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Prepaid Electric Utility Service

ASSESSMENT OF RISKS AND
BENEFITS TO LOW-INCOME
CONSUMERS IN THE DISTRICT
OF COLUMBIA

**John Howat, Olivia Wein, and Karen
Lusson**

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ABOUT THE NATIONAL CONSUMER LAW CENTER

Since 1969, the nonprofit National Consumer Law Center® (NCLC®) has used its expertise in consumer law and energy policy to work for consumer justice and economic security for low-income and other disadvantaged people, in the United States. NCLC's expertise includes policy analysis and advocacy; consumer law and energy publications; litigation; expert witness services; and training and advice for advocates. NCLC works with nonprofit and legal services organizations, private attorneys, policymakers, and federal and state governments and courts across the nation to stop exploitive practices, help financially stressed families build and retain wealth, and advance economic fairness.

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DISCLAIMER

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I. EXECUTIVE SUMMARY

Traditionally in the United States, electric and natural gas utility service has been billed on a post-paid basis where a utility company tracks a customer's usage during the previous monthly or quarterly period and then mails a bill to the customer based on that usage. The customer is then required to make payment within a predetermined time frame, usually set forth in statute or regulation, or face disconnection procedures.

Prepaid service requires customers to pay in advance for their service, with prepaid account balances decreasing as service is delivered. Under the prevailing prepaid model, service is automatically shut off when account balances are depleted. Rather than providing billing and notifications by mail or through direct contact, utilities offering prepaid service typically contract with a software vendor to enable electronic communication of disconnection, consumption, expenditure and account balance information to customers via mobile broadband devices. There is no obligation on the part of the utility to deliver shutoff notification through the mail, to continue providing service for some period of time (e.g., days or weeks) after credits are exhausted, or to work with payment-challenged customers by offering reasonable payment plans or other means of retaining access to basic utility service.

Prepaid electric and gas utility service is highly controversial. Proponents suggest that it brings **unique customer benefits**, including the following:

- Receipt of a steady stream of information regarding usage and expenditures,
- Reduced usage and bills through an energy efficiency or conservation effect,
- Elimination of security deposits and late payment fees,
- Increased control over the account through the ability to make frequent, small payments.

In addition, some prepaid service proponents, particularly utilities and third-party service vendors, have identified **utility and shareholder advantages**, including the following:

- Elimination of traditional billing and notification requirements,
- Reduction or elimination of customer arrearages,
- Reduction or elimination of uncollectible account write-offs, and
- Reduction of short-term capital requirements and customer service expense.

However, many consumer advocates have argued that the service as it is usually delivered is brings considerable risk, particularly to low-income utility customers. These risks include:

- Concentration among lower-income customers facing disconnection for nonpayment, an unaffordable security deposit, or other challenges in staying current on utility bills;
- Elevated rates of service disconnection or interruption;
- Rates and transaction fees that result in increased cost to the customer;
- Forfeiture of regulatory consumer protections regarding billing, payment, disconnection of service, and payment plans; and
- Reduced access to less punitive affordability programs such as arrearage management or percentage of income payment plans.

Prepaid service proponents and energy conservation advocates point to observed usage reduction as an advantage of the service. As described in this report, credible research on this topic confirms that prepaying customers use less electricity than they otherwise would, particularly when the program design includes disconnection of service upon depletion of the credit balance. However, more research is required to draw firm conclusions regarding the causes of usage reduction stemming from prepaid service.

One analysis concludes that prepaying consumers could reduce electricity usage by 8.5% if the program includes disconnection, or 2% if the program design entails reverting participants to postpaid service if the credit balance is depleted. The primary factors that researchers find contributing to usage reduction under prepaid service are the threat of “fast shutoff” and the delivery of feedback regarding usage and expenditures.

Analysis of residential electricity customers and usage in the District of Columbia demonstrates that if the ability to prepay and real time information regarding usage and expenditures were made available to *all* residential customers, systemwide usage reduction similar to a traditional prepaid service offering could be achieved through a participation rate of between 20% and 25% and the negative side effects of unwelcome service disconnection would be avoided.

The introduction of traditional prepaid electricity or natural gas service in the District of Columbia would require exemption or amendment to key provisions of the District of Columbia Municipal Regulations governing utility credit, collection, and service delivery. Exemption or amendments to provisions regarding the following would be required:

- Bill payment
- Billing Information
- Levelized and Estimated Billing
- Bill Payment Due Date
- Deferred Payment Plans

- Security Deposits
- Disconnection Protections
- Serious Illness Protection
- Disputed Billing
- Disconnection Notices
- Prior Contact Prior to Service Disconnection for Nonpayment

Based on the findings reflected in this report, the authors conclude that the risks associated with traditional prepaid service program design outweigh the customer benefits, particularly for lower-income utility customers. We further conclude that prepaid service, as it is typically proposed, fails to enhance affordability that enhances low-income home energy security and uninterrupted access to essential utility service. The District has adopted a strong regulatory consumer protection framework and developed a comprehensive portfolio of programs to enhance affordability. We therefore recommend opposition to traditional prepaid service in the District of Columbia, but nonetheless recommend consideration of support for programs and policies as follows:

- Provide steady stream information regarding usage and expenditures available to all customers opting to receive it
- Provide all customers with the tools to prepay and make small, frequent payment without added transaction fees
- Limit or prohibit security deposit requirements for low-income customers
- Expand bill payment assistance and arrearage management program benefits to low-income customers.

While we recommend rejection of the traditional prepaid service model, we recommend support for non-punitive design components along with expansion of the existing affordability program portfolio and consumer protection structure.

II. INTRODUCTION

Electric utilities in numerous states have sought to offer "prepaid service" for some customers as an alternative to traditional "credit-based service." Prepaid service is delivered through advanced, digital metering infrastructure with remote disconnection and reconnection capabilities, advanced communication features, and capability to measure and record usage in short time increments.

Traditionally in the U.S., electric and natural gas service has been billed on a post-paid basis where a utility company tracks a customer's usage during the previous monthly or quarterly period and then mails a bill to the customer based on that usage. The customer is then required to make payment within a predetermined time frame, usually set forth in statute or regulation, or face disconnection procedures. In most jurisdictions, a utility must provide notification of an impending disconnection by mail or through direct contact, and offer a customer facing disconnection a payment plan to pay down an arrearage over a period of months while retaining access to service.

Prepaid service requires customers to pay in advance for their service, with prepaid account balances decreasing as service is delivered. Under the prevailing prepaid model, service is automatically shut off when account balances are depleted. Rather than providing billing and notifications by mail or through direct contact, utilities offering prepaid service typically contract with a software vendor to enable electronic communication of disconnection, consumption, expenditure and account balance information to customers via mobile broadband devices. There is no obligation on the part of the utility to deliver shutoff notification through the mail, to continue providing service for some period of time (e.g., days or weeks) after credits are exhausted, or to work with payment-challenged customers by offering reasonable payment plans or other means of retaining access to basic utility service.

The prepaid service landscape is changing in some fundamental ways. In the U.S., prepaid service programs have historically been implemented almost exclusively by cooperatively- or municipally-owned utilities. These entities are usually not subject to the customer service regulatory requirements that apply to investor-owned utilities. More recently, however, a number of large, investor-owned interstate utility conglomerates operating investor-owned distribution companies or integrated systems are looking to receive waivers from key consumer protection rules and implement prepaid service. While most recent investor-owned utility (IOU) proposals have sought to implement "traditional" prepaid service, complete with service disconnection upon depletion of the credit balance, a few have sought to alter the traditional structure, particularly with respect to disconnection of service and transaction fees charged to customers when making deposits to prepaid service accounts. A number of recent IOU proposals are described in this report.

Prepaid electric and gas utility service is highly controversial. Proponents suggest that it brings **unique customer benefits**, including the following:

- Receipt of a steady stream of information regarding usage and expenditures,
- Reduced usage and bills through an energy efficiency or conservation effect,
- Elimination of security deposits and late payment fees,
- Increased control over the account through the ability to make frequent, small payments.

In addition, some prepaid service proponents, particularly utilities and third-party service vendors, have identified **utility and shareholder advantages**, including the following:

- Elimination of traditional billing and notification requirements,
- Reduction or elimination of customer arrearages,
- Reduction or elimination of uncollectible account write-offs, and
- Reduction of short-term capital requirements and customer service expense.

However, many consumer advocates have argued that the service as it is usually delivered is brings considerable risk, particularly to low-income utility customers. These risks include:

- Concentration among lower-income customers facing disconnection for nonpayment, an unaffordable security deposit, or other challenges in staying current on utility bills;
- Elevated rates of service disconnection or interruption;
- Rates and transaction fees that result in increased cost to the customer;
- Forfeiture of regulatory consumer protections regarding billing, payment, disconnection of service, and payment plans; and
- Reduced access to less punitive affordability programs such as arrearage management or percentage of income payment plans.

These prospective benefits and risks will be illuminated below in the course of describing operative and proposed prepaid service programs, and separately in a summary section. In addition, a separate section will be devoted to addressing energy conservation and efficiency as it relates to prepaid utility service.

This report also provides research findings with respect to (1) experience with the technology, design, and delivery of prepaid utility service; (2) recent proposals of investor-owned utilities for approval of pilot or permanent prepaid service programs; and compatibility of a prospective prepaid service program with existing District of Columbia utility consumer protections and programs that enhance home energy security and utility affordability. The report also includes recommendations with respect to implementation of prepaid service generally and sets forth an alternative program design model. Finally, the report includes an

evaluation protocol for measuring the effectiveness and customer service outcomes of implementing a prospective prepaid service program in the District of Columbia.

III. TECHNOLOGY REVIEW

A. Evolution of prepayment metering technology

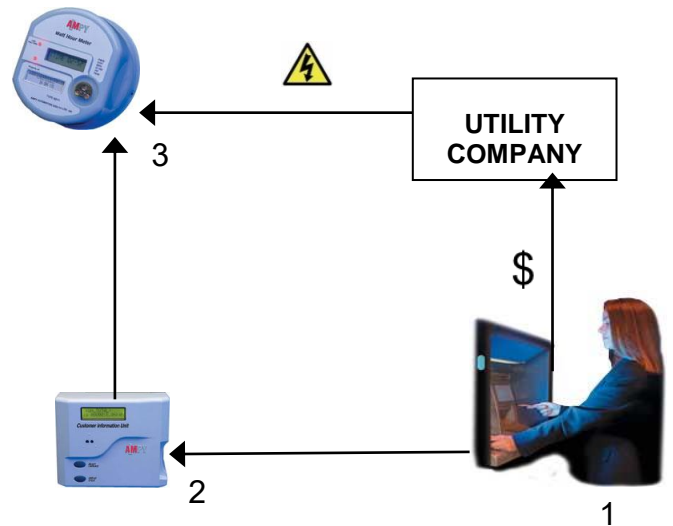
1. Early phase: coin/token operation

In the earliest prepaid utility program experience, customers engaged the meter by feeding coins or tokens. These systems were particularly prevalent in Great Britain.

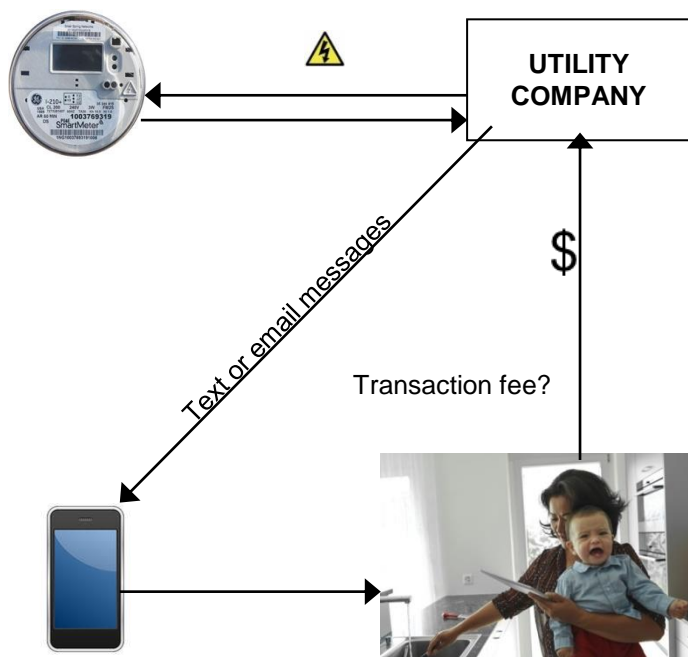


2. Intermediate phase: Smart cards, in-home devices, payment kiosks

The intermediate technology phase involved customers going to a public kiosk to insert cash and transfer deposit information to a “smart card.” The customer then returned home with the card and fed it into an in-home device linked to the meter. The meter then operated until preloaded credits were depleted. The in-home device, in addition to accepting credits from the smart card, served the purpose of sounding an audible alarm as prepaid credits were running low.



3. Current “state-of-the-art” technology



Current technology is more complex. The customer prepays the utility, usually through an electronic transfer. The utility credits the customer’s account and provides service until prepaid credits (and any grace period) are expired. Service is delivered through a smart meter with 2-way communication capacities. When credits are depleted, the remote disconnection feature of the meter is engaged and service is disconnected. If and when the customer makes additional payment, the utility re-credits the account and service is remotely restored. Utilities typically contract with a third-party software vendor who relays billing and expenditure to the customer via broadband service – usually through text or email messages. Clearly, the advent of advanced metering infrastructure technology has prompted an increasing number of utility companies to consider implementation of prepaid service.

IV. PROGRAM EXPERIENCE AND DESIGN FUNDAMENTALS

B. Common Features of Prepaid Electric Service in the U.S.

Prepaid service program design, pricing and participation are not uniform across program offerings in the U.S. However, while there is variation, research has shown commonalities among many of the programs delivered in the U.S. The characteristics and design features listed below are fleshed out more fully in the research findings cited throughout this report.

4. Payment timing and frequency

While post-paying customers generally make a single monthly payment, prepaid service customers tend to make multiple payments monthly. An average of over 7 payments per month has been observed in the Salt River Project M-Power program during peak summer months.

5. Billing, expenditure, and account balance notification

Rather than receiving a monthly bill by mail or electronically, prepaid service customers receive automated text or email messages when the account balance reaches a predetermined level. In most cases, additional messages are sent via text or email prior to service disconnection.

6. Concentrated among cooperatively- and municipally-owned utilities not subject to state regulatory oversight

According to [Prepaid Energy Hub](#), 170 cooperatively-owned utilities in the U.S. have implemented prepaid utility service programs -- most located in the Southeastern region of the country. In addition, at least 10 municipally-owned utilities in the U.S. offer prepaid service. As discussed in greater detail below, prepaid service usually involves utilities sidestepping key regulatory consumer protections that have been adopted at the state level in support of ensuring broad customer access to basic, necessary service. Whereas investor-owned utilities are required to obtain waivers from regulators to implement prepay, cooperatives and municipal utilities in most states are not subject to the jurisdictional authority of state utility regulators and thus have a clear path to implementing the service. In large measure, this dynamic explains the concentration of prepaid service among these less- or unregulated entities. Additionally, programs that more directly promote affordability and efficiency, such as bill payment assistance, arrearage management, and low-income energy efficiency programs, are less likely to be offered by the less-regulated, smaller utilities. Prepay is more likely to be accepted and embraced in the absence of these less-punitive alternatives.

7. Terms and Conditions

As described more fully below, prepaid utility service customers are typically required to agree to a range of terms and conditions that are unique to the service. For example, in many cases prepaid customers are required to certify that they have access to cell phone or internet service, and agree to have service disconnected if credit balances are depleted.

8. Participation

While research in this area is limited, what exists indicates that prepaid service is concentrated among lower-income utility customers. As highlighted below, there is also evidence that the service is concentrated among racial and ethnic minorities. Utilities offering prepay generally do not report publicly information about which of their customers use the service, raising important concerns. In light of the nature of the service, disconnection outcomes, and the requirement that participants forfeit basic consumer protections, it can be argued that prepay is a second-tier utility service concentrated among the poor and racial/ethnic groups already disadvantaged in U.S. society.

9. Rates and Fees

Unlike prepaid cellphone service, that is less expensive than comparable postpaid service, prepaid electric service has been shown to often be more expensive than postpaid electric service, particularly when transaction and reconnection fees (highlighted in greater detail below) are factored into the total customer cost calculation.

