



**Office of the People's Counsel
District of Columbia**

1133 15th Street, NW • Suite 500 • Washington, DC 20005-2710
202.727.3071 • FAX 202.727.1014 • TTY/TDD 202.727.2876



Sandra Mattavous-Frye, Esq.
People's Counsel

January 18, 2013

VIA ELECTRONIC FILING

Ms. Brinda Westbrook-Sedgwick
Commission Secretary
Public Service Commission
of the District of Columbia
1333 H Street, N.W., 2nd Floor, West Tower
Washington, D.C. 20005

Re: **Formal Case No. 1056, In the Matter of the Application of Potomac Electric Power Company For Authorization to Establish a Demand Side Management Surcharge and an Advance Metering Infrastructure Surcharge and to Establish a DSM Collaborative and an AMI Advisory Group and**

Dear Ms. Westbrook-Sedgwick:

Enclosed for filing in the above-referenced proceeding are an original and three (3) copies of the "Office of the People's Counsel's Motion to Lodge".

If there are any questions regarding this matter, please contact me at (202) 727-3071.

Sincerely,

Laurence C. Daniels
Assistant People's Counsel

Enclosure

cc: Parties of record

**BEFORE THE
PUBLIC SERVICE COMMISSION
OF THE DISTRICT OF COLUMBIA**

In the Matter of

**The Application of the
Potomac Electric Power Company
for Authorization to Establish a
Demand Side Management Surcharge
and an Advance Metering Infrastructure
Surcharge and to Establish a DSM
Collaborative and an AMI Advisory
Group**

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Formal Case No. 1056

**MOTION OF THE OFFICE OF THE PEOPLE’S COUNSEL
REQUESTING THE DISTRICT OF COLUMBIA PUBLIC SERVICE
COMMISSION LODGE THE MARYLAND PUBLIC SERVICE COMMISSION’S
ORDER ON OPT-OUT AND PROPOSED LEGISLATION BY THE
VIRGINIA LEGISLATURE REGARDING A UTILITY CONSUMER’S
ABILITY TO OPT-OUT OF A SMART GRID PROGRAM**

I. INTRODUCTION

Pursuant to Rule 105.8 of the Public Service Commission’s (“PSC” or “Commission”) Rules of Practice and Procedure, 15 D.C.M.R. § 105.8 (2010),¹ the Office of the People’s Counsel of the District of Columbia (“OPC” or “Office”), the statutory representative of utility ratepayers in the District of Columbia, hereby formally moves to lodge on the public record of this proceeding the Maryland Public Service Commission’s order on opt-out and the Virginia Legislature’s proposed legislation regarding a utility consumer’s ability to opt-out of a smart grid program.

¹ 15 D.C.M.R § 105.8 (2010).

II. BACKGROUND

After having its Petition requesting the Commission to investigate the technical and economic feasibility of Pepco offering an opt-out provision to its AMI program denied by the Commission,² the Office informed the District of Columbia City Council (“Council”) of consumers’ concerns about Pepco’s AMI program. Specifically, the Office requested the Council to urge the Commission to initiate a proceeding to investigate the health and safety of Pepco’s smart meters and to inquire in to the feasibility of Pepco providing an opt-out provision to its AMI program.³

On August 9, 2012, Councilmember Yvette Alexander, Chairperson of the Committee on Public Services and Consumer Affairs, submitted a letter to the Commission urging them to initiate an investigation into the health and safety of Pepco’s smart meters and the feasibility of Pepco providing an opt-out provision to its AMI program.⁴

On September 7, 2012, the Commission issued Order No. 16892 in which it announced that it will study the health, safety and privacy aspects of the "smart" meters installed by Pepco and will inquire into the feasibility of allowing District of Columbia consumers to choose not to participate in the Advanced Metering Infrastructure (“AMI”) program.⁵

² Formal Case No. 1056, *In the Matter of the Application of Potomac Electric Power Company for Authorization to Establish a Demand Side Management Surcharge and an Advance Metering Infrastructure Surcharge and to Establish a DSM Collaborative and an AMI Advisory Group*, Order No. 16708, rel. Feb. 16, 2012 and Order No. 16761, rel. Apr. 13, 2012.

³ OPC’s Letter to Councilmember Yvette Alexander, June 1, 2012.

⁴ Letter from Councilmember Yvette Alexander to the Commission, Aug. 9, 2012.

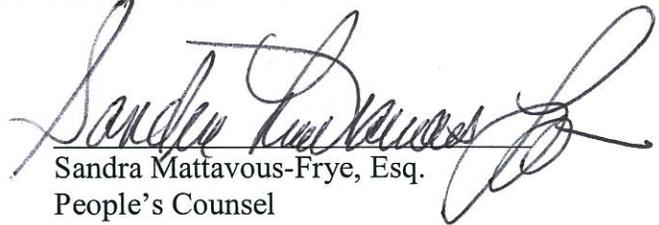
⁵ Formal Case No. 1056, *In the Matter of the Application of the Potomac Electric Power Company for Authorization to Establish a Demand Side Management Surcharge and an Advanced Metering Infrastructure Surcharge and to Establish a DSM Collaborative and an AMI Advisory Group*, Order No. 16892 rel. Sept. 7, 2012.

III. DISCUSSION

OPC submits the Commission's inquiry into the feasibility of allowing consumers to not participate in Pepco's AMI program will include a review of decisions made by other commissions and governing bodies. Therefore the attached documents, Maryland Public Service Commission Order No. 85294⁶ and accompanying dissent to that order (Attachment 1) and the Virginia Legislature's proposed legislation⁷ (Attachment 2), are relevant and should be included in the record of this proceeding.

IV. CONCLUSION

WHEREFORE, the Office respectfully requests the Commission lodge the attached documents and include them in the public record in Formal Case No. 1056.



