a radical change to the residential basic service charge?

No. The Company has failed to justify why it needs to implement drastic increases to the basic service charge in order to recover its costs. As we describe in more detail, the Company's steep increase in the basic service charge is inconsistent with widely accepted rate design principles. In addition:

- The Company's proposal would reduce incentives for energy efficiency and distributed solar, leading to higher electricity usage and ultimately increased costs on the system.
- The Company has not demonstrated that any cost-shifting is occurring, or that such cost-shifting is material.
- The Company's proposal to steeply increase the basic service charge is inconsistent with widely accepted rate design principles and state energy policy goals and would disproportionately harm low-usage and low-income customers.

[4] *See* Direct Testimony of Larry T. Legg at 7.

- The Company's method for calculating the basic service charge is based on a methodology that includes a portion of distribution system costs, rather than only including direct customer costs.

Q Do you agree that there is a need to modernize the Company's rate design as discussed in the testimony of witness Ahmed Faruqui?

A Dr. Faruqui states that, if appropriately used, modern rate design "sends the appropriate price signals to customers and achieves the goals of promoting economic efficiency and equity."[5] Therefore, modernizing the Company's rate design holds the promise of conferring benefits on the Company's ratepayers.

However, there is nothing "modern" about increasing the basic service charge, since it does not enhance price signals to customers regarding the costs imposed on the system during different hours or seasons. The basic service charge is a flat fee imposed regardless of whether the customer uses any electricity, and a customer can do absolutely nothing to avoid it, short of leaving the grid. In contrast, truly modern rate designs, such as time-of-use rates and critical peak pricing, provide much more sophisticated price signals that encourage customers to reduce energy consumption when demand is high, thereby reducing the operation of high-cost peaker plants and the need for capacity additions.

5. CORE RATEMAKING PRINCIPLES TO BE CONSIDERED IN RATE DESIGN

Q What ratemaking principles should be considered when designing rates?

A In his seminal work, *Principles of Public Utility Rates*, Professor James Bonbright discusses eight key criteria for a sound rate structure. These criteria are:

1. The related, "practical" attributes of simplicity, understandability, public acceptability, and feasibility of application.
2. Freedom from controversies as to proper interpretation.

[5] *See* Direct Testimony of Ahmed Faruqui at 2.

3. Effectiveness in yielding total revenue requirements under the fair-return standard.
4. Revenue stability from year to year.
5. Stability of the rates themselves, with minimum of unexpected changes seriously adverse to existing customers.
6. Fairness of the specific rates in the appointment of total costs of service among the different customers.
7. Avoidance of "undue discrimination" in rate relationships.
8. Efficiency of the rate classes and rate blocks in discouraging wasteful use of service while promoting all justified types and amounts of use:
    a. in the control of the total amounts of service supplied by the Company;
    b. in the control of the relative uses of alternative types of service.[6]

Q Are these principles widely recognized and used by commissions?

A Yes. The principles listed above have been recognized for many years as the standard for rate design by commissions across the country. Even the Company acknowledges the central role of these principles in modern rate design when they indicated that Bonbright's work is "almost universally cited in rate proceedings throughout the U.S."[7]

Q Is the Company's rate design proposal consistent with Bonbright's principles?

A No. The Company's proposal does not meet the principles of rate stability (often referred to as "gradualism"), fairness among customers, or efficiency. We will describe these failings in more detail below.

[6] James Bonbright, *Principles of Public Utility Rates*, Columbia University Press, 1961, page 291, provided in Exhibit MW-BH-3.
[7] *See* Direct Testimony of Ahmed Faruqui at 5.

6. INCONSISTENCY WITH THE PRINCIPLE OF RATE STABILITY

Q Please describe Bonbright's principle regarding rate stability.

A This principle means that customer rates should not change suddenly, particularly if this will cause harm to customers by significantly increasing a customer's bill.

Q In what way should customer rates exhibit stability?

A Bonbright's stability principle specifies that unexpected, adverse changes should be minimized. Large increases in customer bills can impose financial hardship on customers, particularly low-income customers, and cause customer confusion and frustration. Substantial changes to electricity rates are also difficult for customers to adjust to, since customers may make investments in household appliances and other durable goods under the assumption that rates will remain relatively stable. However, investments that made sense under one rate structure may no longer be cost-effective after a significant increase or change in structure.

Q Is the Company's proposal consistent with the principle of rate stability?

A No. The Company proposes to increase the basic service charge for residential customers by nearly 80 percent by 2022. This drastic increase will be detrimental to many customers, particularly those who consume less energy than the average, many of whom are low-income customers. The Company's requested increase is more than three times greater than the increase that resulted from the 2010 rate case and nearly eight times greater than the increase in the 2013 rate case, making this an unprecedented move by the Company with no justification for such a drastic increase.