10. Disconnections

As is the case with other aspects of prepaid utility service, there is only limited information available regarding service disconnection rates among prepaying customers. All information that does exist indicates highly elevated disconnection rates for prepay. Further, there is even less information regarding the circumstances surrounding these disconnections, and the extent to which they are related to affordability challenges rather than more “voluntary” circumstances. As highlighted below, involuntary loss of service raises profound health and safety concerns.

11. Retirement of Arrears

Under the prevailing prepaid utility service model, participating customers with an arrearage balance are required to agree to have a proportion of each payment made to “top off” the account applied against the outstanding balance. Typically under these circumstances, 75% of top off payments are applied to crediting the account, and 25% against the arrearage balance.

12. Security Deposits

Under terms and conditions of most prepaid service programs, security deposits are not required from new applicants. For existing, postpaying customers who have paid a deposit and opt to switch to prepay, the deposit is usually applied to the prepaid account. Under circumstances where a customer is facing disconnection of service and opts to switch to prepay, a proportion of the held deposit is applied against the arrearage, and the rest toward crediting the prepaid account. This arrangement can serve to postpone or avoid disconnection in the short term, but is analogous in some ways to cash-strapped customers agreeing to impossibly unaffordable payment agreement terms with little or no likelihood of being successfully completed. In the case of prepay, the security deposit may be viewed as both the bait and the hook, luring the customer into a service that allows the lights to stay on for the time being, but also creating a cost barrier to returning to credit-based service and the consumer protection advantages of that service.

13. Late Payment Fees

While there generally are no late payment fees charged to prepaying utility customers, some utilities do charge reconnection fees. Research findings with respect to such fees are presented below.

14. Reporting Requirements

For most, if not all prepay programs operated by cooperatively- and municipally-owned utilities, there are no requirements to report information regarding participation, sales, the number and duration of service disconnections, or other data points needed to assess the health, safety, and equity implications of prepaid service. A recommended data reporting protocol is included below.

15. Marketing of Prepaid Service

Most utilities offering a prepaid service program market the program on their websites and through other outreach efforts. However, while there is a lack of empirical evidence and reliable survey data in this area, it is likely that utility customer service representative market prepay to customers facing disconnection for nonpayment or applicants facing an unaffordable security deposit.

V. POTENTIAL ENERGY CONSERVATION OR REDUCED USAGE BENEFITS FOR THE DISTRICT OF COLUMBIA

Prepaid service proponents and energy conservation advocates point to observed usage reduction as an advantage of the service. In fact, credible research on this topic confirms that prepaying customers use less electricity than they otherwise would, particularly when the program design includes disconnection of service upon depletion of the credit balance.ⁱ However, evaluators state that more research is required to draw firm conclusions regarding the causes of usage reduction stemming from prepaid service. One credible analysis concludes that prepaying consumers in Minnesota could reduce electricity usage by 8.5% if the program includes disconnection, or 2% if the program design entails reverting participants to postpaid service if the credit balance is depleted.ⁱⁱ The primary factors that researchers find contributing to usage reduction under prepaid service are the threat of “fast shutoff” and the delivery of feedback regarding usage and expenditures.ⁱⁱⁱ

Following is a prepaid service usage reduction estimate for the PEPCo Residential rate class for program designs with and without disconnection of accounts with a zero balance. The estimates are based on the usage reduction findings from Minnesota for both program designs. Further, we provide system-wide usage reduction estimates under a wide range of participation rate scenarios. The estimates were generated using customer count and usage data from provided by PEPCo to the District of Columbia Public Service Commission. Tables from the analysis are included on page 17.

PEPCo D.C. Residential Customers, Usage and Expenditures

Average Number of Customers *	Average Monthly Usage per Customer (kWh) **	Average Annual Usage per Customer (kWh)	Average Monthly Electricity Bill (\$) **	Average Annual Electricity Bill (\$)
264,300	690	8,280	79.32	951.84

Sources: District of Columbia PSC and OPC

* Most recent data available on DC PSC Website

(https://dcpsc.org/PSCDC/media/PDFFiles/Electric/Retail_Customers_2012-2016.pdf)

** 2018 data

PEPCo D.C. Electricity Savings Potential - Prepaid Service With and Without Disconnection

Participation Rate	# of Customers	2018 Average Annual Usage (kWh)	Prepaid Service Usage Reduction With Disconnection 8.5% ***		Prepaid Service Usage Reduction Without Disconnection 2% ***	
			Per Customer (kWh)	PEPCo DC Total (MWH)	Per Customer (kWh)	PEPCo DC Total (MWH)
1%	2,643	8,280	704	1,860	166	438
2%	5,286	8,280	704	3,720	166	875
3%	7,929	8,280	704	5,580	166	1,313
4%	10,572	8,280	704	7,441	166	1,751
5%	13,215	8,280	704	9,301	166	2,188
6%	15,858	8,280	704	11,161	166	2,626
7%	18,501	8,280	704	13,021	166	3,064
8%	21,144	8,280	704	14,881	166	3,501
9%	23,787	8,280	704	16,741	166	3,939
10%	26,430	8,280	704	18,601	166	4,377
15%	39,645	8,280	704	27,902	166	6,565
20%	52,860	8,280	704	37,203	166	8,754
25%	66,075	8,280	704	46,504	166	10,942
30%	79,290	8,280	704	55,804	166	13,130
35%	92,505	8,280	704	65,105	166	15,319
40%	105,720	8,280	704	74,406	166	17,507
45%	118,935	8,280	704	83,706	166	19,696
50%	132,150	8,280	704	93,007	166	21,884
55%	145,365	8,280	704	102,308	166	24,072
60%	158,580	8,280	704	111,609	166	26,261
65%	171,795	8,280	704	120,909	166	28,449
70%	185,010	8,280	704	130,210	166	30,638
75%	198,225	8,280	704	139,511	166	32,826
80%	211,440	8,280	704	148,811	166	35,014

*** Percentage savings estimates from Sussman, et al., "Potential for Prepay as an Energy Efficiency Program in Minnesota."

The table on page 17 illustrates that on average, prepayment customers with disconnection would reduce usage by an average of 704 kWh per year, based on an 8.5% reduction assumption. Systemwide, under a 5% participation rate, PEPCo residential customers would reduce usage by 9,301 megawatt hours. However, if the ability to prepay and real time information regarding usage and expenditures were made available to *all* residential customers, a similar systemwide reduction could be achieved through a participation rate of between 20% and 25% and the negative side effects of unwelcome service disconnection would be avoided.

It should be noted that recently-approved prepaid service pilot programs in Maryland and Illinois have not attracted participants at the rate anticipated by proposing utilities. In light of that experience, a fairly low participation rate in D.C. may reasonably be expected. However, if a purely voluntary option to receive was made available to all PEPCo residential customers, a higher participation rate, and comparable systemwide savings might be expected. Thus, based on percentage usage reduction estimates from the recent Minnesota report, the threat of disconnection would likely bring higher reductions per participating customer, but a well-designed informational program could generate comparable systemwide savings.

VI. UPDATE ON U.S. PROGRAMS

C. Exelon Utilities

Exelon distribution companies PECO Energy, Baltimore Gas and Electric Company (BGE), and ComEd have filed proposals to implement prepaid service programs before their respective regulatory commissions. The proposals differ significantly in scope and design, with the PECO and BGE proposals for pilots that would entail disconnection of participants' service soon after depletion of the prepaid account, but the ComEd proposal for a permanent (not a pilot) program that would entail reverting zero-balance participants to postpaid service rather than disconnecting them. As a result of these design differences, specific requests for waivers from regulatory consumer protections also varies. Outcomes in these cases has also varied, with a limited approval in Pennsylvania (currently pending motions for reconsideration), approval to implement a pilot program in Maryland, and the filing by ComEd of a motion to stay in Illinois. Descriptions of the proposals and status updates follow.

16. PECO Energy

i. Description of the Proposal

In October 2016 PECO Energy Company filed a Pilot Plan for an Advance Payments Program and Petition for Temporary Waiver of Portions of the Commission's Regulations before the Pennsylvania Public Utility Commission.^{iv} In that case, PECO proposed to implement a new residential prepaid electric and natural gas service pilot program open to 2,000 of the Company's residential customers.^v The proposal was for pilot program participants to be required to pay the Company in advance of receiving service, rather than

receiving a bill at the end of a billing period and making payment after service is delivered. If a customer were to run out of prepaid funds, they would enter a five-day grace period in which PECO will provide emergency credits. If the customer has not added funds by the end of the grace period, their electric service will be remotely disconnected.

The Company stated that customers or applicants living at or below 150% of the Federal Poverty Level (“FPL”) would not be eligible to participate in the Pilot. PECO planned to determine a prospective pilot participant’s household income level for eligibility purposes using the same procedures used to screen applicants for participation in a low-income Universal Service Program. PECO stated that if the Company becomes aware that a participant’s income has fallen below the 150% FPL level after enrolling in the program, the customer will be reverted back to traditional post-pay service.

Customers with a delinquency of up to \$1,500 would be eligible to participate in the Pilot. For Pilot program applicants or participants with a delinquency, the Company will devote 25% of each prepaid account payment toward the arrearage and 75% toward the participant’s future usage.^{vi} PECO is seeking a waiver to allow customers with a delinquency to return to traditional post-pay service before the delinquency is retired if they wish to do so. Only individually-metered residential dwellings will be eligible to participate.^{vii} Additionally, the Company states that pilot program participants will be required to have access to internet service or a smart phone with data service.

With respect to existing regulatory consumer protections, PECO stated that by volunteering to participate in the Pilot, volunteers will “agree that the cessation of service on Plan terms will be a *discontinuance*, not a termination – and that the protections offered under the Plan are thus the protections offered for discontinuance only.” PECO maintained that a customer losing service under the prepaid service pilot will do so on a voluntary or consensual basis. This would exclude customers participating in the prepaid program from the standard billing and disconnection notice requirements provided to post-paid customers. Under PECO’s argument, a variety of consumer protections contained in Chapter 14 of the Public Utility Code and Chapter 56 of the PA PUC’s regulations would not apply to customers enrolled in the pilot, including the moratorium on winter terminations for customers at or below 250% of FPL.

Rather than receiving an account disconnection notice by mail, the Company stated that notifications would be sent via text message or email if the prepaid account balance drops below approximately five days of usage. If the customer is unable to load the account after a five-day “grace period,” electric service would be automatically and remotely disconnected.^{viii}

Customers receiving both electric and natural gas service from PECO would be eligible to enroll in the program and prepay for both electric and natural gas service. However, PECO stated that if a customer falls behind in payments and is disconnected after the emergency credit period, only the electric service will be shut off. Natural gas service will not be disconnected under the Pilot program.^{ix}

The Company stated that numerous payment methods would be available to pilot program participants. The only available methods that would not require the customer to pay a transaction fee would be “Mobile/My Account or internet ACH (e-check),” delivery of cash or check to a district office, and sending a check or money order by mail. All other available payment methods would entail the customer incurring a transaction fee as indicated below:

- Mobile/My Account credit or debit payment: \$2.35
- Internet/My Account credit or debit payment: \$2.35
- IVR ACH (e-check): \$2.35
- IVR credit/debit: \$2.35
- Live customer service rep credit/debit: \$2.35
- Cash payment at an “authorized payment location:” \$1.35.^x

PECO estimated that the average program participant will load funds 3-4 times per month, with most participants adding funds between 1-7 times per month.^{xi} Thus, under the Company’s estimate, if a customer added funds four times per month using a credit or debit card online or on a mobile app, they will incur an additional \$9.40 in transaction fees each month. At the upper end of the range, a customer who loads funds seven times per month using the same methods incurs an extra \$16.45 just in transaction fees. This would add up to a significant additional cost for program participants.

Customers participating in the pilot would be required to have internet and/or cell phone data service to enroll in the program as this would be the primary, or possibly only, method of communication that PECO would use to contact customers and provide notices. PECO indicated that if it were to receive notice that electronic communications are returned as undeliverable, PECO would call the customer to obtain working contact information. If contact is unsuccessful, PECO stated that it will mail a letter to the customer that same day. If the customer had not reestablished a method of e-communication within 5 days of the letter being mailed, or by the end of the five-day emergency credit period, then customer would be reverted back to traditional post-pay service.^{xii} PECO indicated that its system will provide notice if either an email or a text message is undeliverable to a customer.^{xiii}

With respect to security deposits, PECO stated that existing customers with a deposit credit would be required to apply their security deposit to their prepaid service account.^{xiv} Similarly, new applicants would not be required to post a deposit before receiving service.^{xv} The Company further stated that a customer returning to traditional service, after applying their security deposit credit to their prepaid service account, would not be required to pay a new deposit as a condition for returning to standard service unless future non-payments warrant the imposition of a new deposit.^{xvi}

With respect to monthly charges, PECO would divide the monthly customer charge by the number of days in the billing period, in effect charging a daily customer charge.^{xvii}

PECO stated that a pilot participant could contact PECO at any time and request to be returned to traditional post-paid service.^{xviii} If the customer had a credit balance, the balance

would be applied to the following month's bill after returning to traditional service. If a customer had entered the five day grace period or had been disconnected and wished to return to traditional service, PECO would debit their account for the full outstanding prepaid debt and will be billed and receive termination notices under standard processes.^{xix}

With respect to a pilot participant with a medical emergency, PECO stated that if it found out a pilot participant developed a medical emergency, that customer would not be disconnected from service. Customers with active medical certificates would not be eligible to enroll in the program.^{xx} PECO stated that there are no additional safeguards as part of the pilot, so any customer that runs out of prepaid funds and does not contact PECO risks having service shut off within five days.^{xxi} If the customer had a medical emergency and did contact PECO, then they would be reverted to standard service.

PECO stated that it would develop educational materials to inform customers about how the program functions, and the customers' rights and responsibilities. However, those materials had not been developed at the time of the Company's filing, and intervening parties could not determine whether adequate disclosures were to be made.

ii. Status Update

The PECO petition in Docket Number: P-2016-2573023 was opposed by the Office of Consumer Advocate, Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA), and others. The core disagreement expressed by these Parties was over participants in the prepaid pilot program being able to maintain access to protections under Chapter 14 of the PA Code and Chapter 56 of the PA PUC's Regulations, including ten-day paper termination notices, winter moratorium on shut off, limited payment arrangements, and an increased difficulty in accessing medical certifications. In addition, Natural Resources Defense Council, a decades-long proponent of energy efficiency, submitted letter to the PA PUC in opposition to PECO's petition. In its letter, NRDC stated the following:

... We are concerned that PECO's pilot would, as designed, result in a two-tiered system of electricity service, with the current system becoming a first tier for those who can afford to post-pay, and the prepaid service becoming a second-class service for vulnerable households. PECO's proposed program would require customers to waive several key consumer protections for their households, including protection from termination in the wintertime, availability of payment agreements to restore service, and additional protections for survivors of domestic violence, including flexible payment agreement terms and additional notice of termination. Because of the waiver of these protections, we are concerned that PECO's pilot could result in the deprivation of an essential service for struggling households. Meanwhile, it does not appear, prepayment for electricity would deliver any actual benefit to such households, under PECO's proposal. We would rather that PECO focus its efforts on the continued development and promotion of proven energy efficiency programs that improve performance and help families save money.

It does not appear that, in its present form, PECO's pilot would electric service any more affordable for households struggling to make ends meet. We believe that PECO's customers would be better served if, rather than advancing prepaid service, PECO focused its energy on measures such as strengthening utility assistance programs, reining in increases in rates, and developing reliable energy efficiency programs.^{xxii}

In January 2018, the Administrative Law Judge in the case issued a Recommended Decision to deny PECO's Petition based on her determination that the disadvantages of PECO's pilot outweigh the benefits to the public, culminating in the conclusion that it is not in the public interest. The ALJ found that PECO did not carry its burden of proof regarding specific areas of the pilot program, which the ALJ found to be insufficient, including the procedures for electronic notification, for handling medical certificates and for protection against termination of service during winter months. The ALJ also found other areas insufficient, including a likely increase in disconnection rates and the omission of payment arrangement options. The ALJ also identified a failure in PECO's proposed pilot program to protect tenants dwelling with landlords and participants who may have protection from abuse orders. Finally, the ALJ found the possible inhibition of the competitive market.^{xxiii} However, after an extended period, the Commission on April 25 2019 overturned the Recommend Decision with an Order approving a modified pilot program. The primary modification would require that pilot participants with a zero balance be returned to traditional service rather than experience disconnection after the five-day grace period.^{xxiv} Motions to reconsider the Opinion and Order are currently pending.