Sandra Mattavous-Frye, Esq.
People's Counsel
D.C. Bar No. 375833

Karen Sistrunk
Deputy People's Counsel
D.C. Bar No. 390153

Laurence C. Daniels, Esq.
Assistant People's Counsel
D.C. Bar No. 471025

⁶ *In the Matter of the Application of the Potomac Electric Power Company and Delmarva Power and Light Company for Authorization to Deploy a Smart Grid Initiative and to Establish a Surcharge for the Recovery of Cost, Case No. 9207, and In the Matter of the Application of Baltimore Gas and Electric Company for Authorization to Deploy a Smart Grid Initiative and to Establish a Surcharge for the Recovery of Cost, Case No. 9208, Order No. 85294 (Jan. 7, 2013).*

⁷ *Virginia Senate Bill No. 797, A Bill to amend and reenact § 56-576 of the Code of Virginia and to amend the Code of Virginia by adding a section numbered 56-249.8 relating to electric utilities; advanced meters, Offered Jan. 9, 2013.*

OFFICE OF THE PEOPLE'S COUNSEL
1133 15th Street, N.W., Suite 500
Washington, D.C. 20005
(202) 727-3071

Dated: January 18, 2013

ATTACHMENT 1

receive a smart meter but with the option to have that meter installed to operate in an “RF-free” or near RF-free manner². Whichever option we ultimately choose, we will require those ratepayers that exercise the option to bear appropriate costs. However, because we do not believe the record before us provides us with sufficient information regarding the overall system, as well as customer-specific, cost-differential between these two options, we will conduct additional proceedings to resolve these remaining issues. Until such time as we decide which option will be available to customers and the specific costs that will be associated with that option, our May 25, 2012 Interim Order remains in effect, and those ratepayers that have previously informed their utility that they do not wish to receive a smart meter need not take any additional action at this time. After we ultimately determine the nature of the “opt-out” and its associated costs, all ratepayers will have the opportunity to provide their utility with their final decision.

I. PROCEDURAL HISTORY

On February 29, 2012, we issued a “Notice of Hearing and Opportunity to Comment on an “Opt-Out” Option for Smart Meters”,³ initiating this phase of our proceedings. In that Notice, we identified eight specific issues regarding an opt-out option for which we sought input, including the effect on: (1) a smart meter project’s costs and benefits; (2) the current installment schedule; (3) the types, components and/or configuration of meters available for customers who “opt out”; (4) future meter reading; (5) communication of data between the utility and the customers; (6) future billing practices; and (7) electric tariff rate structures and energy programs.⁴ We also scheduled a legislative-style hearing for May 22, 2012, and

² “RF” refers to Radio Frequency.

³ Case No. 9207, Item No. 175; Case No. 9208, Item No. 112.

⁴ *Id.*

directed interested parties to submit initial comments by April 6, 2012 and reply comments by April 27, 2012.⁵

Several parties moved to intervene in these cases, and we received initial written comments from Commission Staff (“Staff”),⁶ the Maryland Energy Association (“MEA”),⁷ BGE,⁸ Pepco,⁹ the Office of People’s Counsel (“OPC”),¹⁰ Washington Gas Energy Services (“WGES”),¹¹ the Maryland Smart Meter Awareness Organization (“MSMA”),¹² Ms. Rebecca Hanna-Diener,¹³ and Mr. Chris Bush.¹⁴ Additionally, BGE submitted the written testimony of Mr. Jules Polonetsky¹⁵ and Dr. Peter Valberg.¹⁶ Finally, on April 26-27, we received reply testimony from Pepco,¹⁷ BGE,¹⁸ MEA,¹⁹ MSMA,²⁰ Direct Energy,²¹ and Mr. Chris Bush.²²

On May 22, 2012, we conducted an extensive legislative-style hearing during which we heard from 51 witnesses.²³ Following this hearing, we issued our May 25, 2012 Interim

⁵ *Id.*

⁶ Case No. 9207, Item No. 180; Case No. 9208, Item No. 119.

⁷ Case No. 9207, Item No. 181; Case No. 9208, Item No. 120.

⁸ Case No. 9208, Item No. 122.

⁹ Case No. 9207, Item No. 183.

¹⁰ Case No. 9207, Item No. 184; Case No. 9208, Item No. 123.

¹¹ Case No. 9207, Item No. 182; Case No. 9208, Item No. 121.

¹² Case No. 9207, Item No. 177; Case No. 9208, Item No. 114.

¹³ Case No. 9207, Item No. 188.

¹⁴ Case No. 9208, Item No. 117.

¹⁵ Case No. 9208, Item No. 126.

¹⁶ Case No. 9208, Item No. 122 at Exhibit 1.

¹⁷ Case No. 9207, Item No. 191.

¹⁸ Case No. 9208, Item No. 134.

¹⁹ Case No. 9207, Item No. 193; Case No. 9208, Item No. 133.

²⁰ Case No. 9208, Item No. 128.

²¹ Case No. 9207, Item No. 192; Case No. 9208, Item No. 132.

²² Case No. 9208, Item No. 127.

²³ Case No. 9207, Item No. 204; Case No. 9208, Item No. 146.

Order, in which we allowed customers, on an interim basis, to inform their utilities that they did not wish to receive a smart meter pending our final ruling on the subject.²⁴

Following the May 22, 2012 hearing, BGE and Pepco submitted written responses to questions posed by the Commission regarding the technical and financial feasibility of various AMI installation alternatives.²⁵ We invited interested parties to comment on these responses,²⁶ and we thereafter received comments from Staff,²⁷ OPC,²⁸ MSMA,²⁹ Ms. Traci Radice,³⁰ and Mr. Chris Bush.³¹

After hearing news reports that Pennsylvania Electric Company (“PECO”) had suspended its smart meter roll-out after encountering overheating and fires, we scheduled another legislative-style hearing for August 28, 2012 and directed the Companies to appear at the hearing to update the Commission as to “any issues of electrical overheating or malfunction associated with their further AMI meter deployment.”³² The Companies appeared before the Commission on August 28, 2012 to discuss the safety of their respective smart meter roll-outs.³³

II. DECISION

1. Additional Costs

The Companies, Staff and MEA have identified several issues that allowing customers to retain their current analog meter would impose upon the ongoing BGE and

²⁴ Order No. 84926.

²⁵ Case No. 9207, Item No. 210; Case No. 9208, Item No. 151.

²⁶ Case No. 9207, Item No. 213; Case No. 9208, Item No. 152.

²⁷ Case No. 9207, Item No. 216; Case No. 9208, Item No. 155.

²⁸ Case No. 9207, Item No. 218; Case No. 9208, Item No. 159.

²⁹ Case No. 9207, Item No. 219; Case No. 9208, Item No. 160.

³⁰ Case No. 9208, Item No. 156.

³¹ Case No. 9208, Item No. 157.

³² Case No. 9207, Item No. 220; Case No. 9208, Item No. 161; Case No. 9294, Item No. 9.

³³ Case No. 9207, Item No. 222; Case No. 9208, Item No. 165; Case No. 9294, Item No. 12.