Q Does the Company's plan to phase in its basic service charge increase over three years mitigate its harmful effects?

A No. While the Company's proposed three-year trajectory might be superior to an all-at-once 80 percent increase, the proposed yearly increases are still unduly large. The Company's proposal for 2020 would increase the basic service charge by

nearly 50 percent, from $10.00 to $14.90 per month—a move that cannot be considered "gradual" by any means.

7. INCONSISTENCY WITH THE PRINCIPLES OF FAIRNESS AND AVOIDANCE OF UNDUE DISCRIMINATION

Q Please describe Bonbright's principles regarding fairness and avoiding undue discrimination.

A These principles refer to treating similarly situated customers in a similar manner.

Q Is the Company's rate design proposal consistent with the principle of fairness and avoidance of undue discrimination?

A No. The Company's proposal would place a disproportionate strain on customers that use the least energy.

Q How will the Company's rate design unfairly impact low-use customers' bills?

A The Company has shown that low-use customers will see disproportionately large average monthly bill increases. According to results provided by the Company, an average low-use customer will experience a greater than 10 percent increase in monthly bills in 2020. This may be contrasted with the expected effects on typical and high-use customers, whose monthly bills are expected to increase by 8 percent and 6 percent, respectively, in the first year of the new rate design.[8]

[8] According to the Company, the average "low" customer uses 673 kWh per month, a "typical" customer uses 1,000 kWh per month, and the average "high" customer uses 1,837 kWh per month. *See* Direct Testimony of Larry T. Legg, Exhibit LTL-4. Note, however, that the "typical" residential customer described by the Company does not appear to be identical to the average customer. According to data provided by the Company, in 2013, the average customer used 12,789 kWh per year. While it is unlikely that the average customer today consumes exactly the same quantity of energy as the average customer in 2013, it does not appear that per-customer consumption has dropped. *See* Company response to data request STF-PIA-5-25, Attachment STF-PIA-5-25b and Company response to data request STF-PIA-5-23, Attachment STF-PIA-5-23, available at https://psc.ga.gov/search/facts-document/?documentId=178051.

Q How will the proposed increase in the monthly fixed charge affect customers with the lowest energy consumption?

A Simply put, the lower a customer's monthly consumption, the greater the percentage by which the monthly bill will rise. Using data provided by the Company, we determined that a customer whose consumption ranks in the tenth percentile could expect an increase of 16 percent in the average monthly bill[9] – nearly *three times* as great as the impact on high-use customers. A summary of these differential effects is presented in the table below.

Customer	Monthly Energy (kWh)	Bill Impact
High-use	1,837	5.87%
Typical	1,000	7.93%
Low-use	673	10.07%
Tenth Percentile	367	15.75%

Q Who are the low-use customers that will be most impacted by the proposed rate design?

A Customers who consume less than average generally include customers who have worked hard to conserve energy—often through investing personal financial resources in energy efficient technologies or distributed generation—and low-income customers.

Q What about the Company's claim that on-site generation customers use greater than average energy?

A The data provided by the Company for residential customers enrolled in the Renewable and Non-Renewable Resources (RNR) tariff shows an average annual consumption of 15,089 kWh.[10] However, the data provided by the Company

[9] *See* Company response to data request STF-PIA-5-25, Attachment STF-PIA-5-25b, available at https://psc.ga.gov/search/facts-document/?documentId=178051. This document provides the distribution of customers by annual electricity consumption. Note that this data is for 2013, and that we have assumed that present consumption patterns are consistent with this historical record.

[10] *See* Company response to data request STF-PIA-8-8. Attachment STF-PIA-8-8, available at https://psc.ga.gov/search/facts-document/?documentId=178369, Document Filing # 178369.

represents only a subset of all residential customers with distributed generation. Based on Company responses to other data requests, it appears that this subset may be only about 60 percent of all residential customers with on-site generation.[11] Critically, the Company's sample does not include residential customers who are only using their systems to offset energy, rather than selling energy back to the grid.

Regardless of the amount of energy that customers with on-site generation use, the Company's proposed steep increase in the basic service charge will reduce the value of energy generated on-site relative to a rate design with a lower fixed charge.

Q Why is it problematic to alter the rate structure for customers with on-site generation?

Customers generally assume that the relationship between rate elements will remain relatively stable. While customers understand that rates will rise over time, those who have sunk resources into solar PV systems expect their investments to help mitigate against future rate increases that are patterned on the current relationship between fixed and volumetric charges. The Company's current proposal undercuts the efficacy of historical investments by drastically altering the relationship between rate components, which is inconsistent with the principle of gradualism.

Q How might the Company's proposed increase in the fixed charge impact further adoption of on-site generation?