17. Baltimore Gas and Electric Company

iii. Description of the Proposal

On April 21, 2017, BGE filed with the Maryland Public Service Commission its request for approval of a Pilot Plan designed to implement a prepaid service pilot program utilizing BGE's advanced metering system. In its filing, BGE requested approval to permit 1,000 residential electric or dual-service customers to voluntarily participate in a pilot program in which the customers prepay for electric service.^{xxv}

According to BGE's Plan, participants would pay the Company in advance of receiving service and receive expenditure and usage information electronically via email, text message or telephone.^{xxvi} Rather than notification by mail or premise visit, participants would receive low-balance and impending disconnection notification electronically.^{xxvii} Under most circumstances, the Company would disconnect electric service to customers whose account balance is depleted, and would require a payment sufficient to establish a minimum credit balance of \$15 to have service restored.^{xxviii} Further, BGE proposed that participation be limited to customers with arrearage balances of \$1,000 or less, and that 25% of payments from participants entering the pilot program with an outstanding arrearage balance will be applied against the outstanding balance and 75% toward billing credits.^{xxix} Participants would make payments toward billing credits and any arrearage balance reduction via the

same methods under standard billing, including cash, bank check, or credit card. Payments made utilizing third party vendors would be assessed a transaction fee of \$1.50, with the Company issuing a billing credit for the first two transactions per month.^{xxx} Pilot program participants would not be required to pay a security deposit, or a deposit held by the Company would be credited to the prepaid service account.^{xxxi}

BGE requested waivers from a number of key consumer protections as part of its Pilot Plan, including existing budget billing requirements that allow customers to make levelized payments with less seasonal fluctuation over a 12 month period.^{xxxi} BGE further requested waivers from termination limitations and prohibitions, including the following:

COMAR 20.31.01.07 requiring a utility to inform its customers of the availability of the availability of third-party notification

COMAR 20.31.02.01B prohibiting termination of service for a bill that is less than \$100 and delinquent for less than three months

COMAR 20.31.02.05 - .06 requiring notification of disconnection in-person or by mail at least 14 days prior to termination

COMAR 20.31.03.02 requiring two personal contacts prior to termination of elderly or handicapped customers

COMAR 20.31.03.03 prohibiting termination of service for nonpayment of bills from November 1 through March 31 unless the utility first certifies to the Commission by an affidavit filed at least 24 hours before the termination, that the termination does not constitute a threat to the life or health of the residential occupants

COMAR 20.31.05 requiring that Utility Service Protection Program customers have an equal monthly payment plan, that a customer can only be terminated can only bet terminated for nonpayment of two consecutive bills, and a utility must notify the customer if a bill is past due

Order No. 80307 in Case No. 8919 requiring utilities to withhold termination for a 55-day period for customers who apply for energy assistance within 14 days of the issuance of a termination notice

March 12, 2009 Commission Letter Order requiring BGE to accept payment at the door prior to termination of service.^{xxxi}

iv. Status Update

The regulatory proceeding to consider the BGE request was far less formal than the Pennsylvania proceeding in the PECO case. In Maryland, there was a Comment Proceeding, with only a “legislative-style” hearing rather than a fully adjudicated proceeding with sworn testimony from experts and opportunities for cross-examination. Over the objections of Office of People’s Counsel, the PSC approved with conditions BGE’s request

for waivers and to implement the pilot program.^{xxxiv} Conditions included limiting participation to customers with an arrearage of \$600 or less. In addition, based on concerns that if security deposits are credited to the prepaid account there will be a jump in disconnections once those balances are depleted, the Commission denied the BGE request to apply deposits held by the Company to prepaid service accounts. The Commission also required BGE to provide participants with an electronic notification of a zero balance prior to disconnection of service. Further, the Commission required that BGE test the notification method chosen by the participant (text message, email or telephone), to ensure that it is operative. Further, the Commission required that BGE conduct an evaluation of the pilot, including enrollment of a statistically representative sample of the Company's residential customer base.^{xxxv}

With respect to the requested waivers and other program implementation details, the Commission imposed the following conditions:

- Ensure an immediate switch (and thus immediate restoration of service) between the Prepaid Pilot and traditional postpay service anytime the customer so requests;
- If a customer requests to switch to postpay during the 5-day extension period agreed upon by BGE, the company cannot require an additional security deposit before service is restored;
- BGE must un-enroll a customer from the Prepaid Pilot if it receives a new or amended medical certification, learns of a violation of an Prepaid Pilot eligibility criterion, or discovers extenuating circumstances that renders the customer unsuitable for the Prepaid Pilot;
- Once a pilot participant switches out of the Prepaid Pilot, that customer cannot reenroll during the remainder of the pilot.
- Requirement for BGE to provide more process details about how this switch from the Prepaid Pilot to postpay would occur, particularly related to billing and termination processes for a customer with an outstanding arrearage. These issues could include how BGE will: restore or revise a customer's payment plan; determine a customer's new billing cycle date; and notify and effectuate an arrearage-related service termination.
- Requirement for BGE to contact the customer within 72 hours of any termination alerting the customer to the option of returning to postpay with no additional security deposit required;
- Requirement that a customer's decision to switch from the Prepaid Pilot to postpay may not negatively impact the customer in qualifying for a future payment plan; that is, the switch itself does not count as a failed payment plan or a "strike" against the customer in qualifying for a new payment plan;
- Prohibition against BGE reporting terminations of service of customers enrolled in the Prepaid Pilot to credit reporting agencies; and

- Requirement for BGE to report more details about how it will adhere to statutory third-party notification standards and why waiving third-party notification regulatory requirements is appropriate.^{xxxvi}

Since issuance of the Commission Order conditionally approving the BGE pilot, the Company began enrolling customers in the program. However, in a recent email communication to the Commission and stakeholders, BGE reported that enrollment has been slower than anticipated. As of November 5, 2019, the Company had enrolled only 306 participants out of the intended 1,000. It is presently unclear whether difficulty enrolling customers reflects lack of interest in the program or limitations of BGE's outreach approach.

18. ComEd

v. Description of the Proposal

On December 4, 2017 ComEd filed a Petition for Approval of Rider Prepaid with the Illinois Commerce Commission.^{xxxvii} In that case, ComEd proposed to implement a residential prepaid electric service program open to 3,000 of the Company's residential customers.^{xxxviii} The proposal was to require pilot program participants to pay the Company in advance of receiving service, rather than receiving a bill at the end of a billing period and making payment after service is delivered.^{xxxix} The Company proposed that 25% of any amount paid be first applied to outstanding arrearages and that enrollment be open to customers with an arrearage balance of \$1,500 or less.^{xi} Rather than traditional monthly billing, pilot participants would receive electronic notification of credit balances via text or email and could add to their account in increments of \$10 or more.^{xii} If the customer's credit balance were to be depleted and not replenished within five days of receiving via text or email a zero-balance notice, the customer will not immediately be remotely disconnected, but instead would be reverted to traditional, post-paid service.^{xiii} Because ComEd proposed a program design that would return zero balance customers to postpaid service rather than disconnect those customers, the Company did not request waivers from any consumer protection rules or statutory provisions. In this respect, ComEd's proposal was fundamentally different than those of the Exelon companies, PECO and BGE. However, in response to an information request, ComEd noted that "...ComEd cannot state whether any future proposed full-scale prepayment program will or will not contain the reversion to postpaid service term currently proposed for the pilot program."^{xliii}

Similar to other prepaid service programs and proposals, ComEd proposed to provide notification of prepaid balances via cell phone or email and electronic monthly statements. The Company indicated that participants must therefore have verifiable access to email or text messaging. There would be no paper billing or notifications under the pilot.^{xliiv} Further, the ComEd indicated that the vendor slated to administer text and email functions has the ability to report undelivered messages, and that it intends to track such non-deliveries.^{xliv} However, ComEd did not indicate how it would handle circumstances such as the one where a customer has a "free" email account (e.g., Gmail), but that customer's paid internet service has been disconnected. In such instances, messages would be "delivered," but the customer may not have ready access to them. In fact, in its proposed "Terms and

Conditions of Prepayment Services” the Company appeared to anticipate such a circumstance by stating the following:

Failure to receive a properly sent email or text messaging notification pursuant to the Company’s Continuing Obligation No. 2, as described in the Continuing Obligations section of this rider, shall not entitle the customer to additional time to prepay.^{xlvi}

Thus, under ComEd’s proposed notification protocol it was possible that participants would not receive electronic notifications of credit balances and other important account information.

Similar to the other Exelon company proposals, ComEd proposed to waive the security deposit requirements that apply to residential post-paid service customers.^{xlvii} ComEd proposed to credit pilot participants’ security deposits toward any pre-enrollment arrearage balance and the initial \$15 minimum prepayment account balance. After paying down any outstanding arrearage and establishing a minimum prepaid account balance, any remaining security deposit funds would be applied to a participants’ prepaid account balance.^{xlviii}

vi. Status Update

On April 4, 2018, ComEd filed a motion to stay the proceeding in Docket No. 17-0837. In its motion, which was granted by the ICC, ComEd stated that it wished to “understand and consider the new credit and collections issues and proposals presented by the Office of the Attorney General (“AG”) in direct testimony.”^{xlix}

D. Other Investor-owned Utilities

19. Ameren Illinois

vii. Description of the Proposal and Response

On April 6, 2018, Ameren Illinois filed a prepay tariff under the moniker of “Flex Pay” as “a new payment option” for both its gas and electric residential service customers. Ameren argued that its Flex Pay tariffs would improve its service offerings to customers and leverage the Company’s investment in AMI technology by enabling a mobile application or internet account to allow participating customers to view their “Estimated Days of Service” remaining, calculated by converting kilowatt hour (“kWh”) or therm usage and payments made into an estimated daily balance. Ameren argued that the real-time usage information and conversion to Estimated Days of Service should allow customers to understand usage patterns and better control energy usage, and also have a sense of control over when and how much they pay for utility service, provided their account balance remains positive.

Ameren’s Flex Pay tariffs differed from typical “pay as you go” programs by not disconnecting customers whose account balances reached zero. Instead, the tariff would provide for a grace period, and if a customer failed to make a payment, the customer would be reverted back to post-paid service, with regular credit and collections protections applied

to the account. Ameren stated it would limit eligible customers to those who are “current with their bills,” including current monthly bills and deferred payment arrangements (DPAs). New customers with prior debts from previous utility service would not be eligible for enrollment, nor would net metering, distributed generation tariffed customers, or customers enrolled with a third-party energy supplier. Participating customers must have the capability of receiving either text or email messaging from Ameren to receive usage, payment and Estimated Days of Paid Service calculations. Ameren stated that new customers with poor credit history would be given the option between the current practice to pay a deposit for service or enroll in the Flex Pay program. Low income customers enrolled in Illinois’ Percentage of Income Payment Plan (PIPP) would be ineligible for the program. Ameren acknowledged that it would analyze the prepayment option over a 12-month time period, and that the Company needed to maintain a minimum enrollment of 1,000 Flex Pay participants in order to answer the research questions to be evaluated by the Company.

The Illinois Attorney General’s (AG) office objected to Commission approval of the tariff. The AG argued that an investigation of the Company’s credit and collections data and practices revealed serious defects in its efforts to reduce bad debt and maintain customer connection to the electric and gas utility networks, and that the Flex Pay tariff solved none of those problems. The AG called instead for approval of different pilot programs as a substitute for, or condition of, approval of the Flex Pay tariff that would better address customer affordability issues. The AG proposed that if a customer informs the Company that she or he is currently unable to pay their total bill—or a deposit, if the Company seeks to collect one as a condition to enter into a DPA—the Company must affirmatively offer that customer a reasonable DPA that specifically takes into consideration the customer’s understanding of their ability to pay. The Company would therefore be required to inquire about, and factor into their DPA offer, the customer’s own understanding of their cash flow when determining a monthly payment towards the customer’s arrears in the Company’s DPA offer, thereby matching payments to customer cash flow. Down payments would be the lesser of \$100 or 10% of the customer’s current outstanding arrears at the time of entering into the DPA. For customers in an energy assistance program (LIHEAP) or income supplement program, down payments would be capped at the greater of no more than 5% of the amount of the customer’s arrears or one-third of one month’s average usage. Any customer on a program or otherwise able to demonstrate financial need would be given a reasonable amount of time to produce documentation. DPA installments for such customers would be as low as \$10 per month and no down-payment.

The AG also recommended that Ameren terminate its cash security deposit requirement for all residential customers, given that Ameren cannot demonstrate any relationship between the collection of cash security deposits and the reduction of bad debt or between the collection of cash security deposits and the reduction of residential arrearages. Finally, the AG recommended that Ameren pursue a pilot budget billing plan under which identified low income customers who have received a notice of disconnection following the winter disconnection prohibition period for arrears be allowed to enter into a Minimum Payment Program, with an arrearage reduction component for each complete monthly budget payment made by the low-income customer that applies a credit of one-twelfth of the disconnect notice amount to the customer’s account.

viii. Status update

On February 21, 2019, the Commission approved Ameren's Flex Pay proposal, finding that "the proposed requirements to participate in Flex Pay, are reasonable, and not overly burdensome on Ameren customers who choose to participate in the Flex Pay program."ⁱ The Commission rejected the AG proposals to approve changes to Ameren's credit and collections practices on a pilot basis as a replacement for or condition of approval of the Ameren tariff.ⁱⁱ As of January, 2020, only 12 Ameren customers have enrolled in the Flex Pay program, according to Ameren representatives.

20. Ameren Missouri

In 2017 the utility filed a proposal to implement a prepaid service pilot program that would entail reverting customers with a zero-balance back to post-paid service rather than disconnecting service. The proposal faced opposition from Office of Public Counsel and others. In the face of this opposition, Ameren withdrew its proposal in April, 2018.

21. Westar Electric

On October 1, 2013, Westar Energy, Inc. and Kansas Gas and Electric Company (Westar) filed an Application for approval of its Optional Prepay Service Pilot Program (the Prepay Pilot). The Prepay Pilot was a voluntary program, originally limited to 1,000 customers, with participants permitted to make "smaller payments in advance," rather than paying their full bill at the end of the monthly billing cycle. On April 25, 2014, Westar, Commission Staff (Staff), and the Citizens' Utility Ratepayer Board (CURB) filed a Joint Motion to Approve a Stipulation and Agreement recommending the Commission implement the Prepay Pilot Program with certain conditions, including a limit on the total number of customers with preexisting arrearages who could participate to 250 of the maximum 1,000 participants, available on a first come, first-served basis. On May 29, 2014, the Commission issued an Order Approving stipulation and agreement.

On May 11, 2016, Westar, Staff, and CURB filed their Joint Motion to Extend the Term of the Prepay Pilot Program from two years to an additional five months to allow Westar to collect data covering the summer months and the period when college students arrive on campus for the upcoming school year. Westar proposed to gather the data by August 31, 2016, and file a status report by November 1, 2016, informing the Commission of the results of the program and whether Westar intended to continue, modify, or cancel the program.

On May 17, 2016, the Commission approved a Joint Motion to Extend Term of the Prepay Pilot Program through October 2016, and directed Westar to file a status report by November 1, 2016, informing the Commission of the results of the Prepay Pilot Program and whether Westar intends to continue, modify, or cancel the program. On June 23, 2016, the Commission next granted Joint Movants' Motion to Amend the Prepay Pilot Program to remove participation limits of 250 customers in arrears and 1,000 total participants for the remainder of the pilot program, stating that removing the limitations on participation would allow Westar to collect more data, to better evaluate customer interest in the Prepay

Program, and to best determine the success of the program and whether it should be extended. The Commission granted yet another Prepay Program extension for an additional year to allow Westar to determine whether the pilot program should be made permanent as Westar awaited approval of its acquisition by Great Plains Energy, Inc. pending in Docket No. 16-KCPE-593-ACQ (16-593 Docket).

