

Comments on the Abell Foundation Report titled
Maryland's Dysfunctional Residential Third-Party Energy

Supply Market: An Assessment of Costs and Policies

Prepared by Guy Sharfman on behalf of the Retail Energy Supply Association (RESA)



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Comments on the Abell Foundation Report

I. Executive Summary

A. Introduction

A report authored by the Abell Foundation titled *Maryland's Dysfunctional Residential Third-Party Energy Supply Market: An Assessment of Costs and Policies* ("Abell Report") makes an unsubstantiated and invalid contention that residential customers overpay when purchasing retail power and natural gas from third party suppliers. The report then uses this false allegation to declare that retail choice exerts undue harm on low income residential customers in the State of Maryland. As this document will show, the analyses conducted by the Abell Foundation to prove that Maryland residential customers overpay for retail service is frivolous and no valid conclusions can be reached from it. Further, other 'evidence' sited by the Abell Report claiming that Maryland customers overpay for retail choice has been debunked and accusations that retail choice offers no value to residential customers is without merit. Finally, this document also presents proof that Maryland residential customers can achieve substantial savings over their local utility by taking advantage of retail choice. This savings can be realized in addition to other benefits afforded to customers via retail choice that regulated utilities do not provide.

B. Issues with the Abell Report

The Abell Report presents deficient analyses culminating in meaningless analytical results as well as sites a debunked analysis conducted by the Maryland Office of People's Counsel ("OPC") to falsely claim that Maryland residential customers overpay for retail service. The Abell Report also makes frivolous and unsubstantiated claims that retail supplier products don't offer value to consumers and that Purchase of Receivables ("POR") instigates retail supplier price gouging. The Abell Report then uses these false analysis results and unsubstantiated denunciations to erroneously declare that retail choice harms low income customers in the State of Maryland. More specifically, the Abell Report:

- 1) Provides no credible evidence that residential customers, low income or otherwise, overpay for retail service
- 2) Erroneously attacks the Retail Energy Supply Association for defending retail choice
- 3) Makes the bizarre and inexplicable claim that POR causes retail energy suppliers to raise their prices
- 4) Disregards reasons why low-income customers opt for retail service, thereby implying that these customers are incapable of acting in their own best interest



The remainder of this document details the numerous issues found with the Abell Report. The document also presents evidence from Intelometry Market Savings Reports for Maryland that makes clear residential customers can save money by contracting for retail supply.

II. No Credible Evidence that Customers Overpay for Retail Service

The Abell Report bases the claim that customers overpay for retail choice on the following:

- The report sites analysis results from a report compiled by the Maryland Office of People's Counsel ("OPC Report")
- The report compares data from the Energy Information Administration ("EIA") to Maryland Standard Offer Service ("SOS") prices
- 3) The report surveys the bills of 40 residential customers in BGE's service area
- 4) The report performs a so-called "deep dive" analysis for 9 low income customers in BGE's service area

As discussed in the remainder of this section, none of the items sited by the Abell Report constitute evidence of anything, much less that residential customers are overpaying of retail supplier service. This is critical to understand since everything the Abell Report concludes and recommends rests solely on proving the Abell Foundation's accusation that residential customers overpay for retail choice. If the analytical results presented in the Abell Report are unfounded then the entire report itself is invalid and should never be used to foster changes in any regulatory or legislative policy.

A. The OPC Report has been thoroughly debunked

The Abell Report sites analysis results presented in a report produced by the OPC titled Maryland's Residential Electric and Gas Supply Markets: Where Do We Go from Here? that concluded "third-party supply of electricity and natural gas is resulting in substantial overpayments in the aggregate" for residential customers. However, analysis results of the OPC Report have been thoroughly debunked in a report drafted on behalf of the Retail Energy Supply Association ("RESA Report"). The RESA Report found that "the analysis and assumptions that produce" the claim that residential customers are overpaying for third party supply in Maryland "are so laden with inaccuracies that the OPC Report's analysis-based results and conclusions should never be used to foster policy making in the State of Maryland." More specifically, the RESA Report found that the OPC Report:

- Omits critical information regarding the Maryland utility Price to Compare (PTC)
- > Disregards reasons why customers opt for retail service

¹ See Abell Report at 21

² See RESA Report at 3

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- Misinforms on the differences between PTC prices and retail supplier offers
- Provides a false comparison between variable tariff prices and 12-month fixed supplier prices
- Understates electric PTC prices thereby inflating PTC benefits
- Provides misleading information on the number of retail offers falling below the PTC
- Provides a false derivation of consumer loss

Unlike the RESA Report, the Abell Report does not conduct a serious review of the OPC Report analysis and conclusions and simply sites the OPC Report's error clad analysis results as given.