A By increasing the proportion of a customer's bill that is fixed and that cannot be offset by on-site generation or other distributed resources, the Company's

[11] *See* Company response to data request STF-PIA-7-18 and Company response to data request STF-PIA-7-23, available at https://psc.ga.gov/search/facts-document/?documentId=178360, Document filing #178360.

proposed rate design would reduce the incentive for future customers to invest in distributed resources.

Q Why do you suggest that low-income customers would be hit hard by the increased basic service charge?

A The Company's proposed basic service charge would tend to increase bills for low-usage customers the most. This is of particular concern, since low-income customers tend to use less energy on average. This means that higher basic service charges will raise electricity bills most for those who can least afford it.

Q Why do you assert that low-income customers tend to use less energy than standard residential customers?

A Data provided by the Company suggests that low-income customers use less energy than average. According to data provided by the Company, in 2013, customers with incomes above $20,000 used approximately 13,000 kWh per year, while households with annual incomes under $20,000 used an average of 11,477 kWh per year—approximately 12 percent less energy.[12]

Q What percentage of customers with incomes less than $20,000 used less than the residential class average?

A According to the data provided by the Company, 64 percent of customers with incomes of less than $20,000 used less than the residential class average.[13] This indicates that nearly two-thirds of customers with incomes of less than $20,000 would be worse off under the Company's proposed increase to the basic service charge.

[12] Calculated based on Company response to data request STF-PIA-5-25, Attachment STF-PIA-5-25b, https://psc.ga.gov/search/facts-document/?documentId=178051, Document Filing #178051.
[13] Calculated based on Company response to data request STF-PIA-5-25, Attachment STF-PIA-5-25b, which indicates that the average usage for all residential customers was 12,789 kWh per year in 2013.

Q Did the Company provide any additional data on customer usage?

A Yes. According to Company data, households under the federal poverty level consumed an average of 12,163 kWh per year for the period of July 2017–June 2018.[14] This too is less than the average residential customer for the same period.[15]

Q Did the Company also provide data on customers receiving federal LIHEAP heating assistance?

A Yes. The data provided by the Company in Attachment STF-PIA-5-25a indicate that customers receiving LIHEAP or other assistance consume more energy on average. However, only a fraction of low-income customers are also LIHEAP customers,[16] as the application process requires applying in person at a Community Action Agency and providing multiple forms of identification, proof of income, and utility bills. It is likely that customers with higher than average energy usage would be those most likely to seek out assistance. Many low-income customers receive no assistance at all. Therefore, we find the Company's analysis of customers at various income levels a better representation of low-income customer usage.

Q What equity implications does your analysis imply?

A Our analysis shows that rate design has important equity implications, and the proposed residential basic service charge increase would have regressive impacts by increasing bills the most for customers who can least afford it. Although low-income customers generally use less energy than standard residential customers, these customers face high energy burdens (the proportion of income that goes to

[14] *See* Company response to data request STF-PIA-5-25, Attachment STF-PIA-5-25a, available at https://psc.ga.gov/search/facts-document/?documentId=178051.

[15] Calculated based on data provided in STF-GDS-1-1, Attachment STF-GDS-1-1, available at https://psc.ga.gov/search/facts-document/?documentId=177983, Document Filing #177983.

[16] According to the Georgia Division of Family and Children Services, less than 150,000 households in Georgia received LIHEAP assistance in FY 2018, and only a portion of these customers would reside in Georgia Power's territory. In contrast, in Attachment STF-PIA-5-25b, Georgia Power lists more than 250,000 customers with income below $20,000. *See:* https://dfcs.georgia.gov/low-income-home-energy-assistance-program-liheap.

paying energy bills). To illustrate, a 2016 study by the American Council for an Energy Efficient Economy found that low-income customers in Atlanta have the third-highest median energy burden out of 48 cities. [17] The study indicates that the median low-income customer in Atlanta spends 10 percent of household income on energy, which is more than double that of other Atlanta households.[18] As such, these are the households that are least able to absorb additional increases in monthly costs.

Q How much of a bill increase can a low-usage, low-income customer expect?

A To assess the specific impact of the Company's proposal on low-income customers with low usage levels, we used the data provided by the Company on energy consumption for households with incomes under $20,000 per year and the Company's own customer stratification approach.[19] We used these to estimate the average monthly consumption of a low-use customer from this low-income cohort. While the low-use customer from the general population uses an average of 673 kWh per month, according to Company data, the equivalent low-use customer from the population of households with incomes under $20,000 uses only about 325 kWh per month. This means that a low-use customer from the lowest income cohort uses less than half as much energy as the low-use customer from the general population.

For this low-income, low-use customer, the proposed rate would raise monthly bills by approximately 15 percent—more than twice the expected increase for a typical residential customer. The Company's proposal will exacerbate the financial strain that low-income customers already face.