On November 1, 2016, the Commission issued an Order Approving Limited Extension of Westar's Prepay Pilot Program, extending the Prepay Pilot Program until December 1, 2016, to allow Westar to articulate why the program should be extended further. The Commission directed Westar to file a detailed report demonstrating the efficacy of the program and identifying the benefits justifying the program's cost by November 15, 2016, if it believed a further extension was warranted. On November 16, 2016, Westar filed a Motion to Convert Prepay Pilot Program into Permanent Program, including a status report. Based on the status report, Westar sought to convert the Prepay Pilot Program into a permanent program and lift the participation limits currently in place. Westar also sought permission to add new participants to the Prepay Program while its Motion is pending. In the alternative, Westar requested a six-month grace period to transition customers off of the Prepay Program and to conclude its contract with the third-party program administrator.

Through October, Westar reported that it collected \$305,604 in arrears from customers in the Prepay Program. Westar's total program costs as of October 2016 were approximately \$170,000. Assuming an average participation rate of 200 customers, Westar considered the \$170,000 in costs as an \$850 subsidy for each participant in the Prepay Program, and argued that when applied to all 600,000 residential customers and spread over the entire 30-month life of the program, the subsidy was only about \$0.28.

On November 23, 2016, Staff filed its Opposition to Westar's and Kansas Gas and Electric's Motion to Convert the Prepay Pilot into a Permanent Program, arguing that the analysis presented in Westar's Status Report did not support the request. The Commission Staff faulted Westar for failing to conduct a cost-benefit analysis of the Prepay Pilot Program. The Staff further pointed out that according to Westar's Status Report, the average number of participants was 164 per month, as opposed to the 200 assumed by Westar. Therefore, Staff argued, dividing the costs among the 164 participants, rather than 200 participants, resulted in a much higher subsidy of \$1,040, rather than the \$850 the companies claimed. Assuming either figure, Staff asserted the subsidy was too high to justify making the Prepay Program permanent. The Commission Staff further argued that Westar produced no evidence that any arrears payments collected through the Prepay Program would not have been collected through other means. CURB filed a similar pleading opposing Westar's request to make the program permanent.

On December 15, 2016, the Commission agreed with both Staff and CURB that Westar's Status Report failed to demonstrate sufficient benefits of the Prepay Program to make it permanent. The Commission noted that Westar failed to provide an estimate of how much of the \$305,604 arrears debt collected through the Prepay Program would not have been collected absent the Prepay Program. Without such an estimate, the Commission concluded, there was no way to know how much, if any, of the \$305,604 collected through

the Prepay Program would have been recovered by Westar through other means. The Commission noted that Westar did not demonstrate the efficacy of the pilot program because it failed to produce a traditional, program-specific cost benefit analysis. The Commission authorized a six-month transition period to move customers off of the program and to provide contractually required notice to the contractor administering the program to cancel the services agreement before discontinuing the program.

22. Duke Energy Carolinas

In early 2018 DEC proposed to implement a prepaid service pilot program as part of its demand side management portfolio. The proposal was opposed by the North Carolina Justice Center and rejected by the Utilities Commission in April 2018 as ‘not cost effective.’ It is possible that DEC will return in the future with a non-DSM filing. In August 2019 DEC returned with a proposal to implement a prepaid service program outside of its demand-side management portfolio of programs. A Decision has yet to be rendered in the current case.

23. Arizona Public Service Company

In March, 2012, Arizona Public Service Company (“APS”) launched a prepaid service pilot program, ultimately enrolling approximately 2,000 of its residential customers. Similar to other programs, the APS pilot entailed customers prepaying for electricity rather than receiving a monthly bill after usage of electricity.^{liii} Analysis based on the entire pilot program participant pool reflected a very high rate of disconnections throughout the implementation period. In the APS prepaid service pilot there was an average of 0.8 disconnections per customer per month.^{liiii} This result is similar to the reported SRP disconnection rate of one disconnection per customer per month.

24. San Diego Gas and Electric Company

In October, 2011 San Diego Gas and Electric Company (SDG&E) proposed as part of its general rate case filing to implement a new residential prepaid service program. The program would require participants to prepay for energy prior to consumption. SDG&E asserted that the benefits of the program would include not needing to pay a two-month deposit in order to establish service, not having to pay off prior bad debt with SDG&E before establishing new service, and potential energy savings. SDG&E proposed to begin offering this service as of January 1, 2014.^{liv} Under the proposed program design, a participating customer would be disconnected if his or her prepaid account balance drops below zero. The proposal was opposed by the Office of Ratepayer Advocate (ORA) and several non-profit consumer advocacy organizations. ORA’s opposition stemmed from the proposed request from the following consumer protection provisions:^{liv}

- The 15-day notice requirement of Pub. Util. Code § 779.1(a).
- A 24-hour notice of termination by telephone or in person; or, where such contact cannot be accomplished, a 48-hour notice delivered by mail or in person as required by Section 779.1(b).

- The requirement that no disconnection may occur during a pending investigation, or complaint, or request for extended period for payment as required by Section 779.
- Notification to customers facing disconnection of the availability of CARE program and of extended payment plans, before effecting any disconnection of service for nonpayment or inability to pay energy bills in full.
- According to ORA, a customer signing up for the Prepay option may be foregoing disconnection protections without being aware of it. It cannot be shown that a customer has knowingly and voluntarily relinquished these protections if she or he signs up for this program.

ORA recommended that, before adopting a prepaid service program, SDG&E should first provide the account management and notification tools that SDG&E proposes to include in the Prepay Program to all smart meter customers who are interested in budgeting and managing their energy expenditures, without the drastic disconnection policy proposed in the Prepay Program.^{lvi}

Other consumer groups intervening in the case recommend that the Commission reject the proposal, stating that SDG&E had not met its burden to show that the program would provide meaningful benefits and would not harm consumers.^{lvii}

Consumer groups recommend that the Commission reject proposal because the utility acknowledged that the proposed program would violate existing provisions of the Public Utilities Code, and those provisions cannot be waived as a matter of law. They further argued that participating customers would not receive adequate notice of disconnection and would also be deprived of other valuable notices, such as notices regarding the low-income discount program, the availability of payment plans and levelized payment programs, and the right to avoid termination if a public assistance agency has already pledged payment.

The California Public Utilities Commission rejected SDG&E's proposed prepaid service program, stating the following:

While a Prepay Program may offer benefits to residential customers in certain circumstances, we do not find SDG&E's proposed Prepay Program, in its current form, to be in the public interest. ... We also take note of Consumer Groups' logical inference that, depending on the communications means chosen (e.g., text message, automated phone message, or e-mail), customers on the proposed Prepay Program might receive no advance notice of termination at all since customers who are behind on their electric bills may also be behind on their internet or phone bills. We find that such an outcome is unacceptable.^{lviii}

E. Cooperative and Municipal Utility Programs

Electric cooperatives and municipal utilities have led the way with the experimentation with pre-paid service. These utilities rely on their membership structure or voting constituents to hold the utility leadership accountable to the ratepayers versus the more formalized process

for consumer intervention in front of a utility commission with regulated investor-owned utilities.

Proponents of prepayment often describe the service as a customer budgeting tool, but the unfortunate reality is that many low-income customers end up paying more for their electricity bills than credit-based customers. There is a dearth of rigorous studies on the experience of prepaid customers served by municipal and cooperative utilities, but the few studies performed have shown that prepaid customers tend to pay more. A review of tariffs and terms and conditions also shows the downsides of prepayment plans. We highlight some common risks below.

25. Salt River Project

One of the longest running prepaid meter programs in the United States is operated by Salt River Project (“SRP”), Arizona’s second largest electric utility and the third largest municipally-owned utility in the United States. The SRP M-Power prepayment meter program is the largest prepayment program in the United States. Currently, approximately 152,000 customers are enrolled in the voluntary SRP program, or about 16% of residential electric customers.

The SRP reveals a troubling aspect of full scale prepaid meter programs. The vast majority of SRP prepayment program participants are low-income households, and the median income of M-Power customers has declined considerably in recent years. In 2007, the median participant income was \$27,500. Within a year, it dropped to \$19,500. In 2010, the median income fell below the poverty level for a family of three or more to \$17,900. In 2010, 82 percent of program participants had household income of less than \$30,000.^{lix}

Additionally, a study of customers in the M-Power program shows an increasing proportion of racial or ethnic minorities enrolled in prepayment service. Surveys prior to 2010 showed that Hispanics comprised 22 to 23 percent of SRP’s prepaid service customers in 2006, but that Hispanic participation had increased to 48 percent by 2008.^{lx} In Phoenix, the largest city served by the Salt River Project, Hispanics account for 40.8 percent of the population, and are thus disproportionately represented in the prepaid service program.^{lxi}

A 2009 analysis showed that M-Power customers are “more likely to be relatively young, have families, be relatively low-income, be low electricity consumers, live in apartments, have been SRP customers for less than five years, and have unsatisfactory or ‘new credit ratings’ compared to other residential customers.”^{lxii} On average, the head of a household with a prepaid meter is 36 years old, makes an average annual income of \$24,400, and is Hispanic.^{lxiii}

SRP, like other municipally- or cooperatively-owned utilities in the U.S., do not publicly report rates of service disconnections for prepaid service customers or post-paying customers. However, in response to a media inquiry in 2012, SRP divulged the troubling fact that, on average, M-Power customers experience loss of electric service once per month, compared

to an average disconnection rate among traditional payment customers of less than once per year.^{lxiv}

The M-Power program has long featured an in-home user display terminal that provides customers with real-time consumption, expenditure, and account balance information. This device emits visual and audible alerts as a credit balance is running low. It should be noted here that with the in-home display, M-Power customers are not required to retain access to costly internet or cell phone service in order to receive critical notification of impending electric service disconnection.^{lxv}

26. Other Municipal and Cooperative Utility Program Findings

ix. Increased Cost to the Customer

While some prepayment customers may avoid traditional security deposits, they rarely, if ever, pay lower rates for prepaid service, even though it brings numerous advantages for utility companies. So customers with the least means pay the most for an essential service. One of the few studies on prepaid service found that customers enrolled in the Arizona-based M-Power Prepaid Program with average usage would pay \$38 more than credit customers each year. Under the current tariff, M-Power customers pay a higher volumetric rate during peak summer months than standard price residential customers. M-Power customers pay \$0.1114 during the months of May, June, September, and October. The rate during that period for general residential customers using 2,000 kWh/month or less is \$0.1091. Similarly, during peak months of July and August, M-Power customers pay \$0.1185 per kWh compared with \$0.1157 per kWh for general residential customers using 2,000 kWh/month or less.^{lxvi}

Another prepaid program, offered by the Choctawhatchee Electric Cooperative (CHELCO) in Florida back in 2010, charged prepaid customers extra for the meter. CHELCO charged prepaid customers a higher fixed rate for service than it did for credit customers. Over the course of a year, CHELCO prepaid customers were expected to pay an extra \$127.75 in fixed costs than the utility's credit-based customers.^{lxvii} The increased cost came from two sources: a contract with an outside company to manage the daily calculations on prepayment accounts and equipment that can remotely disconnect accounts. Customers with prepaid service were charged an extra \$54.75 a year to give the utility the ability to seamlessly terminate their power.^{lxviii} While the company touted the lower deposit requirement for prepaid customers, other costs quickly erode any cost advantage that prepayment provides.

The fees and costs for prepaid service can add up quickly. For example, Central Georgia EMC^{lxix} charges a membership fee of \$5.00, an account establishment fee of \$20.00 and a minimum \$50 for daily usage to start prepaid service (\$75.00). Regular post-paid customers, depending on their credit score could be asked to pay a deposit of \$100 or an estimated bill for 90 days. Prepaid customers are charged \$7.00 a month for a prepaid service fee plus the standard residential energy and monthly service charges (an additional \$84 more than regular post-paid customers). Prepaid accounts are subject to disconnection anytime the

account balance goes below zero, regardless of weekends, holidays or severe weather (when the business offices tend to be closed). Anytime service is disconnected, there is a \$50 reconnection fee, a \$30 purchase minimum as well as payment of the unpaid balance before service will be restored. In addition, there are risks of incurring disconnection and reconnection fees as disconnection of prepaid service for 3 days will be treated as an inactive account and the consumer would need to pay the charges to start service all over again, in addition to any unpaid balance.

The fees charged by Central Georgia EMC are not unique, prepayment programs often include burdensome fees, including transaction fees, monthly program fees, and reconnection fees. In the deregulated Texas retail electricity market, numerous Retail Electric Providers (REPs) offer prepaid electric service. The prices, terms and conditions of these products vary, but many involve the imposition of substantial fees on customers. For example, First Choice Power-To-Go fees include: Account updates resend fee \$2.95, Closeout Balance Refund Check Fee \$2.50, Early Cancellation Fee (Fixed Rate Products only) which is listed on the customer's "Electricity Facts Label", document processing fee up to \$2.95, premium contact fee up to \$5.00, payment transaction fee at an authorized pay station up to \$2.95, Micropayment Convenience fee for payments less than \$25 made online or via telephone up to \$4.95, insufficient funds fee or returned payment fee of \$25.00.^{lxx}

The Tri-State (Georgia, Tennessee and North Carolina) Electric Membership Corp.'s Advance Pay program charges a monthly advance pay participation fee of \$7.^{lxxi} Customers pay \$84 a year to participate in Advance pay (\$7 x 12). In addition there is a \$5.00 membership fee, a non-refundable \$20 connection fee and a \$50 payment to activate the prepaid account (this will be applied toward future energy use). These fees will again be required to start service if the Advance pay customer has been disconnected for 5 consecutive days.

The Salt River Project M-Power program charges \$1.90 transaction fee (rising to \$2.00 on November 1, 2019) for debit and credit card purchases.[8] Jackson Energy Cooperative charges customers \$1.25 for every prepayment. Prepayment proponents argue that frequent payments help families budget and conserve electricity but transaction fees quickly inflate the cost of prepayment.^{lxxii}

x. Treatment of arrearages

Common prepaid service design does not allow for reasonable payment plans or arrearage management programs. The consumer payments are structured to retire back debt for the utility versus affordability for the consumer. The consumer payments are structured to retire back debt for the utility versus affordability for the consumer. For example. Jackson Energy Co-Op's Prepay Electric Service (KY) will charge customers who have been disconnected for nonpayment and who choose prepaid service a plan where future purchases will be split 70/30 until the old debt is retired. This means that 70 cents on the dollar will be applied to new purchases of electricity and 30 cents on the dollar will be applied towards the arrearages. The arrearages for these customers may not exceed \$350.^{lxxiii}

xi. Payment Plans and Risk of Disconnection

Central Georgia EMC Prepaid accounts are not eligible for payment plans. Furthermore, LIHEAP or other agency awards will not stop a disconnection (as there is often a lag between when the federal government passes a spending bill and when states receive the grants and are able to make LIHEAP benefit payments) and prepaid consumers are expected to maintain enough of a credit balance to account for this lag in time between a benefit award and the utility's receipt of payment.

Similarly, the Tri-State (Georgia, Tennessee and North Carolina) Electric Membership Corp.'s Advance Pay program also eliminates traditional protections for payment-troubled households.^{lxxiv}

Unlike post-paid service, Tri-State's Advance Pay accounts are not eligible for payment arrangements and energy assistance "Pledges will not be accepted to keep electricity on." Instead, energy assistance will be applied to the account only once the funds have been received. As discussed above, this is problematic for low-income customers facing disconnection for non-payment as the federal LIHEAP assistance funds often face a lag-time between passage of a spending bill and the release of funds to the states.^{lxxv}

Tri-State's Advance Pay customers also lose the disconnection protections for medical conditions (serious illness) or during periods of extreme cold (below 32 degrees) or heat (95 degrees or hotter). Thus, customers enrolling in the prepaid program lose immediate access to energy assistance benefits and critical health and safety protections enjoyed by credit customers. The Advance Pay Membership agreement, also includes bold, large font, all capitals text:

I UNDERSTAND THAT TRI-STATE EMC IS PROVIDING THE ADVANCE PAY ACCOUNT TO ME AT MY REQUEST. I AGREE TO INDEMNIFY AND HOLD HARMLESS TRI-STATE EMC, ITS EMPLOYEES AND AGENTS, FOR ANY AND ALL LOSSES OR DAMAGES INCURRED, BE THEY REAL OR CONSEQUENTIAL, INCLUDING DEATH, AS A RESULT OF MY PARTICIPATION IN ADVANCE PAY OR AS A RESULT OF ELECTRIC SERVICE TERMINATION. ANY PERSON THAT CURRENTLY IS OR WILL BE, RESIDING AT MY LOCATION, WITH A MEDICAL CONDITION OR A PERSON REQUIRING ELECTRIC SERVICE TO OPERATE MEDICAL EQUIPMENT NEEDED FOR THEIR HEALTH AND WELL BEING, IS MY SOLE RESPONSIBILITY. I KNOW AND ACCEPT THAT THERE ARE MEDICAL RISKS ASSOCIATED WITH ADVANCE PAY'S IMMEDIATE TERMINATION OF ELECTRIC SERVICE AND I RECOGNIZE THAT I AM SOLEY (sic) LIABLE FOR ALL LOSSES AND DAMAGES INCURRED UNDER THESE CIRCUMSTANCES.