Pepco roll-outs as well as the potential roll-out in SMECO's service territory.³⁴ These issues include the need to maintain and incur costs associated with a manual meter-reading staff,³⁵ a dual billing system,³⁶ an augmented customer education plan,³⁷ IT system modifications,³⁸ and increased customer service staffing.³⁹ There will also be costs when a residence in which the owner has "opted out" is transferred to a new resident who wants a smart meter instead, and vice versa. No party disputes that allowing customers to retain their current analog meter will cause the Companies to incur costs in each of these areas. If we do ultimately decide to allow customers to retain their current meter, the Companies strongly urge that we require those customers to incur these costs in their entirety.⁴⁰ As previously stated, we will hold additional proceedings to determine these costs and how best to allocate them.⁴¹

2. Lost Benefits

The Companies, Staff and MEA also identify several benefits from AMI that allowing customers to retain their analog meter will dilute from a territory-wide standpoint

³⁴ SMECO's request for authorization to proceed with an Advanced Meter Infrastructure is currently pending before the Commission in Case No. 9294.

³⁵ See e.g., Pepco April 6, 2012 Comments at 10-11; MEA April 6, 2012 Comments at 8-9; May 22, 2012 Tr. 26-28 (Staff).

³⁶ See e.g., Pepco April 6, 2012 Comments at 11.

³⁷ See e.g., Pepco April 6, 2012 Comments at 13. MEA goes further and urges that, in the event we allow customers to retain their analog meter, we require the utilities to inform those customers of all of the benefits they would forego by exercising this option. MEA April 6, 2012 Comments at 13. We will address the specific information to be conveyed to customers when we have decided the precise nature and associated costs of whichever option we ultimately adopt.

³⁸ See e.g., Pepco April 6, 2012 Comments at 2-3.

³⁹ See e.g., Pepco April 6, 2012 Comments at 2-3.

⁴⁰ BGE April 6, 2012 Comments at 17-18; Pepco April 6, 2012 Comments at 12-15; May 22, 2012 Tr. at 132-133 (BGE/Harbaugh).

⁴¹ The Dissent is correct that we analyzed these costs and the alleged concomitant benefits at length prior to our initial approval of BGE's, Pepco's and Delmarva's smart meter roll-out. However, we did so within the overall context of comparing 100% AMI participation versus maintaining the non-AMI *status quo*. We did not develop a record sufficient to allow us to determine whether a slight reduction in AMI participation would render the overall project unfeasible or even affect it sufficiently to over-ride the sincere desire of a small number of customers to forego an AMI meter. As we concede, we may ultimately conclude that it does, but we are not yet ready to reach that conclusion.

and eliminate from the perspective of those customers who exercise this option. In our Orders approving BGE and Pepco's requests for authorization to install territory-wide smart meters, we discussed at length the various operational and supply-side benefits that the utilities hope to achieve through their AMI roll-out.⁴² Not surprisingly, in urging us to require all customers to receive a smart meter, the Companies (supported by Staff and MEA) observe that any alternative will reduce the benefits to be generated by AMI and potentially undermine the project's long-term cost-effectiveness.⁴³ As with the additional costs discussed above, no party denies that some dilution of AMI-related benefits will occur should we allow customers to choose to retain their analog meters. However, we do not believe the record adequately reflects what the likely extent of these lost benefits will be, and we have therefore decided to conduct additional proceedings to closely analyze the extent of both the additional costs and lost benefits before we ultimately decide this issue. Should we ultimately decide to allow customers to retain their analog meter, we will address the effect, if any, this has upon cost-effectiveness when we evaluate the Companies' request for cost-recovery.

3. Health Effects of Smart Meters

MSMA and several individual ratepayers have expressed grave concern that the Radio Frequency ("RF") emissions from smart meters located within or just outside a residence could have adverse health consequences on the home's occupants, particularly those customers unusually susceptible to the effects of even low-level radiation.⁴⁴ In

⁴² See e.g., Order No. 83571 (Pepco) at 29-31 (operational benefits), 31-37 (supply-side benefits).

⁴³ See e.g. BGE April 6, 2012 Comments at 2-4.

⁴⁴ See e.g., MSMA April 2, 2012 Comments at 2 (citing the World Health Organization's classification of smart meter radiation as a level 2B carcinogen); May 22, 2012 Tr. at 169-170 (Jinner)(Citing a study by the California Council on Science and Technology that concluded that RF radiation from smart meters was much higher than

response, the Companies and Staff provided detailed testimony and comments that establish the RF emissions from smart meters to be lower than that emitted by microwaves, cell phones and several other common household appliances.⁴⁵ The Companies also presented expert testimony that distinguished between “ionizing” radiation, which has the ability to damage human molecules, and “non-ionizing” radiation, which does not.⁴⁶ Smart meters emit “non-ionizing” radiation, which scientists have studied extensively for several decades and found no evidence of harmful effects on human beings.⁴⁷ Although we have not found convincing evidence that smart meters pose any health risks to the public at large, we acknowledge a good-faith belief on the part of some ratepayers to the contrary. If we ultimately decide to allow customers to retain their analog meter, this option will address any health concerns raised by the use of smart meters. However, if that option proves not to be feasible, we will provide customers with the option to require their utility to install their smart meter so as to minimize or eliminate RF emissions, such as by using an alternative data communications path or by locating the meter farther from the customer’s home. We received evidence from the Companies regarding several available options,⁴⁸ and our future proceedings will include a review of the costs associated with such options and how best to allow the Companies to recover those costs.

utilities allege). BGE cites the same Council’s 2011 study that concluded smart meter emissions to be lower than microwaves and far lower than cell phones. BGE April 6, 2012 Comments at 5.

⁴⁵ May 22, 2012 Tr. at 50-53 (Staff); May 22, 2012 Tr. at 96-100 (BGE).

⁴⁶ Testimony of Dr. Peter Valberg, BGE April 6, 2012 Comments, Exhibit 1 at 4; May 22, 2012 Tr. at 104-116 (Valberg).

⁴⁷ *Id.* at 7.

⁴⁸ Case No. 9207, Item No. 210 (Pepco and Delmarva); Case No. 9208, Item No. 151 (BGE).

4. Privacy/Security Issues

Several witnesses also expressed concern that the Companies would be unable to protect the privacy of personal data generated by the smart meters and relayed to the Companies. The Companies responded by describing the national privacy standards with which they are compliant as well as the third-party cyber-security firms that they have retained to test their data-protection system.⁴⁹ We have previously addressed all of these privacy and security concerns in prior Orders, and we see no need to re-visit that analysis here.⁵⁰

5. Overheating and Fires Attributable to Smart Meter Installation

Finally, through news media, we learned that PECO had suspended its AMI roll-out in Pennsylvania to evaluate the cause of several overheating incidents that had occurred. On August 28, 2012, we conducted a hearing and heard from the Companies as to whether similar concerns had or might yet materialize during the installation of smart meters in Maryland.⁵¹ At this hearing, BGE and Pepco informed us that they were installing meters manufactured by GE and Landis+Gyr, rather than the Sensor meters being installed by PECO.⁵² We also learned that the Companies had not experienced heat-related installation issues similar to PECO and that the risks of fire associated with installing smart meters were

⁴⁹ Direct Testimony of Jules Polonetsky at 5; BGE April 6, 2012 Comments at 7-8.