[17] Drehobl, A. and L. Ross, "Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities" (American Council for an Energy Efficient Economy, April 2016), 5, available at: https://aceee.org/sites/default/files/publications/researchreports/u1602.pdf.

[18] *Id.*, at 46.

[19] *See* Company response to data request STF-PIA-5-19, where the company explains that it determines the average monthly energy use of a low-use customer by taking an average of the consumption of all customers in the bottom of three strata, which we assume are equally divided. Available at https://psc.ga.gov/search/facts-document/?documentId=178051, Document Filing #178051.

8. INCONSISTENCY WITH THE PRINCIPLE OF EFFICIENT USE

Q How does Bonbright define the principle of efficiency?

A Bonbright defines the principle of efficiency as "discouraging wasteful use of service while promoting all justified types and amounts of use."[20] In other words, rates should be designed to send price signals that discourage wasteful use of energy and encourage customers to pursue cost-effective means of reducing their energy consumption.

Q Please explain the price signal that a basic service charge sends to customers.

A A basic service charge sends the signal to customers that they have no control over a portion of their bill, since they will have to pay the fixed portion regardless of how much electricity they consume. As the fixed charge increases, the overall size of a customer's bill is increasingly divorced from how much electricity they actually use, thereby diluting price signals associated with energy use.

Q What impact would the Company's rate design proposal have on customer incentives to use electricity more efficiently or install distributed generation?

A A higher basic service charge relative to the volumetric charge reduces customers' incentive to use electricity more efficiently because more of the costs are recovered through the fixed component of the rate. Since only the variable component is avoidable, increasing the basic service charge makes customer efforts to reduce their electricity bill by lowering their energy consumption less effective. As a consequence, the price signal sent by higher basic service charges is likely to discourage many customers from implementing efficiency measures or installing distributed generation—resulting in greater future energy consumption.

[20] *See* James Bonbright, *Principles of Public Utility Rates*, 291 (1961) (provided in Exhibit MW-BH-3).

Q Is an increased basic service charge necessary to avoid cost-shifting?

A No. The Company suggests that customers who consume less than average amounts of energy, such as customers with energy efficiency and distributed solar, are shifting customer-related costs onto others. However, the Company has not demonstrated that this is occurring. To properly analyze cost-shifting, the Company would need to calculate the benefits provided to the system by these technologies (such as the value of reducing usage on peak summer days) compared to the costs imposed on the system. The Company has not provided such an analysis.

Q If cost-shifting due to distributed generation were occurring, would the impacts be large?

A No. Only a tiny fraction of Georgia's residential customers—approximately one-tenth of one percent—have solar. This means that any cost-shifting from solar customers, if it exists, would be *de minimis.*[21]

Q How might high basic service charges impact overall system costs?

A Rate designs that feature high basic service charges tend to lead to higher costs on the system, since the associated lower volumetric charges induce customers to consume more energy. Higher energy use will ultimately lead utilities to procure more energy and generation capacity as well as expand investments in the capacity of power lines and substations. The end result is higher electricity costs for all customers. Somewhat paradoxically, lowering volumetric rates too far can actually have the effect of driving up future costs for all ratepayers.

Q Will increasing the basic service charge impact the efficacy of the Company's energy efficiency programs?

A Yes, increasing the basic service charge more than the energy charge works at cross-purposes to the Company's energy efficiency programs. In 2018, the

[21] *See* Company response to data request STF-PIA-7-18, available at https://psc.ga.gov/search/facts-document/?documentId=178360, Document Filing #178360.

Company spent nearly $34 million on energy efficiency programs for residential customers.[22] Disproportionately increasing the basic service charge over the energy charge reduces the cost-effectiveness of energy efficiency investments relative to an alternative rate design with a greater volumetric rate increase. If customers participate less in efficiency programs as a result, the Company may have to step up its spending on energy efficiency investments to achieve the same results, ultimately leading to an increase in rates.

Q Has the State of Georgia prioritized energy efficiency?

A Yes. The state code requires that utilities whose rates are regulated by the Commission, including the Company, "identify and describe existing and planned programs to discourage inefficient and excessive power use" through the integrated resource planning process.[23] Further, utilities are required to account for the full range of "economic, environmental, and other benefits" that would result from the use of energy efficiency.[24]

Q Have other Commissions recognized the detrimental impact of higher fixed customer charges?

A Yes, the negative effects of increasing basic service charges are well-recognized. One example comes from a 2016 rate case in Maryland. While the Potomac Electric Power Company requested to increase its basic service charge for residential customers from $7.39 per month to $12.00 per month, the Maryland Public Service Commission approved a much smaller increase to only $7.60 per month and explained that the proposed change would result in customers having less control over their bills and would be antithetical to energy conservation efforts.