Wood County Electric Cooperative in Texas also attempts to shift the burden of risk of participation in prepaid electric service to the customers by the following statements:

Participants that select the SmartPower prepay method to pay their bills, agree to indemnify and hold harmless the Cooperative, its employees and agents, for any and all losses and damages incurred, be they real or consequential, including death, as a result of participation in SmartPower, or as a result of electric service termination.

Any person that is, or will be, residing at a location with a medical condition, or a person requiring electric service to operate medical equipment needed for their health and well-being, is member's sole responsibility.^{lxxvi}

VII. PREPAID SERVICE AND DC UTILITY CONSUMER PROTECTIONS

The introduction of prepaid electricity or natural gas service in the District of Columbia would require exemptions or amendments to Chapter 3: Consumer Rights and Responsibilities of the District of Columbia Municipal Regulations. Below are many of the areas of current DC regulations that would be affected.

F. Bill Payment

Rule 304.1 requires that the utility provide customers with a bill at least once during each billing cycle. With prepaid service, customers would not be provided with a utility bill as the utility account would shift to a pre-paid model where funds are deposited into a customer's account before service is provided.

G. Billing Information

Rule 304.7 governs the information on a customer's utility bill. Traditional post-paid utility bills contain useful information for customers including an ability to track energy usage from one billing cycle to the next; track previous balance, if any; see the breakout of charges for residential utility service, distribution service charge, transmission service, purchased gas charge, natural gas supply service or generation service charge, as applicable; rate elements of generation, transmission and distribution charges; the amount of all payments and credits made to the account during the current billing cycle, as well as any amounts overdue. The utility bill also is a vehicle for regular consumer education about avenues for recourse and assistance. The utility must include instructions regarding the process for inquiries and complaints and the contact information for the utility regarding inquiries and complaints as well as contact information for the PSC and the Office of People's Counsel^{lxxvii}. The use of the monthly utility bill is a traditional vehicle for consumer outreach and education, where the utility bill must include any information that the PSC may require and if applicable, include an itemization of usage, payments made, and account balance, energy usage history or gas

usage profile^{lxxviii}. Prepaid service risks loss of this regular vehicle for consumer tracking of monthly usage and account information as well as consumer notice, outreach and education.

H. Levelized and Estimated Billing

The ability to have a levelized bill that is based on 1/12 of an estimated, annual average usage can help some families budget for energy service. Rules 304.10 and 304.11 provides natural gas and electric consumers with the right to choose a level payment billing program or budget payment plan. The utilities are required to inform customers of this option along with the particulars of how this billing plan operates. The shift to prepayment service takes this budgeting tool out of the toolbox for consumers. Estimated utility bills provide consumers with flexibility pay for service in-between actual utility meter readings. Prepaid service would remove this option.^{lxxix}

I. Bill Payment Due Date

In the District of Columbia, electric and natural gas payments shall be due within 20 days after the bill is rendered.^{lxxx} Prepaid service would need to be exempted from this rule.

J. Billing Disputes

Rule 305.2 prevents late charges being applied to amounts in dispute before the Commission. With prepaid service the consumer may not have a means of withholding payments in the case of a dispute regarding service as the payment for usage is instantaneous.

K. Deferred Payment Plans

When customers fall behind on their bills, one important tool for preserving service is to negotiate a reasonable deferred payment plan. Rules 305.5 and 306 allow consumers to enter into payment plans with the utility and/or energy supplier. The deferred payment agreements (DPA) rule precludes additional charges and interest^{lxxxii}. DPAs must be provided to the customer in writing within 10 business days^{lxxxii}. Rule 311.6 prohibits disconnection and requires utilities to restore service where there is a DPA. Rule 320.4 requires qualified personnel to enter into DPAs during normal business hours. While the reasonableness of the duration of the repayment and the terms of the repayment can be unaffordable for desperate consumers who are trying to keep the service turned on in the short-term, the solution is not to abandon the concept of deferred payment agreement (DPA), but rather to develop rules to ensure DPAs are more reasonable^{lxxxiii}.

Prepaid service eliminates a consumer's right to enter into DPAs to manage arrears. A common treatment for arrears with the prepayment service is to apply a substantial percentage of the charge towards the arrears (e.g., 25% of a payment will be directed to an arrearage). This makes service even more unaffordable for struggling households as only 75 cents on the dollar will be going towards current service. There is no ability to negotiate for

more reasonable terms as each payment is instantaneous. The utility will be able to collect its arrears while the household is faced with reduced service.

L. Security Deposits

One of the selling points of prepaid service presented to payment-troubled consumers is the waiver of an expensive deposit to access service. However, the District of Columbia has deposit rules that provide consumer protections that help mitigate deposits as a barrier to service. Rule 307.1 prohibits deposits or guarantees for new customers and 307.3 prohibits deposits for disconnections or arrears outside of the previous 12 months. The deposit amounts are capped at the lesser of \$100 or 2/12 of the estimated annual bill and deposits \$35 or more may be paid in a minimum of 3 equal monthly installments^{lxxxiv}. The utility is liable for interest on deposits^{lxxxv} and must refund/credit the deposit upon payment of service for 12 consecutive months^{lxxxvi}. Customers facing deposit requirements also have the option of providing a written guarantee from another party^{lxxxvii}. If the District is looking for ways to lower the barriers to service for payment troubled customers, limiting or eliminating the requirement for deposits would be a sound place to start.

M. Disconnection Protections

There are disconnection protections that should apply to prepaid service, but some of these existing protections could be more complicated to implement with prepaid service. One of the straightforward protections is rule 310.3 which provides temperature-based disconnections for electricity and natural gas. Rule 311.7 prohibits disconnections after 5:00 pm Thursday and before 8:00 am Monday, during legal holidays and when the utility is closed to the public. These protections could be programmed into the delivery of prepaid service.

Rule 310.2(b) prohibits disconnection for failure to pay for merchandise, appliances or nonresidential utility services. The instantaneous payment made possible with prepaid service and the common model of directing a certain percentage of each payment towards arrearages establishes a much weaker consumer protection framework for consumers of prepaid service. It is conceivable that a prepaid service payment allocation could include some percentage of payment for merchandise, appliance or nonresidential service, unless absolutely prohibited by the Commission or by other mechanism. If these non-utility charges are permitted with prepaid service, it is conceivable that service could be disconnected due to non-payment attributable, at least in part, to non-utility charges.

N. Serious Illness Protection

Rule 311.1, the District of Columbia's serious illness protection rule, would be incredibly difficult, if not impossible to administer without modification. This rule postpones disconnection for 21 days where a customer provides the utilities with a certificate by a physician or public health official stating that disconnection would be detrimental to the health and safety of an occupant of the premises. This postponement can be renewed for an

additional 21 days. Serious illness protections are critical to the protection of the health, safety and well-being of medically fragile District of Columbia residents. The District's protection is among the weaker serious illness protections in the country, but nonetheless, the instantaneous payment for energy service makes the timing of postponement of disconnection extremely difficult, if not impossible in a prepayment environment. Individuals returning home from surgery, or chemotherapy or recovering from a heart attack have limited strength to cope with applying for the serious illness protection with regular post-paid service. Strong serious illness protection rules in other states provide a longer period of protection from disconnection than 21 days. However, disconnection with prepaid service is instantaneous. Seriously ill individuals and customers with medically fragile household members must not be permitted to participate in prepaid service. In addition, individuals on prepaid service who become seriously ill must have a mechanism to immediately postpone disconnection for a reasonable period of time necessary to protect health and safety and should be returned to a post-paid service. Failure to do so will jeopardize the health and safety of medically fragile customers.

O. Disputed Billing

An important consumer protection is the ability of a consumer to dispute a charge and to be protected from disconnection pending resolution of that dispute. Rule 305.3 prevents late charges being applied to amounts in dispute before the Commission. With prepaid service the consumer may not have a means of withholding payments in the case of a dispute regarding service as the payment for usage is instantaneous.

Rule 311.2 provides the consumer with the ability to file a dispute with the Office of Consumer Service and prohibits disconnection pending investigation as long as non-disputed amounts are paid. With prepaid service, it will be harder for consumers to detect a problem with their billing. With traditional post-paid service, a consumer receives a bill once a month and can, fairly easily compare usage and amount from one month to the next. The rate and charges are displayed on the bill and the timeframe is fairly standard from one bill to the next. It is arguably much easier for consumers to detect a problem with their bill with this regular billing cycle. With prepaid service, consumers are reloading credits at uneven increments of time and the data regarding usage, rates and charges is much harder to track. The lack of paper billing also makes this protection harder to exercise. One possible means of mitigating this harm is to return prepaid customers to post-paid service if there is a dispute filed with the Office of Consumer Services. This will allow time for resolution while avoiding a repetition of the harm from the instantaneous prepayment of service under the terms that gave rise to the dispute.

P. Disconnection notices

Prepaid service would need an exemption from numerous disconnection procedure rules. Utilities are prohibited from disconnecting service unless they provide notice of disconnection at least 15 days prior to the date of disconnection^{lxxxviii}. Another important consumer protection regarding disconnections is the ability of the consumer to designate a 3rd party to receive important notices such as the disconnection notices^{lxxxix}. This provides an important

back-stop to ensure that service remains connected by providing enough time for a 3rd party to pay the bill (e.g., out-of-town relation paying the bill of an individual with diminished capacity). This ability of a 3rd party to pay the bill and prevent a disconnection is weakened in a prepayment framework due to the near-immediate ability to disconnect service. The form of traditional post-paid notice of disconnection provides critical information on how to preserve service^{xc} including the amount necessary to maintain service, the reason for disconnection, the date of the disconnection, who to contact at the utility regarding the matter, the right to delay disconnection for medical reasons, the availability of deferred payment arrangements and the right to file a complaint with the Commission, the availability of legal representation and the assistance of the Office of the People's Counsel. These consumer protections are lost with pre-paid service. Once service is disconnected, the utility is required to leave notice reasonably calculated to be seen by the occupants stating that service has been disconnected and the contact information to restore service as well as the procedures where a medical or safety emergency exists^{xci}.

Q. Personal Contact Prior to Service Disconnection for Nonpayment

The District of Columbia also requires personal contact before disconnection^{xcii}. This is a critically important, and life-saving protection. Utilities are required to make a minimum of two attempts at personal contact at least two days before disconnection^{xciii}. If personal contact has not been made the disconnection is prohibited and a field service representative must leave a notice reasonably calculated to be seen by a resident indicating that service may be disconnected as soon as the next business day unless the outstanding bills are paid^{xciv}. There are rules regarding field service agent identification and payment procedures that would also be forgone in a pre-payment regime^{xcv}. For example, the ability of field agent to stop a disconnection if there is a medical emergency^{xcvi} or the resident provides a payment to the field agent^{xcvii} or the resident has provided a reasonable explanation for the delinquency^{xcviii}. The field agent provides a critical last check to protect the health, safety and well-being of the occupants. There is no substitute for a field agent's ability to observe the situation and apply the appropriate consumer protections. This is one of the most consequential differences between prepaid and post-paid service.

VIII. UTILITY AFFORDABILITY PROGRAMS IN THE DISTRICT OF COLUMBIA

The District of Columbia has a number of low-income energy assistance programs and has demonstrated creativity in adopting a range of programs to address low-income energy insecurity. These programs address different aspects of energy insecurity and, while no one program provides a comprehensive solution, these programs work to help families move forward in their attempts to reach energy security.

R. Bill Assistance Programs

27. Federal Low Income Home Energy Assistance Program (LIHEAP)

District's Department of Energy and the Environment administers the LIHEAP program. In the District of Columbia, approximately a quarter of the population is income-eligible for LIHEAP.^{xcix} In FY 2017, approximately 40 percent of the households eligible for LIHEAP received assistance.^c A 2018 Apprise LIHEAP energy burden analysis found that the District's LIHEAP recipients who used electric as their main heating fuel had an average annual gross home energy bill of \$902 and LIHEAP recipients who used natural gas as their main heating fuel had an average annual gross home energy bill of \$1,354.^{ci} Customers can receive a regular LIHEAP benefit and those in an emergency situation (received a disconnection notice or service has been disconnected) can receive emergency assistance (available only once a year).

Before prepaid service can be adopted, there must be careful stakeholder discussions with DOEE on how prepaid customers could participate in the District's LIHEAP program, particularly since these customers will not have a bill and calculation of energy burden will be complicated by the sporadic payments. The implementation of the emergency LIHEAP assistance will also be problematic as there will not be a disconnection notice.

28. Residential Aid Discount

The Residential Aid Discount (RAD) program provides eligible low-income electric customers with a credit that covers approximately 30 percent of a typical RAD customer's bill. The Residential Aid Credit (RAC) covers the full customer charge for distribution, the volumetric energy charge for distribution, as well as an exemption from the following surcharges: the RAD discount surcharge, the Sustainable Energy Trust Fund surcharge and the Energy Assistance Trust Fund surcharge. Low-income households meeting the eligibility criteria for LIHEAP (60% of state median income) are eligible for the RAD program.

The implementation of RAD for prepaid customers will also require careful deliberations as to calculation of the RAC and the delivery of consumer information on the RAC and surcharge waivers that would normally appear on the monthly bills.

29. Residential Essential Service

The Residential Essential Service (RES) program provides eligible low-income natural gas customers who use natural gas as their primary heating source with a discount of approximately 25 percent of the heating bill during the months from November 1st to April 30th. The RES discount provides a 55 percent discount on the distribution service (includes the customer and the distribution charges). If natural gas prices are particularly high (rise above 50 percent of the base year price for a given month), the RES discount increases to 70 percent on the distribution service. RES customers are also exempt from the Sustainable Energy Trust Fund surcharge and the Energy Assistance Trust Fund surcharge. Low-income

households meeting the eligibility criteria for LIHEAP (60% of state median income) are eligible for the RES program.

The implementation of RES for prepaid customers will also require careful deliberations as to calculation of the credit and the delivery of consumer information on the RES credit and surcharge waivers that would normally appear on the monthly bills.

30. Senior Citizens and Disabled Resident Rate Credit

The Senior Citizens and Disabled Resident Rate Credit (Pepco electric customers) provides seniors and consumers with disabilities receiving the D.C. Homestead Deduction or the Senior Citizen/Disabled Property Owner Tax Relief, and not receiving RAD, with a \$7.50 credit on their monthly Pepco electric bill. The Senior Citizens and Disabled Resident Rate Credit is an experimental rate designed to help seniors and disabled residents with incomes that are low, but not low enough to qualify for RAD. Seniors are defined as 65 or older and eligibility is based on participation in the District's Office of Tax and Revenue's Homestead Deduction or the Senior Citizen/Disabled Property Owner Tax Relief program. Enrollment occurs once a year and is automatic. Pepco receives from Commission staff list of eligible customers and Pepco applies the discount to their accounts. Customers receive a notice of eligibility from Pepco with instructions regarding opting out of the Senior Citizens and Disabled Resident Rate Credit discount.

31. Arrearage Management Plan

Pepco's Arrearage Management Plan (AMP) Program^{cii} is a new program to help low-income customers with large arrears, reduce or eliminate their debt through regular payments of current bills. At the start of the AMP, the customer's arrearage amount is fixed and set aside. During participation in the AMP, the customer will not be disconnected due to this arrearage. Customers are put on a budget billing plan and each full payment of a current bill results in 1/12 of the arrearage being forgiven. AMP customers will have the opportunity to cure up to 2 consecutive missed payments by making a full payment in the 3rd month. Disconnected customers can participate in AMP by paying the lesser of \$500 or 25% of the arrearage and the \$35 reconnection fee will be waived. Eligible customers in the first year of AMP are RAD eligible customers with a minimum arrearage of \$300 that is at least 60 days past due.