⁵⁰ See e.g., Order No. 83410 at 35-41.

⁵¹ Case No. 9207, Item No. 222; Case No. 9208, Item No. 165; Case No. 9294, Item No. 12. On October 9, 2012, PECO announced that it had renewed its smart meter installations, replacing the smart meters manufactured by Sensor with meters manufactured by Landis+Gyr. http://articles.philly.com/2012-10-10/business/34343946_1_sensus-meters-sensus-devices-new-generation-meters

⁵² August 28, 2012 Tr. 20-21 (BGE); August 28, 2012 Tr. 39 (Pepco). SMECO does currently intend to install Sensor meters, although it has not experienced any mechanical problems in either its pilot program (consisting of approximately 900 meters), or the Patuxent River Naval Air Station (consisting of approximately 1,040 AMI meters). August 28, 2012 Tr. 55-56.

similar to what might occur when replacing an analog meter with another analog meter.⁵³ We are therefore convinced that the use of smart meters does not pose a fire hazard to ratepayers.

6. Conclusion

For the above-stated reasons, we conclude that the current record is insufficient to allow us to quantify the associated additional costs and foregone benefits of allowing customers to retain their current analog meter. Additionally, the record does not adequately quantify the costs associated with providing the option to customers of allowing them to receive alternative AMI meters that would minimize RF emissions. We will therefore initiate proceedings to better determine which of these two options is preferable. The Companies shall continue to respect the requests of those ratepayers for a moratorium on installation following our May 25, 2012 Interim Order, and we will specify the means by which customers may permanently exercise their opt out right or retract their previous decision once we have identified which option customers will have and quantified the associated costs.

IT IS THEREFORE, this 7th day of January, in the Year Two Thousand Thirteen by the Public Service Commission of Maryland,

ORDERED (1) That we will initiate additional proceedings to determine whether we will allow customers to retain their analog meter, or whether we will instead allow customers to receive an alternatively-installed AMI meter;

⁵³ *Id.* at 11 (BGE); *Id.* at 38 (Pepco). The Companies also noted that smart meters contain an internal heat sensor - lacking in current meters - that allows the Companies to respond to any sharp temperature increase, thereby reducing the risk of harm below that posed by current meters.

(2) That we shall determine the associated costs and procedures for exercising either option following those additional proceedings;

(3) That, on or before July 1, 2013, the Companies shall submit to the Commission their proposals regarding a) the overall additional costs associated with allowing customers to retain their current analog meter, b) their proposals regarding cost recovery of these additional costs from customers, and c) their proposals for recovery of costs related to offering customers different RF-free or RF-minimizing options related to the installation of their smart meters. Additionally, we ask the Companies to provide this information scaled for different levels of customer participation; and

(4) That all requests for relief inconsistent with this Order are hereby DENIED.

/s/ Harold D. Williams

/s/ Lawrence Brenner

/s/ W. Kevin Hughes

Commissioners

the potential risks and benefits, and after realigning the companies' proposals substantially (especially BGE's). Because the majority's decision today could, depending on how future proceedings go, seriously disrupt that delicate balance, we respectfully dissent. Instead, we would decide now not to allow customers to opt out of having an advanced meter installed and would direct the companies to offer significantly reduced or radio frequency-free alternative modes of installation that would preserve a single metering system infrastructure, such as submitted by the companies in response to bench data requests during the May 22, 2012 hearing.⁴

If the Commission were to allow customers to opt out of receiving an advanced meter, it would undermine the fundamental underpinnings of the business cases on which we approved these deployments. Even if only a small number of customers were to opt out, the companies will now be required to maintain parallel meter data management systems and retain legacy meter reading staff and infrastructure – costs that AMI deployments were designed to eliminate. In addition, the reduced number of customers with advanced meters reduces the potential overall energy savings, both in terms of peak demand reductions and consumption reductions, that these programs were designed to achieve, and reduces the effectiveness of AMI's outage detection capabilities. It is impossible to predict the marginal increase in cost and diminution of benefits with any precision – those impacts will depend on how many and which customers opt out, which in turn will likely depend on the portion of the cost the Commission ultimately decides to require opt-out customers to bear. For us, though, the ultimate degree of degradation is

⁴ See Item No. 151, Case No. 9208 (July 3, 2012 (BGE)); Item No. 210, Case No. 9207 (PHI). We would require the customer seeking the alternative installation to bear the cost, although we would not object to accommodations for low-income customers or perhaps to some socialization of some portion of the cost.

less important than the structural harm that allowing opt-outs will cause to these business cases.⁵

As the majority did, we have considered carefully the genuine concerns AMI opponents have raised here, particularly the health concerns that individual customers described both in writing and during our public hearing on May 22, 2012. The evidence in the record, however, demonstrates that advanced meters pose no systemic health risks, nor any new security or privacy risks not already covered or anticipated by our ongoing deployment proceedings. The meters meet every applicable standard and, even under the outlier scenarios argued by opponents, express only a minimal incremental amount of radio frequency (“RF”) radiation. As an accommodation to individuals concerned about incremental RF exposure, we would require the companies to develop alternative ways of installing advanced meters that eliminated or reduced to negligible the meters’ RF emissions to the home or business. Although perhaps less than ideal from a technical perspective, those installations would preserve the meter data collection and management efficiencies of the AMI build-outs, while respecting individuals’ health concerns. Instead, the majority’s opt-out solution sacrifices the system-wide benefits and efficiencies on which the Commission based its approval of the AMI business cases, in order to address individual-level concerns that, in our view, can and should be addressed individually.

1. Opt-outs Will Undermine the AMI Business Cases

When the Commission approved AMI build-outs in Maryland, it explicitly recognized “the potential of AMI to deliver substantial benefits to the Companies’

⁵ We have not prejudged the question, but we wonder too whether the companies fairly can argue that this decision prejudices their ability to deliver a cost-effective AMI system, a condition precedent to cost recovery that did not account for the possibility of opt-outs.

customers.”⁶ These benefits fall generally into two categories: operational efficiencies and supply-side savings.⁷ Allowing customers to opt out of an advanced meter will erode both and, as a result, undermine the business cases on which the Commission relied. From the perspective of the projects themselves, it makes no sense to allow customers to opt out.