[22] *Demand Side Management 2018 Demand and Side Management (DSM) True-Up Filing*, Docket No. 41062, Document Filing No. 176120, (Georgia Public Service Commission, March 15, 2019), available at https://psc.ga.gov/search/facts-document/?documentId=176120.

> In arriving at this increase, we place emphasis on Maryland's public policy goals that intend to encourage energy conservation. Maintaining relatively low customer charges provides customers with greater control over their electric bills by increasing the value of volumetric charges. No matter how diligently customers might attempt to conserve energy or respond to AMI-enabled peak pricing incentives, they cannot reduce fixed customer charges.[25]

In 2013, the Maryland Public Service Commission rejected in total a $0.86 increase in the basic service charge, noting that doing so would reduce customer control of their bills and would be inconsistent with the state's policy goals.

> Even though this issue was virtually uncontested by the parties, we find we must reject Staff's proposal to increase the fixed customer charge from $7.50 to $8.36. Based on the reasoning that ratepayers should be offered the opportunity to control their monthly bills to some degree by controlling their energy usage, we instead adopt the Company's proposal to achieve the entire revenue requirement increase through volumetric and demand charges. This approach also is consistent with and supports our EmPOWER Maryland goals.[26]

In 2012, the Missouri Public Service Commission rejected a proposed increase in the basic service charge for residential and small general service classes, writing:

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[25] *In The Matter of the Application of Potomac Electric Power Company for Adjustment to its Retail Rates for the Distribution of Electric Energy*, Case No. 9418, Order No. 87884, 110 (Maryland Public Service Commission, November 15, 2016), available at https://www.psc.state.md.us/search-results/?q=9418&x.x=0&x.y=0&search=all&search=case.

[26] *In The Matter of the Application of Baltimore Gas and Electric Company for Adjustment in its Electric and Gas Base Rates*, Case No. 9299, Order No. 85374, 99 (Maryland Public Service Commission February 22, 2013), available at https://www.psc.state.md.us/search-results/?q=9299&x.x=22&x.y=10&search=all&search=case.

> Shifting customer costs from variable volumetric rates, which a customer can reduce through energy efficiency efforts, to fixed customer charges, that cannot be reduced through energy efficiency efforts, will tend to reduce a customer's incentive to save electricity. Admittedly, the effect on payback periods associated with energy efficiency efforts would be small, but increasing customer charges at this time would send exactly [the] wrong message to customers that both the company and the Commission are encouraging to increase efforts to conserve electricity.[27]

Q How does the Company's proposed residential basic service charge compare with peer utilities' fixed charges?

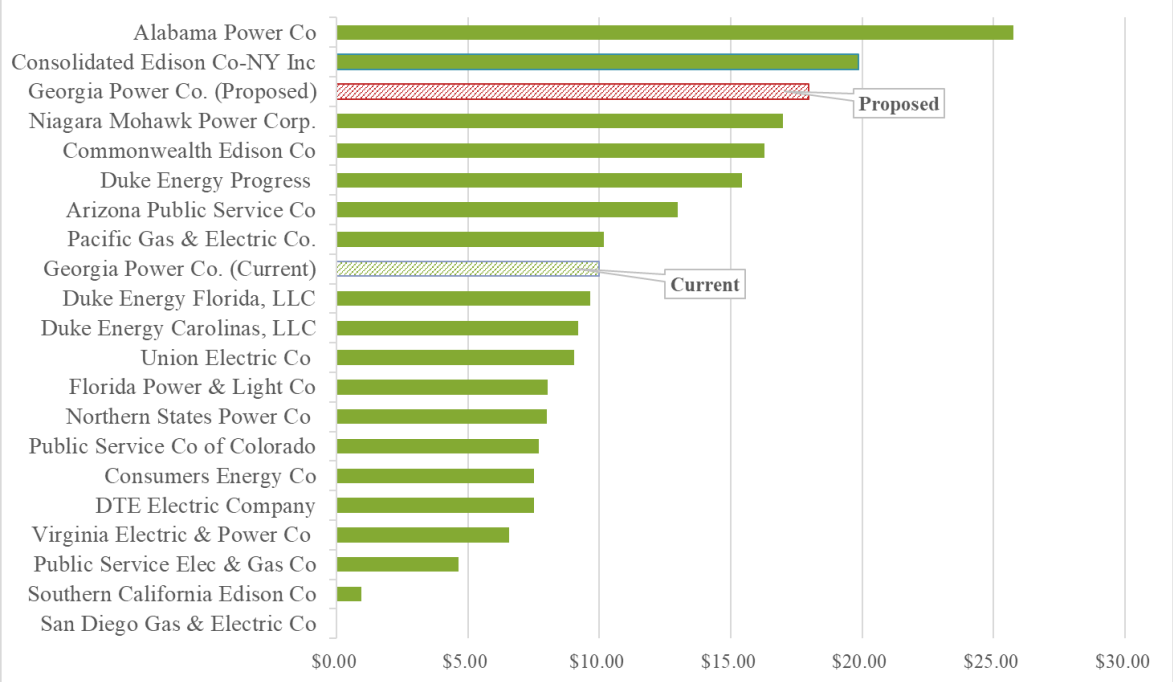
While the Company furnishes a table comparing its current residential basic service charge with those levied by Georgia cooperatives,[28] this comparison does not provide accurate context, as the cooperatives are not regulated in the same way as the Company. To contextualize the Company's proposed increase, we reviewed the current residential fixed charges at the 20 largest investor-owned utilities (IOUs) by total residential customers, which are presented on the following page in