Prepaid service customers would not be able to participate in the AMP as it is currently structured. As noted above in the discussion regarding the District's rules allowing for deferred payment plans, prepaid service tends to capture payment on arrears as a substantial fraction of each payment made. This weakens the household's energy security as only a fraction of each dollar will be going to purchase energy and a substantial percentage will automatically be siphoned off to pay down an arrearage.

32. Washington Area Fuel Fund/Charitable Giving

Washington Area Fuel Fund/Charitable Giving are charitable funds to help low-income households facing emergency energy situations who have exhausted LIHEAP and other sources that help pay energy bills.

S. Weatherization, Energy Efficiency, and Renewable Energy Programs

33. Weatherization Assistance Program

The District's Department of Energy and the Environment (DOEE) administers the Weatherization Assistance Program (WAP) and uses the same income-eligibility thresholds as the LIHEAP program. WAP funds are used to make low-income homes more energy efficient for long-term energy bill savings. WAP funds can also be used to help low-income homeowners fix or replace air conditioning units, heating systems and hot water tanks. LIHEAP applicants indicate their interest in WAP when applying for LIHEAP assistance.

34. Additional Energy Efficiency Programs

There are additional energy efficiency programs that help affordable housing owners increase the energy efficiency of their properties such as the **Income Qualified Efficiency Fund (IQEF)**. IQEF is a program administered by the District of Columbia's Sustainable Energy Utility (DC SEU) to improve the energy efficiency of affordable housing, shelters and clinics. DC SEU also administers the **Low Income Multifamily Comprehensive** initiative that provides technical and financial assistance to improve the energy efficiency of multifamily properties. DC SEU has funding from the Sustainable Energy Trust Fund (from a surcharge on electric and natural gas ratepayers) and the Renewable Development Fund (from competitive energy suppliers) and runs residential energy efficiency programs (efficiency appliance rebate programs, discounted LED products, and free energy kits).

35. Solar for All

Solar for All (SFA) is funded through the Renewable Development Fund and provides a no-cost solar photovoltaic systems for low-income households. The SFA program has a goal of helping 100,000 low-income households reduce their energy bills by 50% by 2032 through solar power. Households that participation in LIHEAP, RAD, RES and other income-qualified programs are eligible for this program.

36. Energy Efficiency in Affordable Housing

Pepco^{ciii} and Washington Gas^{civ} will be launching programs to increase the energy efficiency of affordable multifamily housing. The funds for these programs stem from recent mergers are not ratepayer funds. DC: Pepco Arrearage Management Plan.

IX. SUMMARY OF BENEFITS AND RISKS TO LOWER-INCOME HOUSEHOLDS

T. Potential Benefits

Proponents of prepaid service programs cite a number of customer benefits derived through participation. These benefits are summarized below.

37. Receipt of a steady stream of information regarding usage and expenditures

Present-day prepaid service programs are typically delivered to customers with an advanced, digital meter capable of recording and communicating usage information in short time increments. This capability enables streaming over broadband information regarding usage and expenditures to customers on a near-real-time basis. Receipt of information in this form and at regular frequencies may be viewed as an enhancement or beneficial supplement to customers' receiving usage and expenditure information retrospectively in a monthly bill. It should be noted, however, that provision of timely usage information, including projections of expenditure levels at the end of a monthly billing cycle, are not technologically limited to customers who enroll in a prepaid service program that often entails relaxed disconnection procedures and forfeiture of consumer protections as described in this report.

38. Reduced usage and bills through an energy efficiency or conservation effect

Prepaid service proponents often cite conservation usage reduction benefits associated with the service. As described in Section VI, above, usage reduction has, in fact, been observed in studies of prepaid service programs. However, researchers have yet to determine the extent to which observed reductions are attributable to informational benefits, disconnected service, or customer fear of service loss.

39. Elimination of security deposits

Most of the recent prepaid service proposals, particularly from investor-owned utilities, allow the participant to forego posting a security deposit, or apply an existing deposit held by the utility toward the prepaid account. For a customer facing imminent disconnection for non-payment or an unaffordable deposit to establish service, this may appear in the short term to be a good option. However, it should be noted that for customers who have depleted their prepaid account balance, have been disconnected, or who otherwise wish to return to post-paid service, payment of a new security deposit may present a significant hurdle to regaining or retaining service. It should be further noted that it is within the discretion of regulated utilities in most jurisdictions to waive deposits or late payment fees, and to ease payment agreement terms. Finally, some jurisdictions prohibit utilities from collecting residential deposits altogether.^{CV} Thus, enrollment in a prepaid service program, along with associated risks as described below, is not the only means by which customers may be provided with less onerous security deposit terms.

40. Increased control over the account through the ability to make frequent, small payments

One of the primary benefits of prepaid service cited by proponents is the ability of participants to make payments in any amount and at any time. Clearly, the ability to make relatively small payments may be of value to customers with cash flow challenges or limited income. However, similar to provision of timely usage and expenditure information, providing customers with the tools and ability to make small payments in advance of receiving a monthly bill is not technologically limited to customers enrolled in a prepaid service program. It should further be noted that when third party transaction fees are required, it may not be advantageous for cash-strapped customers to make numerous, small utility service payments in a given month.

U. Potential Risks

41. Concentration among lower-income customers facing disconnection for nonpayment, an unaffordable security deposit, or other challenges in staying current on utility bills

Experience in the United States clearly demonstrates that prepaid service is concentrated among low- or moderate-income consumers, particularly those who are facing unaffordable security deposit requirements or disconnection for nonpayment under traditional service. In the largest prepayment program operating in the United States, the service is increasingly concentrated among racial and ethnic minorities. (See discussion of research on Salt River Project's M-Power Program.)

Previous research from Great Britain may also be instructive here. Electric and natural gas utilities in Great Britain have implemented prepaid service on a widespread basis. The number of electric prepayment meters in Great Britain was about 3.6 million in 1997. In 1997 there were also 1.2 million natural gas prepayment meters deployed in Great Britain. By 2009, 3.7 million electric prepayment meters and 2.5 million natural gas prepayment meters had been deployed, serving 14% of electricity customers and 11% of natural gas customers.^{cvi}

Historically, a vast majority of prepayment meter users in Great Britain have been low-income customers.^{cvii} Utility companies targeted marketing of prepayment meters to low-income households in arrears, even though they charged substantially more for service delivered under prepayment than for service paid for by traditional billing means or through direct debit.^{cviii}

Prepayment meters in Great Britain are still concentrated disproportionately in lower-income households. Sixty percent of electricity and natural gas customers with prepayment meters in 2010 had annual incomes below £17,500 (\$27,704). Further, over half of prepayment meter customers received a means-tested benefit, nearly half had an unemployed head of household, and more than a third had one or more household members with a long-term physical or mental illness or disability.^{cix} Similar to the SRP experience, average income

among prepaid service customers in Great Britain is declining. In 2008, the average household income for prepaid customers was £16,091 (\$27,523). By 2009, the average income fell to £13,466 (\$21,929).^{cx} The number of customers with disabilities increased from 26 percent to 39 percent.^{cx}

42. Elevated rates of service disconnection or interruption

Rates of prepaid service disconnection in the U.S. is almost non-existent. However, as indicated in this report, the largest program in the U.S., SRP's M-Power program, has disconnection rates about 10 times higher than those of standard service customers. Further, previous research from Great Britain, while limited, also demonstrates very high disconnection rates among prepaying customers.

Information regarding rates and service disconnections among prepaid service customers is very difficult to come by, since implementing utilities in Great Britain are not required to track and report this critical information. Customer surveys have been conducted and help to fill the information gap. Accent, an independent research firm in the UK, surveyed prepaid service customers. It found that in 2008, 9% of prepaid electric service customers had experienced disconnections during the previous twelve months.^{cxii} Customers using traditional, credit-based service experienced a disconnection rate of about one-tenth of one percent during that same period.^{cxiii} Further, a 1997 customer service survey found that twenty-eight percent of prepayment customers in Great Britain were disconnected from service over the previous twelve month period.^{cxiv} The survey also found that over half of prepaid service customers experiencing disconnection went without fuel supplies up to three times during the previous year. Over half of the households reporting disconnection from prepaid service went without fuel between five and twenty-four hours, and four percent of those disconnected from natural gas service went without fuel for between four and seven days.^{cxv} Finally, a 2010 survey conducted in Great Britain for the organization Consumer Focus showed that twenty-two percent of prepaid service customers had foregone other necessities such as food and medicine in order to retain utility service, forty-five percent had reduced their energy usage to retain service, fifty-four percent had used a "emergency credit" to retain service, and fully sixteen percent had service disconnected during the previous year.^{cxvi}

Thus, all information available shows elevated rates of service disconnection for prepaying utility customers. Increased disconnections of electric service that come with prepaid service threaten the health and safety of customers, particularly the elderly, disabled, and low-income families with children. Disconnecting electric service has caused house fires and extreme indoor temperatures, which can result in illness and death. Implementing prepaid utility service, with the increased rates of service disconnection that result, increases the risk that such tragedies will occur.

Electricity service is widely considered to be a necessity of life and essential to public health and safety. In addition to providing everyday functions, secure, reliable electricity service is critical in avoiding health and safety risks by providing safe lighting, heat,^{cxvii} cooling during

high temperatures, power for medical devices and refrigeration of food and medications, and fuel for electric cooking appliances and electrically heated hot water.

Prepaid service compromises basic access to continuous utility service that is vital to the health and safety of customers and communities. The increased electric and natural gas service disconnections, and bill payment pressure that would likely result from a prepayment program pose a threat to the health and safety of customers as well as the communities in which we live. The National Energy Assistance Directors' Association's (NEADA) National Energy Assistance Survey outlines the steps that many individuals and families must take in order to afford basic utility services, often at a risk to their own health.^{cxxviii}

The NEADA survey found that in vulnerable homes, “[b]ecause of the difficulty they faced in paying their utility bills as many as 37% went without medical or dental care, and 34% did not fill a prescription or took less than their full dose of prescribed medication.” Many individuals reported making difficult or even dangerous decisions when addressing unaffordable energy costs: 39% closed off part of their home; 23% kept the home at a temperature they felt was unsafe or unhealthy; 21% left their home for part of the day; 33% used their kitchen stove or oven to provide heat; and 24% went without food for at least one day.^{cxxix} The NEADA survey includes households that received assistance from the Low Income Home Energy Assistance Program (LIHEAP); in most states, this includes homes earning at or below 150% of the federal poverty level, but in some states includes those earning 60% or less of the state median income, or those enrolled in programs such as Temporary Assistance for Needy Families (TANF), food stamps, SSI, or similar assistance.^{cxxx}

Even with consumer protections in place, we hear about tragic occurrences all too often in our communities when homes are cut off from utility service. As AARP et al. noted in a report titled *The Need for Consumer Protections: Smart Metering Proposals and the Move to Time-Based Pricing*, “[i]t is common for a household that is denied electricity to turn to alternative and often dangerous means of providing light and heat in the home there are instances reported every year of the deaths of children and adults due to the use of a candle in a dwelling without electricity or heat.”^{cxxxi}

When candles are used for light in the absence of electricity, there is additional risk of fatal fire according to the National Fire Protection Association (“NFPA”). In a report entitled “Home Candle Fires,” NFPA reviewed fire service reports and news clips about 117 identified fatal home candle fires in 2005 - 2010 that resulted in a total of 177 civilian fire deaths. Candles were used for light in the absence of power in 30, or one-quarter (26%), of these fires and 60, or one-third (34%), of the associated deaths.^{cxxii} An example of fatalities caused by a candle fire after a utility shut-off was the case of Tashika Turner, who lost three of her young children in a candle fire in New York in October, 2013, one day after her electric utility disconnected service for non-payment.^{cxxiii}

In addition to safe lighting, electric service is required to operate most indoor cooling equipment. Loss of such equipment can have fatal consequences. Extreme heat leads to deaths and illnesses that are preventable when people are able to stay cool indoors. From 1979 through 2003 excessive heat exposure caused at least 8,000 deaths in the United

States.^{cxxiv} According to the US Department of Health and Human Services, Centers for Disease Control and Prevention, “Air conditioning is the strongest protective factor against heat-related illness.”^{cxxv}

In a 2007 report entitled “Unhealthy Consequences: Energy Costs and Child Health: A Child Health Impact Assessment of Energy Costs and the Low Income Home Energy Assistance Program,” researchers identify effects of high energy bills and utility disconnections on health and safety. A key finding of the report is that “[i]n addition to imposing general hardship, disconnected utilities make it difficult to manage chronic conditions such as asthma or diabetes, which require electricity to operate medical equipment or to refrigerate medications, such as insulin.”^{cxxvi}

In cold weather, young children and the elderly are particularly at risk for cold-related illness or death.^{cxxvii} Extreme heat is similarly dangerous for the elderly, the very young, and those with chronic health conditions.^{cxxviii}

In addition, loss of essential utility service results in other costs to the consumer, including spoiled food, lost wages, and the like; as well as costs to society, such as hospital room emergency care, other health care costs, and credit and collection costs.^{cxxix} As has been documented, prepaid service increases the incidence of disconnection from service, and it is not in the public interest to place access to this necessary service further at risk for many households.

43. Rates and transaction fees that result in increased cost of service

Low-income customers using prepaid utility service tend to make numerous, small payments on a monthly basis to retain electricity or natural gas service, often incurring transaction fees that add to the customer’s total cost for basic service. Experience from SRP’s M-Power program indicates customers made an average of 7.1 payments per month during the peak summer period.^{cxxx} When transaction fees are tacked onto these payments, prepaying customers experience a significant increase in their total cost of service.

44. Forfeiture of regulatory consumer protections regarding billing, payment, disconnection of service, and payment plans

The movement to prepaid service allows companies to sidestep critical consumer protections that have evolved over decades while altering the utility’s incentives to interact creatively and constructively with customers having trouble staying current on their bills. State legislators and utility regulators have long recognized that utility service is a necessity of modern life and that loss of service poses a threat to health and safety. Toward this end, they have adopted important utility consumer protections regarding bill payment timeframes, secure, reliable notification prior to disconnection of service, limitations on disconnection during harsh weather conditions, the right to dispute a bill, and special protections for the elderly and disabled. Many states help to ensure utility bill affordability through discounted rate structures and “arrearage management” programs. In some states, consumer protections

include prohibitions or limitations on residential customer late payment fees and security deposits. In most cases, prepaying customers lose access to these protections.

45. Reduced access to less punitive affordability programs such as arrearage management, percentage of income payment plans, and levelized billing

In many cases, low-income prepayment customers are restricted from participating in more traditional programs intended to enhance affordability and aid in home energy cost management. In the case of arrearage management, it is clear that with traditional prepaid service disconnection policies, customers will not accrue significant arrears. But the traditional program design is not compatible with less punitive programmatic means of controlling customers' bills and arrearages.

V. Benefits not exclusive to traditional prepaid service customers but risks are real

In summary, provision of the customer benefits cited by prepaid service proponents are generally not exclusive to a program that requires forfeiture of consumer protections and heightened risk of service loss. The same technology that is used to facilitate transfer of near-real-time usage and expenditure information, which can support non-punitive conservation benefits, can be modified and used to provide all smart metered customers with such information. In addition, security affordability problems may be addressed through regulatory and programmatic solutions that do not require participation in a prepaid service program. Further, no customers are currently precluded from making payment in advance of receiving a monthly bill. However, under the traditional prepaid service model, evidence shows concentration of participation among lower-income households, high rates of service disconnection, rates and fees that do not enhance affordability of service, limitations on access to budget billing and other customer service programs that can benefit lower-income customers, and requirements that participating customers forego essential consumer protections.

X. EVALUATION TOOL TO MEASURE EFFECTIVENESS AND OUTCOMES OF IMPLEMENTATION OF PREPAID SERVICE IN THE DISTRICT OF COLUMBIA

Following is a recommended data collection and reporting protocol that should be implemented in the event a prepaid service programs is approved for the District of Columbia. Such a protocol is required to evaluate the extent to which a program is achieving stated goals, and, importantly, to ascertain the extent to which it affects access to and quality of service for the broad range of prospective participants.