From an operational standpoint, allowing opt-outs will dramatically reduce the cost savings associated with remote meter reading and imposes the cost of maintaining parallel meter data management processes. These impacts will occur from the very first opt-out, and won’t necessarily scale: as noted in Staff’s comments, the possibility of opt-outs will require the Companies to maintain many of the systems and services that would otherwise be phased out, and fundamental data and billing structures will be required even for a single customer who opts out.⁸ Furthermore, the relatively unrestricted scope of the opt-out (perhaps only constrained by the cost the opt-out customer will be required to bear) will place a permanent burden on the Companies to plan for a fluctuating demand for future opt-outs. The Companies will never be assured of the magnitude of the opt-out, nor the location of the opt-out customers in their service territory from year to year. The mere existence of an opt-out provision will require the companies to maintain parallel operational and management processes, which will eat into the operational financial benefits contained in the companies’ business cases – benefits that would be realized by *all* ratepayers – and challenge the companies to deliver cost-effective AMI projects. Indeed, assuming that the companies proceed with their AMI deployments, allowing opt-

⁶ Order No. 83571 (PHI), at 1.

⁷ See *e.g.*, Order No. 83571 (PHI) at 29-31 (operational benefits), 31-37 (supply-side benefits).

⁸ See Staff April 6, 2012 Comments, at 6.

outs will create *new* inefficiencies through the operation of parallel meter data and billing processes.

Opt-outs will also erode the aggregate supply-side benefits from AMI.⁹ We agree with the Maryland Energy Administration that an opt-out provision “impedes the effort to attain the overall and peak demand energy savings goals of the EmPOWER Maryland program.”¹⁰ By 2015, the EmPOWER Maryland Energy Efficiency Act requires Maryland’s large electric companies to reduce per capita electricity consumption by 10% and per capita peak demand by 15% per capita peak demand reduction,¹¹ and reductions driven by AMI-enabled dynamic pricing are an important part of the broader EmPower strategy.¹² The Commission has, correctly, waded carefully into the relatively uncharted waters of dynamic pricing, but with or without that additional financial carrot, hourly usage information and increased analytical capability can still help all participating customers to assert greater control over the quantity and timing of their electricity usage, whatever rate design they might choose. We recognize that customers can and do reduce their peak and overall usage without advanced meters. But nobody has raised any objection to more information as such, only to the modality of collecting and transmitting it, and we address those important concerns below.

Finally, and importantly, every customer who opts out is a customer whose outage cannot be detected by an advanced meter – or, put another way, a customer whose outage

⁹ A customer’s decision to opt out obviously prevents him or her from benefitting individually from the increased usage data and information flow AMI affords, although the individual’s marginal lost savings will depend on his or her inclination to use the information for that purpose in the first place. Whether to take advantage of the opportunity is an individual decision even with an advanced meter in place, but we are concerned here with the aggregate savings losses.

¹⁰ MEA April 6, 2012 Comments, at 4.

¹¹ Md. Code Ann., Pub. Utilities Art. § 7-211(g)(1)-(2).

¹² MEA April 6, 2012 Comments, at 4-5.

will be unknown to the company unless the customer calls.¹³ The potential outage-related operational benefits from AMI¹⁴ were an important consideration in our decision to approve these deployments, and are especially important now, given the recent spate of weather-driven outage events. It seems inconsistent with our increased emphasis on the reliability and resiliency of electric distribution systems to amend the AMI programs in a way that could diminish companies' post-deployment ability to identify and respond to outages.

For all of these reasons, we would resolve the opt-out question now rather than prolonging the discussion.

2. AMI Presents No Systemic Privacy, Security or Health Concerns that Justify Opt-Outs.

We fully recognize that those opposing AMI do so not for the sake of opposing change or increased usage information, but from genuine concerns regarding the health, privacy and security implications of “smart meters.” The Commission considered two of these three – privacy and security – carefully in the course of considering whether to approve AMI deployment in the first instance, and we are comfortable with the (considerable) work that has been done, and is being done, to address them. In authorizing BGE's AMI deployment, the Commission noted that “we and the parties will need to work through [critical privacy and cyber-security concerns] together carefully,”

¹³ We understand that the meters of AMI-enabled neighbors of opted-out customers would notify the company of an outage, and thus that the company would know about an outage in the area anyway – a principle known as “free riding” that we normally work hard to avoid. Moreover, even a small group of opt-outs located together could disguise outage events or confound efforts to diagnose and repair outages, a reverse “free ridership” in which customers who opt out could delay or thwart restoration for customers who didn't.

¹⁴ *See, e.g.*, MEA April 6, 2012 Comments, at 7-8 (discussing ability of smart meters to notify the utility of an outage, thereby eliminating reliance on customer reporting or company truck rolls, and noting the “gaps” in the network exposed by opt-out customers).

but we decided that “the public interest is served by a decision to move forward” with AMI deployment.¹⁵ The majority noted the national privacy standards with which the companies’ AMI deployments comply, as well as the third-party cyber-security firms that they have retained to test their data-protection system,¹⁶ and we reaffirm the Commission’s earlier finding that these measures, and the extensive workgroup process that is well underway, will ensure that customers’ data will be kept secure and private.

This takes us to health concerns, which were not raised during our initial approval proceedings. Those opposing advanced meters, most notably some individual citizens and the Maryland Smart Meter Awareness organization, contend that incremental RF radiation emitted by advanced meters causes a variety of detrimental health effects. We do not doubt *for an instant* the sincerity of the testimony in this regard or dispute the reality and severity of the negative health experiences the individuals recounted at our May 22, 2012 hearing. But the evidence in this case – and we have reviewed it all – demonstrates that advanced meters pose no *systemic* health risks. To the contrary, advanced meters satisfy every applicable United States and international standard,¹⁷ and we are persuaded by the substantial evidence and expert testimony that rebuts the claims that the modest non-

¹⁵ Order No. 83531, at 32.

¹⁶ Direct Testimony of Jules Polonetsky at 5; BGE April 6, 2012 Comments at 7-8.