A Figure 1. Residential Fixed Charges at 20 Largest IOUs. While the Company currently ranks eighth in this list, its proposed basic service charge would propel it to the third highest position.

[27] *In the Matter of Union Electric Company Tariff to Increase Its Annual Revenues for Electric Service*, File No. ER-2012-0166, Report and Order, 110-11 (Missouri Public Service Commission December 12, 2012)), available at https://www.efis.psc.mo.gov/mpsc/DocketSheet.html.

[28] *See* Direct Testimony of Larry T. Legg, Exhibit LTL-3.

Figure 1. Residential Fixed Charges at 20 Largest IOUs[29]



9. CONCERNS WITH COST OF SERVICE STUDY METHODOLOGY

Q What is the purpose of the basic service charge?

A The basic service charge is designed to recover customer-related costs.

Q How has the Company determined how much to increase its residential basic service charge?

A The Company determined its proposed basic service charge increase through its cost-of-service study (COSS) using the Minimum Distribution System approach. The Minimum Distribution System approach employs regression analysis to estimate the portion of total investment in select categories of distribution system infrastructure that would be incurred even if there were no load—just to maintain a distribution system capable of serving of customers. The Company reports that its

[29] Data was sourced from Openei.org and utility tariff sheets. Where individual utilities offer multiple residential rates with differing monthly fixed charges, the reported values are for the traditional rate.

Minimum Distribution System analysis produced a basic service charge for the residential class of $20.87 per month.[30]

Q Do you have any concerns regarding the Company's calculation of the basic service charge?

A Yes. The Company's calculated basic service charge is inflated for two separate reasons:

- First, it appears that the Company has changed the way in which it classifies certain types of costs since its previous rate case, resulting in a much larger proportion of costs being classified as customer-related.
- Second, the Company uses the Minimum Distribution System method, which overstates the costs that are truly customer-related.

Q In what way has the Company changed its methodology since its prior rate case?

A Under the Company's Minimum Distribution System methodology, certain distribution system accounts are classified as a combination of customer-related and demand-related. The portion classified as customer-related is theoretically based on the minimum size that would be required to serve a customer, while the remainder is classified as demand-related.

We examined the proportion of gross plant costs in Accounts 364 through 368 labeled as customer-related versus demand-related in 2013[31] and compared those proportions to the same categories of costs in 2019. We found that in all accounts except one, the proportion of costs classified as customer-related increased over 2013, in some cases dramatically.

[30] *See* Company response to data request STF-DEA-2-14, Attachment STF-DEA-2-14, available at https://psc.ga.gov/search/facts-document/?documentId=178314, Document Filing #178314.

[31] Direct Testimony of Michael T. O'Sheasy on Behalf of Georgia Power Company, Docket No. 36989, Georgia Power Company Cost of Service Study for Historic Year Ended December 31, 2012, Exhibit ____(MTO-3) and Exhibit ____(MTO-4).

Q To what extent have the costs classified as customer-related increased since 2013?

A In 2013, the Company classified a maximum of 44 percent of the gross costs in Accounts 364 through 368 as customer-related, while in 2019, the Company classified up to 99 percent of these costs as customer-related. Only one category—Account 364 Poles—showed a decrease in customer-related costs, which is shown in Table 2.

Table 2. Comparison of Customer-Related Gross Plant Costs in 2013 to 2019[32]

Account	Description	Voltage Level	2013 Customer-Related Costs	2019 Customer-Related Costs	% Change
364	Poles	F	75%	62%	-12%
		G	72%	60%	-5%
365	Overhead Conductors	F	44%	73%	59%
		G	42%	56%	44%
366	Underground Conduit	F	13%	13%	20%
		G	6%	38%	89%
367	Underground Conductors	F	13%	13%	17%
		G	12%	12%	21%
368	Line Transformers	F	20%	26%	35%
		G	34%	99%	65%
Total Dollars			**$1.14 billion**	**$1.97 billion**	**$827 million**
% Increase					**73%**

Q What is the dollar impact of classifying a larger proportion of Accounts 364–368 as customer-related rather than demand-related?