With respect to evaluation and reporting requirements, PEPCo should be required to track and report monthly on the following data points:

- Participating customers by zip code of census tract
- Participant housing type, vintage, and size;
- Participant's household income;
- Number of household members 65 years of age or more in the participating household;
- Number of household members 5 years of age or younger in the participating household;
- Participant's race and ethnicity
- Baseline usage and expenditures by month;
- Post-enrollment usage and expenditures;
- Pre-enrollment involuntary service loss;
- Post-enrollment service loss;
- Duration of post-enrollment service loss;
- Reasons for post-enrollment service loss;
- Pre-program arrears;
- Post-enrollment payments, disaggregated by contribution to arrears and billing credits;
- Frequency of post-enrollment payments;
- Average post-enrollment payment amount;
- Method of payment; and
- Transaction fees incurred.

In addition, the following survey questions should be asked of customers upon application to the pilot program, during participation, and post-participation:

- How were you made aware of or chosen for pilot participation?
- Did you ever experience unwelcome loss of service over the past 12 months?
 - If so, how many times?
- Did you ever keep your home at an unsafe or unhealthy temperature over the past 12 months?
 - If so how many times?
- Did you ever forego necessities over the past 12 months to pay for a utility bill?
 - If so, how many times?

- Including transaction fees that are required for some forms of payment, do you pay more for prepaid service or traditional service?
- If you were faced with disconnection of service because you could not afford to stay current on your electric bill, which of the following hypothetical options would you prefer?
 - A payment agreement that allowed you to pay an affordable amount monthly over a 12-month period to retire arrearage?
 - Prepaid service where service is remotely and automatically shut off when credit balances are exhausted?
- Did you change your consumption levels or patterns?
 - If so, explain how.
- If you were faced with disconnection of service because you could not afford to stay current on your electric bill, which of the following hypothetical options would you prefer?
 - A payment agreement that allowed you to pay an affordable amount monthly over a 12-month period to retire arrearage?
 - Prepaid service where service is remotely and automatically shut off when credit balances are exhausted?

XI. GENERAL RECOMMENDATIONS AND ALTERNATIVE PROGRAM DESIGN ELEMENTS

Based on the foregoing, the authors conclude that the risks associated with traditional prepaid service program design outweigh the customer benefits, particularly for lower-income utility customers. We further conclude that prepaid service, as it is typically proposed, fails to enhance affordability that enhances low-income home energy security and uninterrupted access to essential utility service. As described herein, the District has adopted a strong regulatory consumer protection framework and developed a comprehensive portfolio of programs to enhance affordability. We therefore recommend opposition to traditional prepaid service in the District of Columbia, but nonetheless recommend consideration of support for programs and policies as follows:

- Provide steady stream information regarding usage and expenditures available to all customers opting to receive it
- Provide all customers with the tools to prepay and make small, frequent payment without added transaction fees
- Limit or prohibit security deposit requirements for low-income customers
- Expand bill payment assistance and arrearage management program benefits to low-income customers

In short, while we recommend rejection of the traditional prepaid service model, we recommend support for non-punitive design components along with expansion of the existing affordability program portfolio and consumer protection structure.

XII. APPENDICES

W.NASUCA Prepaid Service Resolution

**NATIONAL ASSOCIATION OF STATE UTILITY CONSUMER ADVOCATES
RESOLUTION 2011-3
URGING STATES TO REQUIRE CONSUMER PROTECTIONS
AS A CONDITION FOR APPROVAL OF
PREPAID RESIDENTIAL GAS AND ELECTRIC SERVICE**

Whereas, some gas and electric utilities have sought to replace traditional credit-based service to some residential customers with prepaid service delivered through prepayment meters or digital meters with remote connection and disconnection capabilities; and

Whereas, prepaid gas and electric service requires customers to pay in advance for their service, with prepaid account balances decreasing as service is delivered; and

Whereas, automated and remote disconnection of service can and does occur when prepaid account balances are depleted; and

Whereas, experience in the United States and United Kingdom demonstrates that prepaid metering and prepaid billing (1) is targeted toward and concentrated among customers with low or moderate incomes that are facing service disconnections for nonpayment, (2) results in more frequent service disconnections or interruptions, and (3) is delivered at a higher rate than traditional credit-based service;¹ and

Whereas, most of the current state consumer protection requirements regarding the disconnection of service were not developed in anticipation of prepaid services, and such protections may be bypassed or eliminated when services are provided on prepaid basis;

Whereas, proponents of prepaid service have sought legislation in at least one state providing that automated, remote disconnection of service upon depletion of prepaid account balances be considered a voluntary termination of service by the customer and not a disconnection by the utility subject to consumer protection laws and regulations regarding the disconnection of service;² and

Whereas, the proliferation of digital meters with remote connection and disconnection capabilities makes implementation of prepaid service more feasible economically for utilities; and

Whereas, prepaid utility service reduces or eliminates utility incentives to negotiate effective, reasonable payment agreements and to implement effective bill payment assistance and arrearage management programs; and²

Whereas, increased service disconnections of vital gas and electric service that come with implementation of prepaid service and prepaid metering threaten the health and safety of customers, particularly those who are most vulnerable to the effects of a loss of service, including the elderly, disabled and low-income families, as detailed and documented in a companion resolution encouraging state legislatures and state public utility commissions to institute programs to reduce the incidence of disconnection of residential gas and electric service based on nonpayment; and

Whereas, utilities offering prepaid service benefit financially from reduced cash working capital requirements, uncollectibles amounts and credit and collections risk; and

Whereas, utilities in at least one state require customers to pay deposits for a customer prepayment device or system;³ and

Whereas, providers of residential electric service in at least one state impose additional fees on customers choosing to make payments more frequently than once every thirty days and under other circumstances;⁴ and

Whereas, in at least one instance, a company has reportedly gone out of business after receiving prepayment funds from customers, resulting in large unpaid fines and more distressingly in an undetermined number of customers having lost their money;⁵

Now, therefore, be it resolved, that NASUCA continues its long tradition of support for the universal provision of essential residential gas and electric service for all customers;

Be it further resolved, that proposals by utility companies that seek to replace traditional credit-based service to some residential customers with prepaid service delivered through prepayment meters or digital meters with remote connection and disconnection capabilities should not be approved unless they guarantee that current consumer protections are not bypassed or eliminated and that adequate and comparable consumer protections are developed and in place. At a minimum, if prepaid services are offered, a utility should be required to satisfy each of the following conditions:

- (1) All regulatory consumer protections and programs regarding disconnection limitations or prohibitions, advance notice of disconnection, premise visits, availability of payment plans or deferred payment agreements, availability of bill payment assistance or arrearage forgiveness, and billing disputes are maintained or enhanced;
- (2) In the event that the billing credits of a customer receiving prepaid residential electric or natural gas service are exhausted, the customer shall be given a reasonable disconnection grace period, after which the customer shall revert to

traditional, credit-based service, subject to all rules and customer protections applicable to such service;

(3) Prepayment households include no one who is³

(a) income-eligible to participate in the federal Low Income Home Energy Assistance Program (LIHEAP); or

(b) protected under state law from disconnection for health or safety reasons;

(4) Prepaid service is only marketed as a purely voluntary service and is not marketed to customers facing imminent disconnection for non-payment;

(5) Utilities offering prepaid service also offer effective bill payment assistance and arrearage management programs for all customers, including customers with arrearages who choose prepayment service;

(6) Rates for prepaid service are lower than rates for comparable credit-based service, reflecting the lower costs associated with reduced cash working capital requirements, uncollectibles amounts and shareholder risk affecting a utility's return on equity;

(7) Utilities demonstrate the cost effectiveness of any proposed prepaid service offerings through a cost versus benefit analysis and reveal how costs will be allocated among various classes of customers;

(8) Prepayment customers are not subjected to any security deposits or to additional fees of any kind, including but not limited to initiation fees or extra fees assessed at any time customers purchase credits;

(9) Utilities ensure there are readily available means for prepayment customers to purchase service credits on a 24-hour a day, seven-day a week basis;

(10) Prepayment customers can return to credit-based service at no higher cost than the cost at which new customers can obtain service;

(11) Payments to prepaid accounts are promptly posted to a customer's account so as to prevent disconnection or other action adverse to the customer under circumstances in which the customer has in fact made payment; and

(12) Adequate financial mechanisms are developed and in place within the state to guarantee that funds prepaid by customers are returned to the customers who prepaid them if and when a company becomes insolvent, goes out of business or is otherwise unable to provide the services for which the funds were prepaid;

Be it further resolved, that the implementation of prepaid service programs should be 94 monitored to ensure that it does not in practice result in an increased rate of service disconnections for non-payment;

Be it further resolved, that utilities implementing prepaid service programs should track and report to the state regulatory commission separately for credit-based and prepayment customers each of the data points delineated in the companion resolution urging the states⁴ to gather uniform statistical data on billings, arrearages and disconnections of residential gas and electric service;

Be it further resolved, that NASUCA authorizes its Executive Committee to develop specific positions and take appropriate actions consistent with the terms of this resolution. The Executive Committee shall advise the membership of any proposed action prior to taking action if possible. In any event the Executive Committee shall notify the membership of any action pursuant to this resolution.

Submitted by Consumer Protection Committee

Approved June 28, 2011

San Antonio, Texas

Abstention: Tennessee

¹“SRP’s prepaid electricity plan found to have higher rates,” *The Arizona Republic*, (July 11 2010), www.azcentral.com/private/cleanprint/?1299004402750; Electric Power Research Institute, “Paying Upfront: A Review of Salt River Project’s M-Power Prepaid Program, (October 2010); Talbot, “Prepayment meters: A scourge penalising the poor” (June 2009), <http://www.energychoices.co.uk/prepayment-meters-a-scurge-penalising-the-poor.html>; Centre for Sustainable Energy and National Right to Fuel Campaign, “Counting the Hidden Disconnected,” (1998).

²See 2011 Iowa Proposed Legislation, House Study Bill158, <http://coolice.legis.state.ia.us/Cool-ICE/default.asp?Category=billinfo&Service=Billbook&menu=false&hbill=hsb158>.

³“Paying Upfront” A Review of Salt River Project’s M-Power Prepaid Program,” EPRI, Palo Alto, CA: (2010), <http://www.srpnet.com/environment/earthwise/pdfx/spp/EPRIMPower.pdf>.

⁴Biedrzycki, “New Fees On Residential Electric Bills Complicate Cost Comparisons For Consumers Shopping For A Better Deal And Penalize Those Who Save Electricity And Those Struggling To Pay Their Bill” (February 2011), <http://www.scribd.com/doc/49467979/Fees-Report-FINAL-2232011>.

5Texas Public Utility Commission, News Release, “PUC orders \$3.7 million in penalties: two former retail electric providers fined millions (Jan. 14, 2010), <http://www.puc.state.tx.us/nrelease/2010/011410.pdf>; “Consumer group: Electricity companies have big fees hidden in small print,” KHOU11 Houston (April 30, 2011) , <http://www.khou.com/news/local/Consumer-group-Electricity-companies-have-big-fees-hidden-in-small-print--121014164html>.

X. NEADA Prepaid Service Resolution

RESOLUTION

Pre-Paid Residential Gas and Electric Meters: Public Service Commissions Should Require the Inclusion of Comprehensive Consumer Protections and Rates that Are Lower than Comparable Rates for Credit-based Service

Whereas, the National Energy Assistance Directors’ Association, representing the state directors of the Low Income Home Energy Assistance Program (LIHEAP) has a long standing interest in helping poor families stay connected to the grid and afford the cost of home energy through the use of bill payment assistance and weatherization; and

Whereas, access to home energy includes a range of bill payment and shut-off protections including winter shut-off rules; and

Whereas, the California Public Service Commission recently rejected an application from the San Diego Electric and Gas Company to implement prepaid electric utility service because the program lacked adequate consumer protections that were available to post-paying ratepayers; and

Whereas, the National Association of State Utility Consumer Advocatesⁱⁱ, whose members include state designated officials whose mission is to represent utility customers before their respective public service commissions approved a resolution proposing that utilities be required to satisfy each of the following twelve conditions prior to any implementation of prepaid gas and electric service as well that:

(1) All regulatory consumer protections and programs regarding disconnection limitations or prohibitions, advance notice of disconnection, premise visits, availability of payment plans or deferred payment agreements, availability of bill payment assistance or arrearage forgiveness, and billing disputes are maintained or enhanced;

(2) In the event that the billing credits of a customer receiving prepaid residential electric or natural gas service are exhausted, the customer shall be given a

reasonable disconnection grace period, after which the customer shall revert to traditional, credit-based service, subject to all rules and customer protections applicable to such service;

(3) Prepayment households include no one who is: (a) income-eligible to participate in LIHEAP; or (b) protected under state law from disconnection for health or safety reasons;

(4) Prepaid service is only marketed as a purely voluntary service and is not marketed to customers facing imminent disconnection for non-payment;

(5) Utilities offering prepaid service also offer effective bill payment assistance and arrearage management programs for all customers, including customers with arrearages who choose prepayment service;

(6) Rates for prepaid service are lower than rates for comparable credit-based service, reflecting the lower costs associated with reduced cash working capital requirements, uncollectibles amounts and shareholder risk affecting a utility's return on equity;

(7) Utilities demonstrate the cost effectiveness of any proposed prepaid service offerings through a cost versus benefit analysis and reveal how costs will be allocated among various classes of customers;

(8) Prepayment customers are not subjected to any security deposits or to additional fees of any kind, including but not limited to initiation fees or extra fees assessed at any time customers purchase credits;

(9) Utilities ensure there are readily available means for prepayment customers to purchase service credits on a 24-hour a day, seven-day a week basis;

(10) Prepayment customers can return to credit-based service at no higher cost than the cost at which new customers can obtain service;

(11) Payments to prepaid accounts are promptly posted to a customer's account so as to prevent disconnection or other action adverse to the customer under circumstances in which the customer has in fact made payment; and

(12) Adequate financial mechanisms are developed and in place within the state to guarantee that funds prepaid by customers are returned to the customers who prepaid them if and when a company becomes insolvent, goes out of business or is otherwise unable to provide the services for which the funds were prepaid;

Now, therefore, be it resolved that the National Energy Assistance Directors' Association (NEADA): recommends that public service commissions only consider approving proposals to implement prepaid electric service that meet each of the conditions set forth above; recommends that any implementation of prepaid service programs should be monitored to ensure that it does not in practice result in an increased rate of service disconnections for nonpayment; and recommends that utilities implementing prepaid service programs track and report to the state regulatory commission separately for credit-based and prepayment customers each of the data points delineated in the companion resolution to gather uniform statistical data on billings, arrearages and disconnections of residential gas and electric service.