¹⁷ *See, e.g.*, Staff April 6, 2012 Comments, at 5 (stating that “[t]he Federal Communications Commission mandates that all smart meter devices must meet radio frequency exposure limits it has established”). Staff’s comments cite a joint report by the Edison Electric Institute, the Association of Edison Illuminating Companies, and the Utilities Telecom Council in which the RF exposure issues of smart meters are discussed in detail. The EEI-AEIC-UTC report describes how the FCC developed its metrics for acceptable RF exposure limits, and notes that “for those relatively rare instances that result in close proximity to the meters, measurements have shown exposure well below FCC standard limits.” *A Discussion of Smart Meters and RF Exposure Issues*, EEI-AEIC-UTC, 12 (March 2011), http://www.aeic.org/meter_service/smartmetersandr031511.pdf.

ionizing radiation from AMI technology causes negative health impacts.¹⁸ Moreover, we cannot help but realize that as we move through our everyday lives, we are being bombarded by RF from all directions, to a much greater degree than anything an advanced meter could possibly emit – radiation that will be present with or without advanced meters.¹⁹ Microwave ovens, Wi-Fi wireless routers, laptop computers and cell phones *all* expose each of us to a power density of radio frequency on an order of magnitude overwhelmingly greater than that of even standing one foot adjacent to an operable electric smart meter,²⁰ and that’s before considering large-scale RF exposure from sources such as television and radio transmissions.²¹ As we discuss below, we would acknowledge and redress potential *individual* health concerns by directing the companies to provide customers an opportunity to have their advanced meter installed in an RF-free manner, a solution that preserves the fundamentals of the AMI business cases and a single metering system infrastructure. On this record, though, we are unwilling to undercut the bases of our decisions to approve AMI deployments, and to knowingly dilute the benefits

¹⁸ See Testimony of Dr. Peter Valberg, BGE April 6, 2012 Comments, Exhibit 1 at 4; May 22, 2012 Tr. at 104-116 (Valberg) (discussing the difference between “ionizing” radiation, which has the ability to damage human molecules, and “non-ionizing” radiation, which does not).

¹⁹ See Staff April 6, 2012 Comments, at 5; OPC April 6, 2012 Comments, at 2-3. Both Staff and OPC note in their respective comments numerous sources of radiation—sources that represent equipment and services which have become an integral part of our everyday lives. Such examples include: transmission and distribution facilities, electric appliances in the household, televisions and computer screens, microwave ovens, security systems, cell phones, radio and TV transmissions. *Id.*

²⁰ Staff April 6, 2012 Comments, at 5, Table 2.

²¹ See OPC April 6, 2012 Comments, at 3 (noting that telecommunications equipment such as TV and radio antennas are examples of higher frequency electromagnetic fields). OPC’s comments cite information garnered from the website for the International EMF Project of the World Health Organization (“WHO”). Specifically, WHO’s website for the International EMF Project explains that “[m]obile telephones, television and radio transmitters and radar produce RF fields. These fields are used to transmit information over long distances and form the basis of telecommunications as well as radio and television broadcasting all over the world.” *Electromagnetic Fields Project*, World Health Organization, <http://www.who.int/peh-emf/about/WhatisEMF/en/> (last visited January 4, 2013).

and cost-effectiveness of these projects, in response to debatable and, in our view, rebutted health concerns.²²

3. An RF-Diminished Advanced Meter Alternative is Preferable to Opt-Outs.

Rather than allowing customers to opt out of advanced metering, and thus require the companies to maintain parallel data management universes, we would address individual customers' health concerns by directing the companies to provide a significantly reduced or RF-free advanced meter installation alternative that would preserve a single metering system infrastructure. We know that this approach is feasible because the companies have told us so: in response to data requests issued from the bench during the May 22, 2012 hearing, BGE and the PHI companies described ways in which their advanced meters could be installed, either by locating them farther away from the customer's home²³ or using alternative, hard-wired methods of communicating data, to reduce or eliminate the resulting RF emissions.²⁴ Although these alternatives have their drawbacks and, like the opt-out approved by the majority, would impose costs on those customers choosing them, our approach would preserve the aggregate structure and benefits of the AMI deployment rather than creating dual (and dueling) meter data and billing systems. We agree with the majority that customers choosing an alternative AMI installation should bear the cost, although we would consider cost structures that account for low-income customers'

²² We agree with the majority's analysis of safety concerns flowing from over-heating incidents in Pennsylvania and elsewhere, at 5-6, and note that advanced meters possess a piece of technology that traditional analog meters lack – a temperature sensor – that will alert the Company if the temperature exceeds a set threshold. August 28, 2012 Tr. 11-12.

²³ The power density of an electric smart meter is observed at 8.8 $\mu\text{W}/\text{cm}^2$ if an individual is one foot adjacent to the object, while the power density of an electric smart meter is reduced to 0.1 $\mu\text{W}/\text{cm}^2$ at 10 feet removed.

²⁴ See Item No. 151, Case No. 9208 (July 3, 2012 (BGE)); Item No. 210, Case No. 9207 (Pepco and Delmarva).

circumstances, or possibly that socialize a portion of the cost. Unlike the opt-out approach, however, our solution would not require meter-reading field personnel and equipment, separate meter data management systems or additional billing system processes.

* * *

For the foregoing reasons, we respectfully dissent from the Commission's decision to continue considering the possibility of permitting ratepayers to opt out of advanced meters. Instead, we would decide now not to allow opt-outs and would direct the companies to provide customers with a significantly reduced or RF-free advanced meter installation alternative that would preserve a single metering system infrastructure, and we would reaffirm our earlier decisions to authorize the deployment of advanced meters for all customers in the BGE, Pepco and Delmarva service territories.

/s/ Douglas R. M. Nazarian

/s/ Kelly Speakes-Backman

Commissioners

ATTACHMENT 2

2013 SESSION

INTRODUCED

13100731D

SENATE BILL NO. 797

Offered January 9, 2013

Prefiled December 19, 2012

A BILL to amend and reenact § 56-576 of the Code of Virginia and to amend the Code of Virginia by adding a section numbered 56-249.8, relating to electric utilities; advanced meters.

Patron—Garrett

Referred to Committee on Commerce and Labor

Be it enacted by the General Assembly of Virginia:

1. That § 56-576 of the Code of Virginia is amended and reenacted and that the Code of Virginia is amended by adding a section numbered 56-249.8 as follows:

§ 56-249.8. Advanced meters.

A. As used in this section:

"Advanced meter" means a meter that is capable of measuring, recording, storing, and reporting usage according to predetermined time criteria and that allows two-way communications suited for demand-response programs.

"Electric utility" means any person that generates, transmits, or distributes electric energy for use by retail customers in the Commonwealth, including any investor-owned electric utility, cooperative electric utility, or electric utility owned or operated by a municipality.

B. The Commission shall:

1. Prohibit an electric utility from installing an advanced meter to serve a customer or requiring a customer to use any advanced meter unless the customer has affirmatively requested to have an advanced meter installed;

2. Require an electric utility, at a customer's request, to uninstall any advanced meter;

3. Require that an electric utility shall not give any meter use data from an advanced meter to any person other than the electric utility;

4. Prohibit an electric utility from shutting off service to a customer based on (i) the amount of electricity the customer uses or (ii) the customer not being served by an advanced meter;

5. Prohibit an electric utility from imposing any disincentive on a customer for not being served by an advanced meter;

6. Prohibit an electric utility from obtaining data from an advanced meter more than once per month, unless requested by a customer; and

7. Require an electric utility to notify customers in writing that the installation and use of an advanced meter is not required by state law and is not permitted without the customer's request.

§ 56-576. Definitions.