A The gross plant costs in categories 365 to 368 classified as customer-related have increased from $1.14 billion to more than $1.97 billion, an increase of 73 percent since 2013.

[32] Direct Testimony of Michael T. O'Sheasy on Behalf of Georgia Power Company, Docket No. 36989, Georgia Power Company Cost of Service Study for Historic Year Ended December 31, 2012, Exhibit ____(MTO-3) and Exhibit ____(MTO-4) and Direct Testimony of Lawrence J. Vogt on Behalf of Georgia Power Company, Docket No. 42516, Georgia Power Company Cost of Service Study for Historic Year Ended December 31, 2018, Exhibit ____(LJV-3) and Exhibit ____(LJV-4).

Q What is the rationale for this change in cost classification?

A The Company does not provide an explanation for this change in its direct testimony or response to data requests.

Q What concerns do you have with the Minimum Distribution System methodology?

A The Minimum Distribution System methodology classifies portions of the secondary distribution system as customer-related, when in fact these costs are directly related to the usage of electricity. Specifically, it classifies poles, conductors, conduit, and line transformers (Accounts 364-368) as customer-related. However, this makes little sense, as this equipment is constructed specifically to carry and transform electricity. If no electricity were used, then the secondary distribution system would not exist.

Q The Company notes that the Minimum Distribution System methodology is described in the NARUC Electric Cost Allocation Manual. Does this mean that the methodology is sound?

A While the Minimum Distribution System methodology is described in the 1992 manual, an updated report published by NARUC in 2000 notes that the Minimum Distribution System approach relies on shaky assumptions. Specifically, the report states:

> In the case of the minimum-size and zero-intercept methods, the threshold assumption is that there is some portion of the system whose costs are unrelated to demand (or to energy for that matter). From one perspective, this notion has a certain intuitive appeal – these are the lowest costs that must be incurred before any or some minimal amount of power can be delivered – but from another viewpoint it seems absurd, since in the absence of any demand no such system would be built at all.[33]

[33] Frederick Weston, Charging for Distribution Utility Services: Issues in Rate Design (2000), at 30. Available at https://pubs.naruc.org/pub.cfm?id=536F0210-2354-D714-51CF-037E9E00A724.

Q What method do you recommend instead of the Minimum Distribution System method?

A We recommend the Basic Customer Method. This method is used by the majority of states[34] and is intuitive, as it includes only costs that are directly customer-related. Specifically, the basic customer method classifies only costs associated with meters, meter reading, and billing as customer-related.[35] It is also worth noting that some states go so far as to explicitly prohibit the use of methods that classify distribution costs as customer-related.[36]

Q Can you provide any examples where Commissions have explicitly adopted the Basic Customer Method for rate design?

Yes. We provide two examples below:

1) 1985, the Pennsylvania Public Utility Commission adopted the standard that defined "basic customer cost' as including meters, service drops, meter reading, and billing. At the same time, the Commission specifically excluded "assertedly 'customer-related' costs of transformation and distribution plant" which were "better recovered through energy charges to avoid subsidies from low usage customers to high usage customers."[37] The Commission also later affirmed that the basic customer method should exclude indirect customer and administrative costs.[38]

2) In a 2015 rate case, the Washington Utilities and Transportation Commission rejected proposals to increase the customer charge, stating:

[34] *Id. at 29.*
[35] *Id. at 30.*
[36] *Id.,* at 29. (citing the "basic customer" method as the method in use in more than 30 states), https://www.raponline.org/wp-content/uploads/2016/05/rap-westonchargingfordistributionutilityservices-2000-12.pdf
[37] *Pa. PUC* v. *West Penn Power Company,* 59 Pa. PUC 552 (1985) ("1985 *West Penn Power"),* Slip Opinion at 42.
[38] *Bureau of Investigation and Enforcement's (I&E) Exceptions,* Docket No. R-2012-2290597, p. 8, (Pennsylvania Public Utility Commission, November 8, 2012), available at http://www.puc.state.pa.us/about_puc/consolidated_case_view.aspx?Docket=R-2012-2290597.

> The Commission is not prepared to move away from the long-accepted principle that basic charges should reflect only "direct customer costs" such as meter reading and billing. Including distribution costs in the basic charge and increasing it 81 percent, as the Company proposes in this case, does not promote, and may be antithetical to, the realization of conservation goals.[39]

Similarly, the Texas Public Utilities Commission has stated that "the customer charge shall be comprised of costs that vary by customer such as metering, billing and customer service."[40]

In some states, the Basic Customer Method has been mandated by legislation. In 2015, in response to substantial increases in the customer charge, the Connecticut legislature passed a law limiting the residential customer charge to "the fixed costs and operation and maintenance expenses directly related to metering, billing, service connections and the provision of customer service."[41]

Q Is the magnitude of the Company's proposed increase to the basic service charge in this case in line with its previous rate cases?