ⁱ <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M086/K541/86541422.PDF> pages 50-55, California Public Service Commission 1/16/2014 Decision 14-01-002

ⁱⁱ <http://nasuca.org/urging-states-to-require-consumer-protections-as-a-condition-for-approval-of-prepaid-residential-gas-and-electric-service-2011-03/>

Y. NASUCA/NARUC Data Reporting Resolution

NATIONAL ASSOCIATION OF STATE UTILITY CONSUMER ADVOCATES

Resolution 2019-07

Resolution on Best Practices in Data Collection and Reporting for Utility Services

Delinquencies in Payments and Disconnections of Service

Whereas, services from public utility companies including providers of electricity, heating fuels, water and wastewater are vital and necessary to modern life;

Whereas, many utility customers have chronic difficulties paying their utility bills in full, which can result in disconnection of service by the utility for nonpayment;

Whereas, these difficulties have been of concern for state regulatory agencies and other interested parties for at least 50 years;

Whereas, these difficulties have persisted or are worsening despite protracted and ongoing efforts to provide direct financial support from federal and state tax dollars, and customer donations, plus financial assistance and programming provided by social services agencies, religious institutions, and other community-based organizations;

Whereas, disconnection during either cold or hot temperature extremes in weather can prove dangerous and potentially life-threatening;

Whereas, many electric customers rely on continuous service to power medical care devices that are essential for their health, the disconnection of which can be life-threatening;

Whereas, almost half of all residential energy consumption is devoted to heating and cooling of homes, with these services being essential to maintaining health, safety and welfare of ratepayer households;

Whereas, the large number of disconnections of utility service jeopardizes the health and safety of many households and the safety of many communities and leaves vulnerable households subject to risk of harm;

Whereas, households with seniors and infants and very young children are particularly at risk if utility services are disconnected as all are more susceptible to hypothermia if there is no heat and heat stress when there is no air conditioning;

Whereas, seniors on fixed incomes, in particular, may face challenges in not only affording service but also in accessing assistance for paying utility bills, due to mobility limitations or other age-related disabilities;

Whereas, households with annual incomes at or below \$30,000, have “energy burdens” two to four times as large as households that make in excess of \$30,000 (with “energy burden” defined as the percent of income spent on energy costs);

Whereas, funding to assist lower-income households pay their energy bills is insufficient to meet the need, with funding available from the federal Low-Income Home Energy Assistance Program (LIHEAP) able to assist only about 6.1 million or about one-fifth of eligible households, with an average annual grant of \$458, during federal fiscal year 2018;

Whereas, low-income households often postpone other important purchases, even in some cases going without food, or forgoing medical or dental care, in order to pay utility bills, or suffer illness in an effort to lower those bills by reducing their usage of heating and cooling energy to what may be unhealthy levels;

Whereas, States vary widely in the protections against disconnection available to customers and to households with persons who have a serious illness or who are otherwise vulnerable, including additional procedural delays, or disconnection stays of limited or unlimited duration, with some states having no protections;

Whereas, both National Association of Regulatory Utility Commissioners (NARUC) and the National Association of State Utility Consumer Advocates (NASUCA) have revisited related concerns about low-income utility services in recent years and have both passed at least a dozen related resolutions on this topic;

Whereas, NARUC and NASUCA recognize the value of evidence-based policy making to improve outcomes for both utilities and customers;

Whereas, data collection and sharing play an integral role in providing information for developing evidence-based policies; *now therefore be it*

Resolved, that NASUCA, convened at its 2019 annual meeting in San Antonio, TX encourages all interested parties to study and consider implementing best practices to help reduce the incidence of and minimize the negative impacts on utility services payment delinquencies and disconnections and take into consideration and explore the following actions;

- work to standardize the terms used to discuss delinquencies and disconnections and definitions of those terms including, at a minimum, the terms -- disconnection, reconnection, displacement (meaning a customer once disconnected who does not ever reconnect to service at the same address), vulnerable customers and critical medical needs customers;
- work to standardize the data collected, insofar as that is practicable, in order to facilitate state comparisons and track progress towards reducing these problems;
- describe and implement best practices related to data collection regarding delinquencies and disconnections;
- regularly seek input from consumers, and the agencies and organizations that work with consumers, so that utility companies and regulators continue to be apprised of evolving customer needs and preferences;
- consider implementing quality audits and data-governance practices to ensure the information collected and reported is valid and reliable;
- to the extent permissible under federal and state laws, collect and share data for research purposes, while ensuring privacy of personally identifiable information;
- work to identify and share best practices that demonstrate promise to reduce delinquencies and disconnections, with the explicit goal of increasing customers capabilities to pay utility bills over time including best practices that identify and highlight access to helpful programs and services, including bill affordability programs such as discount rates or percentage of income payment plans, energy efficiency programs and services, weatherization, consumer education, expanding existing shutoff protections, custom payment plans that reflect the ability of the customer to successfully complete the payment plan, and flexible bill due dates;
- train employees of utilities and service agencies to assess and work with customers on sustainable solutions to avoid arrearages and maintain utility services;
- work with all stakeholders, including utility companies, to collect and share data on arrearages and disconnections;
- share information about best practices with all interested parties; and
- work on continuous improvements in policies and programs designed to help reduce delinquencies and disconnections; *and, be it further*

Resolved, that States should consider requiring utilities to (1) collect monthly data that tracks uncollectables, number of payment arrangements, number of payment arrangement defaults, number of revised payment arrangements, disconnections, reconnections, duration and frequency of disconnections and other relevant data points; (2) make the data publicly available on a monthly basis, delineated by general residential customers and those receiving low-income assistance; and (3) file the data with state public utility commissions to be published on the public utility commission's website so that policy makers might have access to sufficient, objective and granular data for forming public policy aimed at protecting the public health, safety and welfare.

Be it further resolved, that NASUCA authorizes its Executive Committee to develop specific positions and take appropriate actions consistent with the terms of this resolution. The Executive Committee shall advise the membership of any proposed action prior to taking action if possible. In any event the Executive Committee shall notify the membership of any action pursuant to this resolution.

Submitted by Consumer Protection Committee

Approved November 18, 2019

San Antonio, Texas

XIII. ENDNOTES

- i. See Sussman, R., et al., “Potential for Prepay as an Energy Efficiency Program in Minnesota,” Conservation Applied Research and Development, December 2018.
- ii. *Id.* at 2.
- iii. *Id.* at 25.
- iv. Docket Number: P-2016-2573023
- v. The Company's Proposal is set forth in Statement 1, prepared by Jude Scarpello.
- vi. *Id.* at 15, 16.
- vii. *Id.* at 14-15.
- viii. *Id.* at 6.
- ix. See PECO Statement No. 1 at 11; PECO Response to OCA-III-6.
- x. PECO Answer to CAUSE-PA I-44.
- xi. PECO Response to CAUSE-PA-I-45.
- xii. PECO Response to: OCA-I-21,;CAUSE-PA-I-27; OCA-III-4. OCA-III-7; I&E-I-18
- xiii. PECO Response to OCA-III-7.
- xiv. PECO Answer to OCA I-31.
- xv. PECO Statement No. 1 at 8.
- xvi. PECO Answer to OCA I-32.
- xvii. PECO Response to OCA-I-26.
- xviii. PECO Statement No. 1 at 17.
- xix. PECO Response to OCA-I-3.
- xx. PECO Response to I&E-I-9.
- xxi. PECO Response to I&E-I-26.
- xxii. NRDC Letter to Pennsylvania Public Utility Commission, December 15, 2016.
- xxiii. Recommended Decision, Pennsylvania Public Utility Commission Docket No. P-2016-2573023, January 30, 2018, p. 79.
- xxiv. Opinion and Order, Pennsylvania Public Utility Commission Docket No. P-2016-2573023, April 25, 2019, p. 89.
- xxv. Request of Baltimore Gas and Electric Company for Approval of a Prepaid Pilot Program and Request for Waivers of COMAR and Commission Orders, April 21, 2017. p. 1.
- xxvi. Plan at p. 4.
- xxvii. Plan at p. 2.
- xxviii. Plan at p. 2.
- xxix. Plan at p. 4.
- xxx. OPC 3-6.
- xxxi. Plan at p. 1.
- xxxii. Plan pp. 7-8.
- xxxiii. *Plan* Attachment 3.
- xxxiv. Maryland Public Service Commission, Case No. 9453, Order No. 88438.
- xxxv. *Id.*
- xxxvi. *Id.*
- xxxvii. Docket No. 17-0837.
- xxxviii. The Company's Proposal was set forth in ComEd Ex. 1.0, Direct Testimony of Grace Brigando, and ComEd Ex. 2.0, Direct Testimony of Robert Garcia.
- xxxix. ComEd Ex. 1.0, p. 5.
 - xl. *Id.*, p. 11.
 - xli. *Id.*, p. 5.
 - xl. *Id.*, p. 6.
 - xl. *Id.*, p. 6.
 - xl. AG Ex. 1.1, ComEd response to AG 2.10.
 - xl. ComEd Ex. 1.0, p. 10.
 - xl. ComEd response to AG 3.18.
 - xl. ComEd Ex. 2.01, p. 8.; ComEd Ex. 2.0, p. 7.

- xlvi. ComEd Ex. 1.0, p. 4.
- xlviii. Ex. ComEd 2.01, pp. 5, 8.
- xliv. ComEd Motion to Stay the Proceeding, Illinois Commerce Commission, Docket No. 17-0837, April 4, 2018, p. 1.
 - I. Final Order of February 21, 2019, p. 34.
 - ii. *Id.*
 - iii. Arizona Public Service Company, “Demand Side Management Residential Prepaid Energy Conservation Pilot Program: End of Pilot Report,” February, 2015, p. 2.
 - liii. *Id.* at p. 21.
 - liv. See, Final Decision, Public Utilities Commission of the State of California, Application 11-10-002, January, 2014, p. 50.
 - lv. ORA Opening Brief at 20-21.
 - lvi. *Id.*
 - lvii. Joint Parties Opening Brief at 10.
 - lviii. Final Decision, Public Utilities Commission of the State of California, Application 11-10-002, January, 2014, p. 54.
 - lix. Neenan, B., *Paying Upfront: A Review of Slat River Project’s M-Power Prepaid Program*, “EPRI Report”, Table 4-3, October 2010, p. 4-6.
 - lx. *Id.* at 4-6.
 - lxi. U.S. Census Bureau, “[State & County Quick Facts](#),” (2012).
 - lxii. EPRI Report, Table 4-3, p. 4-6.
 - lxiii. *Id.*
 - lxiv. Randazzo, “[Prepaid Utilities Criticized as Unfair](#),” The Republic, AZcentral.com, June 19, 2012.
 - lxv. EPRI Report, p. 3-1.
 - lxvi. M-Power and Standard Price Plan for Residential Service, Effective May 2019 Billing Cycle.
 - lxvii. In CHELCO’s rates, approved by the Commission, they state, “CHELCO will spend \$270.70 for equipment . . . that has remote cut off capabilities. The carrying cost of this additional expense was calculated by the company to be \$0.15 per day.” Over a year, customers will pay \$54.75 more due to these special meters. Florida Public Service Commission, “Case Background, Docket No. 100079-EC,” (May 6, 2010).
 - lxviii. The lowest potential start-up cost, including the additional fixed cost incurred as a result of switching to prepaid service, amounts to \$179.75. This number incorporates the installation fee (\$27) and the deposit (\$25). If a customer cannot accommodate an installation between 9:00AM and 5:00 PM, the total costs amount to \$227.75 to reflect the \$75 off-hours installation charge.
 - lxix. See [Central Georgia EMC Prepaid Metering Agreement](#) (visited 10/9/19), and see also, [A Summary of Electric Service and Associated Fees, Central Georgia EMC](#) (Visited 10/9/19).
 - lxx. [First Choice Power Power-To-Go \(SM\) Terms and Conditions, First Choice Power Fees](#), (visited on 10/8/19).
 - lxxi. [Tri-State Electric Membership Corp. Advance Pay Service Agreement](#) (visited October 8, 2019).
 - lxxii. See [Frequently Asked Questions About M-Power](#) (visited 10/8/2019).
 - lxxiii. See [Jackson Energy Cooperative Corporation Standard Rider for Prepay Electric Service](#) (effective June 5, 2015) (Visited 10/15/2019).
 - lxxiv. [Tri-State Electric Membership Corp. Advance Pay Service Agreement](#) (visited October 8, 2019).
 - lxxv. See [sign on letter to the Sec of HHS urging prompt release of appropriated funds – Olivia Cite].
 - lxxvi. See Wood County Electric Cooperative, “[Indemnity and Member Responsibilities](#)” available at: (visited 10/8/2019).
 - lxxvii. Rules 304.7 (l) – (o) and (q).
 - lxxviii. See e.g., Rule 304.7 (r) - (t).
 - lxxix. Additional affected rules include Rules 304.3, 304.4 and 304.7(p).
 - lxxx. See, Rule 305.1.

- lxxxi. Rule 306.1.
- lxxxii. Rule 306.2.
- lxxxiii. See e.g., Iowa Admin, Code 199.19.4(11)(payment agreements of at least 12 months and a right to a second payment agreement for customers who default on the first payment agreement).
- lxxxiv. Rule 307.7.
- lxxxv. Rule 307.8.
- lxxxvi. Rule 307.10.
- lxxxvii. Rules 307.15-307.17.
- lxxxviii. Rule 311.3.
- lxxxix. Rule 311.3.
 - xc. Rule 311.5.
 - xc. Rule 314.
 - xcii. Rule 312.
 - xciii. Rule 312.2.
 - xciv. Rule 312.4.
 - xcv. Rule 313.
 - xcvi. Rule 313.2.
 - xcvii. Rule 313.3.
 - xcviii. Rule 313.4.
- xcix. Apprise, *District of Columbia LIHEAP Energy Burden Analysis* (Sept. 2019) at p.i.
 - c. *Id* at ii (DC's LIHEAP requires the household to pay at least one energy bill).
 - ci. *Id.*
 - cii. Note: Kansas Corp Commission decision denying permanent prepayment program found that the utility failed to demonstrate that arrears could have been reduced through other programs.
 - ciii. Formal Case 1148, In the Matter of the Investigation into the Establishment and Implementation of Energy Efficiency and Energy Conservation Programs Targeted Towards Both Affordable Multifamily Units and Master Metered Multifamily Buildings Which Include Low and Limited Income Residents in the District of Columbia (\$11.25 million).
 - civ. Formal Case 1142, In The Matter of the Merger of AltaGas, Ltd. and WGL Holdings, Inc. (Merger Commitment No.3 to provide \$4.2 million for energy efficiency and energy conservation initiatives benefitting low and limited income residents of multifamily housing).
 - cv. See, e.g., Mass. Regs. Code tit. 220, § 26.02, 220 MA ADC 26.02. Security deposits may only be required from new non-residential accounts; or from non-residential accounts for service of a similar character, at any location, under any name, if this service has been properly terminated during the last 18 months due to non-payment; or if a non-residential account has failed to pay at least two bills, not reasonably in dispute, within 45 days from the date of receipt of each such bill during the same 18-month period.
 - cvi. Owen, Ward, "[Smart Prepayment in Great Britain](#)," Sustainability First, March 2010, at 11.
 - cvii. Centre for Sustainable Energy and National Right to Fuel Campaign, "Counting the Hidden Disconnected," (1998), p. 8.
 - cviii. National Right to Fuel Campaign, "Fuel Poverty Fact File: Progress and Shortfall," (2000), p. 23-26.
 - cix. Mummery and Reilly, Consumer Focus, "Cutting Back, Cutting Down, Cutting off: Self Disconnection Among Prepayment Meter Users," July 2010, ("Mummery and Reilly") page 5.
 - cx. Accent for National Housing Federation, "Pre-Payment Meter Utilities Customers: Wave 2 Final Report," (April 2009), p. i.
 - cx. *Id.*
 - cxii. Accent report prepared for National Housing Federation, "Pre-Payment Meter Utilities Customers, Final Report," (June 2008), p. 12.
 - cxiii. Calculated by National Consumer Law Center using Office of Gas and Electricity Markets Domestic Suppliers Quarterly Debt and Disconnections Reports from 2008.

- cxiv. Centre for Sustainable Energy and National Right to Fuel Campaign, “Counting the Hidden Disconnected,” (1998), p. 20.
- cxv. *Id.* at p. 21.
- cxvi. Mummery and Reilly at p. 17.
- cxvii. Electricity is required for electric resistance space heating and to operate a boiler or furnace fueled by natural gas or heating oil.
- cxviii. National Energy Assistance Directors’ Association, [National Energy Assistance Survey](#) (Nov. 2011).
- cxix. *Id.* at 5 (Table II).
- cxx. National Energy Assistance Directors’ Association, [2009 National Energy Assistance Survey](#) (Apr. 2010), at 1-2.
- cxxi. AARP, National Consumer Law Center, National Association of State Utility Consumer AdvOPCtes, Consumers Union, and Public Citizen, [The Need for Essential Consumer Protections: Smart Metering Proposals and the Move to Time-Based Pricing](#) (Aug. 2010), at 17.
- cxxii. Ahrens, Mary, “Home Candle Fires,” National Fire Protection Association, December 2015, p. iv.
- cxxiii. See, e.g. CNN, “[Official: 3 children die in Bronx fire after candle lit.](#)”
- cxxiv. [National Weather Service, National Oceanic and Atmospheric Administration.](#)
- cxxv. [Centers for Disease Control and Prevention.](#)
- cxxvi. Smith, Lauren A., et al., “Unhealthy Consequences: Energy Costs and Child Health: A Child Health Impact Assessment of Energy Costs and the Low Income Home Energy Assistance Program,” Child Health Impact Working Group, April 2007, p. 7.
- cxxvii. U.S. National Institutes of Health, National Institute on Aging, [Hypothermia: A Cold Weather Risk for Older People, Press Release](#) (Jan. 16, 2009).
- cxxviii. U.S. Centers for Disease Control and Prevention, [Extreme Heat Prevention Guide.](#)
- cxxix. National Association of State Utility Consumer Advocates, [Encouraging State Legislatures and State Public Utility Commissions to Institute Programs to Reduce the Incidence of Disconnection of Residential Gas and Electric Service Based on Nonpayment](#) (June 28, 2011).
- cxxx. EPRI Report at 4-7.



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