As used in this chapter:

"Affiliate" means any person that controls, is controlled by, or is under common control with an electric utility.

"Aggregator" means a person that, as an agent or intermediary, (i) offers to purchase, or purchases, electric energy or (ii) offers to arrange for, or arranges for, the purchase of electric energy, for sale to, or on behalf of, two or more retail customers not controlled by or under common control with such person. The following activities shall not, in and of themselves, make a person an aggregator under this chapter: (i) furnishing legal services to two or more retail customers, suppliers or aggregators; (ii) furnishing educational, informational, or analytical services to two or more retail customers, unless direct or indirect compensation for such services is paid by an aggregator or supplier of electric energy; (iii) furnishing educational, informational, or analytical services to two or more suppliers or aggregators; (iv) providing default service under § 56-585; (v) engaging in activities of a retail electric energy supplier, licensed pursuant to § 56-587, which are authorized by such supplier's license; and (vi) engaging in actions of a retail customer, in common with one or more other such retail customers, to issue a request for proposal or to negotiate a purchase of electric energy for consumption by such retail customers.

"Combined heat and power" means a method of using waste heat from electrical generation to offset traditional processes, space heating, air conditioning, or refrigeration.

"Commission" means the State Corporation Commission.

"Cooperative" means a utility formed under or subject to Chapter 9.1 (§ 56-231.15 et seq.).

"Covered entity" means a provider in the Commonwealth of an electric service not subject to competition but shall not include default service providers.

"Covered transaction" means an acquisition, merger, or consolidation of, or other transaction

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59 involving stock, securities, voting interests or assets by which one or more persons obtains control of a
60 covered entity.

61 "Curtailed" means inducing retail customers to reduce load during times of peak demand so as to
62 ease the burden on the electrical grid.

63 "Customer choice" means the opportunity for a retail customer in the Commonwealth to purchase
64 electric energy from any supplier licensed and seeking to sell electric energy to that customer.

65 "Demand response" means measures aimed at shifting time of use of electricity from peak-use
66 periods to times of lower demand by inducing retail customers to curtail electricity usage during periods
67 of congestion and higher prices in the electrical grid.

68 "Distribute," "distributing," or "distribution of" electric energy means the transfer of electric energy
69 through a retail distribution system to a retail customer.

70 "Distributor" means a person owning, controlling, or operating a retail distribution system to provide
71 electric energy directly to retail customers.

72 "Electric utility" means any person that generates, transmits, or distributes electric energy for use by
73 retail customers in the Commonwealth, including any investor-owned electric utility, cooperative electric
74 utility, or electric utility owned or operated by a municipality.

75 "Energy efficiency program" means a program that reduces the total amount of electricity that is
76 required for the same process or activity implemented after the expiration of capped rates. Energy
77 efficiency programs include equipment, physical, or program change designed to produce measured and
78 verified reductions in the amount of electricity required to perform the same function and produce the
79 same or a similar outcome. Energy efficiency programs may include, but are not limited to, (i) programs
80 that result in improvements in lighting design, heating, ventilation, and air conditioning systems,
81 appliances, building envelopes, and industrial and commercial processes; (ii) measures, such as but not
82 limited to the installation of advanced meters, implemented or installed by utilities, that reduce fuel use
83 or losses of electricity and otherwise improve internal operating efficiency in generation, transmission,
84 and distribution systems; and (iii) customer engagement programs that result in measurable and
85 verifiable energy savings that lead to efficient use patterns and practices. Energy efficiency programs
86 include demand response, combined heat and power and waste heat recovery, curtailment, or other
87 programs that are designed to reduce electricity consumption so long as they reduce the total amount of
88 electricity that is required for the same process or activity. Utilities shall be authorized to install and
89 operate such advanced metering technology and equipment on a customer's premises; ~~however, nothing~~
90 ~~in this chapter establishes a requirement that an energy efficiency program be implemented on a~~
91 ~~customer's premises and be connected to a customer's wiring on the customer's side of the~~
92 ~~inter-connection without the customer's expressed consent upon complying with the requirements of~~
93 ~~§ 56-249.8.~~

94 "Generate," "generating," or "generation of" electric energy means the production of electric energy.

95 "Generator" means a person owning, controlling, or operating a facility that produces electric energy
96 for sale.

97 "Incumbent electric utility" means each electric utility in the Commonwealth that, prior to July 1,
98 1999, supplied electric energy to retail customers located in an exclusive service territory established by
99 the Commission.

100 "Independent system operator" means a person that may receive or has received, by transfer pursuant
101 to this chapter, any ownership or control of, or any responsibility to operate, all or part of the
102 transmission systems in the Commonwealth.

103 "In the public interest," for purposes of assessing energy efficiency programs, describes an energy
104 efficiency program if, among other factors, the net present value of the benefits exceeds the net present
105 value of the costs as determined by the Commission upon consideration of the following four tests: (i)
106 the Total Resource Cost Test; (ii) the Utility Cost Test (also referred to as the Program Administrator
107 Test); (iii) the Participant Test; and (iv) the Ratepayer Impact Measure Test. Such determination shall
108 include an analysis of all four tests, and a program or portfolio of programs shall not be rejected based
109 solely on the results of a single test. In addition, an energy efficiency program may be deemed to be "in
110 the public interest" if the program provides measurable and verifiable energy savings to low-income
111 customers or elderly customers.

112 "Measured and verified" means a process determined pursuant to methods accepted for use by
113 utilities and industries to measure, verify, and validate energy savings and peak demand savings. This
114 may include the protocol established by the United States Department of Energy, Office of Federal
115 Energy Management Programs, Measurement and Verification Guidance for Federal Energy Projects,
116 measurement and verification standards developed by the American Society of Heating, Refrigeration
117 and Air Conditioning Engineers (ASHRAE), or engineering-based estimates of energy and demand
118 savings associated with specific energy efficiency measures, as determined by the Commission.

119 "Municipality" means a city, county, town, authority, or other political subdivision of the
120 Commonwealth.

121 "Peak-shaving" means measures aimed solely at shifting time of use of electricity from peak-use
122 periods to times of lower demand by inducing retail customers to curtail electricity usage during periods
123 of congestion and higher prices in the electrical grid.

124 "Person" means any individual, corporation, partnership, association, company, business, trust, joint
125 venture, or other private legal entity, and the Commonwealth or any municipality.

126 "Renewable energy" means energy derived from sunlight, wind, falling water, biomass, sustainable or
127 otherwise, (the definitions of which shall be liberally construed), energy from waste, landfill gas,
128 municipal solid waste, wave motion, tides, and geothermal power, and does not include energy derived
129 from coal, oil, natural gas, or nuclear power. Renewable energy shall also include the proportion of the
130 thermal or electric energy from a facility that results from the co-firing of biomass.