A No. In the prior rate case, the Company proposed to increase its residential basic service charge by just $1.00 to $10.00 per month to improve alignment with its calculated customer-related costs.[42]

[39] *Final Order Rejecting Tariff Sheets, Resolving Contested Issues, Authorizing And Requiring Compliance Filings*, Docket UE-140762, p. 91, (Washington Utilities and Transportation Commission, March 25, 2015), available at https://www.utc.wa.gov/docs/Pages/DocketLookup.aspx.

[40] *Generic Issues Associated with Applications for Approval of Unbundled Cost of Service Rate Pursuant to PURA § 39.201 and Public Utility Commission Substantive Rule § 25.344*, Docket No. 22344, Order No. 40, p. 6, (Texas Public Utilities Commission, November 22, 2000).

[41] CGS § 16-243bb, June Sp. Sess. P.A. 15-5, S. 105.

[42] Georgia Power Company's 2013 Rate Case, Docket No. 36989. Note that the Company rounded off proposed changes to the basic service charge for each tariff based on the results of its cost-of-service study. For example, if the COSS results suggested that the basic service charge should be higher than that achieved by the constant factor approach, then the Company rounded up.

Q Were any concerns raised about the Company's basic service charge proposal in 2013?

A Yes, several intervenors, including Public Interest Advocacy Staff and Georgia Watch raised concerns about this $1.00 per month increase.

Q What concerns did Staff raise?

A First, Staff expressed concern about the size of the proposed increase, noting that if approved, the $1.00 increase proposed in 2013 and $1.50 increase granted in the previous rate case would have meant an overall rise in the basic service charge for residential customers of 33 percent. Second, Staff noted that "[c]ustomer costs should only reflect those costs that are required to connect a new customer and maintain that customer's account."[43]

Q What did Staff recommend in that case?

A Staff recommended using a "Direct Customer Cost" analysis, rather than the Minimum Distribution System method. Based on the description provided, this approach appears to be analogous to the Basic Customer Method discussed above. Using this approach, Staff found that $9.50 per month would be a more appropriate basic service charge for the residential class.[44]

Q Are the concerns raised in the 2013 rate case relevant today?

A Yes, these concerns are just as relevant today, but with more serious customer impacts. Unlike the $1.00 increase proposed in 2013, the Company is now proposing to increase the basic service charge by an additional $7.95. This would result in a total increase in the basic customer charge of more than $10.00 since 2010.

[43] Georgia Power Company's 2013 Rate Case, Docket No. 36989, Joint Direct Testimony and Exhibits of Glenn A. Watkins and Jamie C. Barber on behalf of the Georgia Public Service Commission Public Interest Advocacy Staff, October 18, 2013, at 44, available at https://psc.ga.gov/search/facts-document/?documentId=150292.

[44] Staff also suggested that the Company could implement differentiated basic service charges for traditional and time-of-use residential rates. *See id*.

10. SUMMARY AND RECOMMENDATIONS

Q Please summarize your position on the Company's proposed rate design.

A The Company's proposed rate design would fundamentally alter the relationship between customer charges and volumetric rates by drastically increasing the fixed portion of customers' bills relative to the portion that customers can control through their usage. In doing so, the Company's rate design proposal would:

a. Reduce customers' control over their bills;

b. Dampen incentives for energy efficiency and conservation, and potentially lead to increased consumption and higher costs over time;

c. Increase low-usage customers' bills the most, resulting in rate shock for these customers; and

d. Disproportionately impact low-income customers.

Q What alternatives exist for the Company to recover its revenue requirements?

A Rather than increasing the basic service charge as proposed, the Company could either relegate all increases to the volumetric rates, or else equally increase both volumetric and fixed components. The latter is essentially what the Company proposed to do in 2013.

Q Which of these alternatives do you recommend?

A We recommend that the fixed charge be maintained at its current level of $10.00, as this would provide customers with the most control over their bills; encourage customers to invest in efficient technologies, thereby reducing long-run costs on the system; and would promote the principles of fairness and equity.

Q Do you recommend any other rate design changes?

A Yes, we recommend that the Company encourage greater adoption of time-of-use rates among existing customers in order to improve the efficiency of price signals.

Q Does this conclude your direct testimony?

A It does.

M. Whited 10/16/2019

Melissa Whited, October 16, 2019

10/16/2019

Ben Havumaki, October 16, 2019