131 "Renewable thermal energy" means the thermal energy output from a renewable-fueled combined
132 heat and power generation facility that is (i) constructed, or renovated and improved, after January 1,
133 2012, (ii) located in the Commonwealth, and (iii) utilized in industrial processes other than the
134 combined heat and power generation facility.

135 "Renewable thermal energy equivalent" means the electrical equivalent in megawatt hours of
136 renewable thermal energy calculated by dividing (i) the heat content, measured in British thermal units
137 (BTUs), of the renewable thermal energy at the point of transfer to an industrial process by (ii) the
138 standard conversion factor of 3.413 million BTUs per megawatt hour.

139 "Renovated and improved facility" means a facility the components of which have been upgraded to
140 enhance its operating efficiency.

141 "Retail customer" means any person that purchases retail electric energy for its own consumption at
142 one or more metering points or nonmetered points of delivery located in the Commonwealth.

143 "Retail electric energy" means electric energy sold for ultimate consumption to a retail customer.

144 "Revenue reductions related to energy efficiency programs" means reductions in the collection of
145 total non-fuel revenues, previously authorized by the Commission to be recovered from customers by a
146 utility, that occur due to measured and verified decreased consumption of electricity caused by energy
147 efficiency programs approved by the Commission and implemented by the utility, less the amount by
148 which such non-fuel reductions in total revenues have been mitigated through other program-related
149 factors, including reductions in variable operating expenses.

150 "Supplier" means any generator, distributor, aggregator, broker, marketer, or other person who offers
151 to sell or sells electric energy to retail customers and is licensed by the Commission to do so, but it
152 does not mean a generator that produces electric energy exclusively for its own consumption or the
153 consumption of an affiliate.

154 "Supply" or "supplying" electric energy means the sale of or the offer to sell electric energy to a
155 retail customer.

156 "Transmission of," "transmit," or "transmitting" electric energy means the transfer of electric energy
157 through the Commonwealth's interconnected transmission grid from a generator to either a distributor or
158 a retail customer.

159 "Transmission system" means those facilities and equipment that are required to provide for the
160 transmission of electric energy.

CERTIFICATE OF SERVICE

Formal Case No. 1056, In the Matter of the Application of Potomac Electric Power Company For Authorization to Establish a Demand Side Management Surcharge and an Advance Metering Infrastructure Surcharge and to Establish a DSM Collaborative and an AMI Advisory Group

I hereby certify that on this 18th day of January 2013, a copy of the "Office of the People's Counsel's Motion to Lodge" was served on the following parties of record by hand delivery; first class mail, postage prepaid, or electronic mail:

Honorable Betty Ann Kane
Chairman
Public Service Commission of the
District of Columbia
1333 H Street, N.W., 7th Floor East
Washington, D.C. 20005
bakane@psc.dc.gov

Honorable Joanne Doddy Fort
Commissioner
Public Service Commission of the
District of Columbia
1333 H Street, N.W., 7th Floor East
Washington, D.C. 20005
jfort@psc.dc.gov

Richard Beverly, Esq.
General Counsel
Public Service Commission of the
District of Columbia
1333 H Street, N.W., 7th Floor East
Washington, D.C. 20005
rbeverly@psc.dc.gov

Honorable Kenyan McDuffie, Chairperson
Committee on Government Operations
Council of the District of Columbia
1350 Pennsylvania Avenue, N.W., Suite 506
Washington, D.C. 20004
kmeduffie@dccouncil.us

Kirk J. Emge, Esq.
Senior Vice President and General Counsel
Peter Meier, Esq.
Vice President, Legal Services
Marc K. Battle, Esq.
Assistant General Counsel
Potomac Electric Power Company
701 Ninth Street, N.W., 10th Floor
Washington, D.C. 20068
kjemge@pepcoholdings.com
peter.meier@pepcoholdings.com
mkbattle@pepcoholdings.com

Frann G. Francis, Esq.
Senior Vice President & General Counsel
Apartment and Office Building
Association of Metropolitan Washington
1050 17th Street, N.W., Suite 300
Washington, D.C. 20036
ffrancis@aoba-metro.org

Phylcia Fauntleroy Bowman
Executive Director
Public Service Commission of the
District of Columbia
1333 H Street, N.W., 6th Floor East
Washington, D.C. 20005
pbowman@psc.dc.gov

Brian R. Caldwell, Esq.
Assistant Attorney General
Office of the Attorney General
441 4th Street, N.W., Suite 650-N
Washington, D.C. 20001
brian.caldwell@dc.gov

Kimberly Katzenbarger
General Counsel
District Department of the Environment
Office of the General Counsel
51 N Street, N.E., 6th Floor
Washington, D.C. 20002
kimberly.katzenbarger@dc.gov

Marc Biondi, Esq.
Assistant General Counsel
WMATA
600 5th Street, N.W., Room 2C-08
Washington, D.C. 20001
mebiondi@wmata.com

Coralette Hannon
AARP
6705 Reedy Creek Road
Charlotte, North Carolina 28215
CHannon@aarp.org

Barbara Alexander
Consumer Affairs Consultant
83 Wedgewood Drive
Winthrop, ME 04364
For AARP
barbalex@ctel.net

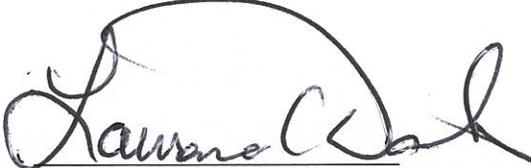
John Britton, Esq.
Schnader, Harrison Segal & Lewis, L.L.P.
750 9th Street, N.W., Suite 550
Washington, D.C. 20001-4534
For the City of Alexandria
jbritton@schnader.com

Nancy White
Squire, Sanders & Dempsey (US) LLP
Suite 300
1200 19th Street, N.W.
Washington, D.C. 20036
NaWhite@ssd.com

Brian R. Greene, Esq.
Katharine A. Hart
SeltzerGreene, P.L.C.
Eighth & Main Building
707 East Main Street, Suite 1025
Richmond, Virginia 23219
For Retail Energy Supply Association
bgreene@seltzergreene.com
khart@seltzergreene.com

Michael Philips
Politics & Prose
Climate Action Project
5015 Connecticut Avenue, N.W.
Washington, D.C. 20008
michael.philips3@verizon.net

Leonard Lucas, Esq.
Assistant General Counsel
Office of General Counsel
U.S. General Services Administration
1275 First Street, N.E., 5th Floor
Washington, DC 20002
leonard.lucas@gsa.gov



Laurence C. Daniels, Esq.
Assistant People's Counsel