B. Abell Report comparison of EIA data to SOS prices is meaningless

The Abell Report professes to compare EIA data for retail suppliers in Maryland to utility SOS prices obtained from the OPC and concludes that residential customers collectively overpaid \$255 million for retail supplier service between 2014 and 2017.³ As discussed in the remainder of this section, this comparison is meaningless, and the \$255 million figure presented in the report is entirely unfounded for the following reasons:

- 1) Setting aside the flaws with the Abell Report methodology, the report does not provide a deep explanation of what analysis was done, links to sources, tables depicting analysis breakdowns, workpapers or anything else noteworthy. As such, there is nothing provided that can be used to verify if the analysis conducted as part of the report was performed correctly regardless of methodology used.
- 2) EIA only provides data that enables the derivation of annual average retail supplier prices for their entire Maryland residential portfolios by year. There is no breakdown of retail supplier prices by month, customer, product type, product term or even by utility. In other words, EIA essentially just provides a single annual average price by year for each supplier for all of Maryland. As such, this data cannot be used to claim over or under payment by any retail customer or group of retail customers. A proper analytical work would have sited the shortcomings of using this data, but the Abell Report implies that using it to claim over or under payment is perfectly accurate.
- 3) The Abell Report then claims to compare retail supplier prices derived using EIA to derived annual average SOS prices for Maryland utilities. This comparison is unequivocally apples and oranges due to the following:
 - a. EIA doesn't break out retail supplier prices by utility, meaning the retail supplier prices reported are statewide. The derived SOS prices are utility specific, meaning that these prices reflect market price differentials between Maryland utility service areas. Since retail supplier prices from the EIA do not

³ See Abell Report at 10



it is categorically improper to make a blanket comparison between these prices and utility specific SOS prices.

b. EIA doesn't break out retail supplier prices by term, meaning that each price represents a basket of an unknown number of product terms with varying start and end dates. As discussed in the RESA Report, Maryland retail suppliers offer a multitude of products to residential customers that enable them to lock in prices for terms of up to 36 months.⁴ As such, many if not all annual EIA prices likely incorporate products priced in different years where SOS prices do not, making a blanket comparison between the two inappropriate.

Take for example a residential customer that entered into a 12-month fixed price contract with a retail supplier in July of 2014. The price paid by the residential customer would have been derived based on the state of the market in 2014. Since the customer's contract extends into the first half of 2015 this price would be incorporated into the EIA 2015 annual price for the associated retail supplier even though the price was derived in 2014. The Abell Report would ignore this and compare this price to utility SOS prices derived in 2015 falsely claiming that this comparison is valid.

- c. EIA doesn't break out retail supplier prices by product type, meaning that each price represents a basket of an unknown number of product types with differing value adds. Per the RESA Report, Maryland retail suppliers offer products to residential customers encompassing renewable options, reward programs, wholesale price caps, zero or limited termination fees, cash back, gift cards and charitable donations. By contrast SOS prices offer customers none of these benefits. Comparing a barebones SOS price to an average of an unknown number differentiated products is meaningless and says nothing about whether any one customer or group of customers is/are overpaying for retail supply or SOS service.
- 4) The Abell Report claims that the Maryland utility SOS prices used in the Abell Foundation analysis were pulled from monthly OPC Price Comparison reports.⁶ These reports, however, do not provide the true Price to Compare ("PTC") meaning the full price Maryland residential customers truly pay for utility default service. As discussed in the RESA report, the full Maryland electric utility PTC includes a generation charge, a transmission charge and a Procurement Cost Adjustment ("PCA") charge.⁷ SOS prices reported in OPC Price Comparison reports only encompass generation and transmission charges, meaning they do not incorporate the complete price residential customers pay for utility service. The RESA Report noted that in the most extreme case

⁴ See RESA Report at 7

⁵ See RESA Report at 7

⁶ See Abell Report at 10

⁷ See RESA Report at 4 & 5



provided in the OPC Report the omission of the PCA amounted to understating the PTC by 14%, thereby artificially inflating the value of utility default service.⁸

5) The Abell Report claims that "a monthly kilowatt-hour usage figure reported by BGE" was used to derive an annual weighted average SOS price for each utility. The monthly usage of a typical residential customer would be driven by seasonal weather, meaning expected kWh usage would vary by month. Further, the expected usage pattern would vary by utility service area. Maryland utilities provide residential load profiles that proxy customer behavior over a given year. These profiles are publicly available and are the standard bearer for proxying customer behavior. The Abell report does not explain why utility specific profile data was ignored or why only a single BGE kWh figure was used to weight SOS prices across all utilities suggesting that no serious analysis was done.

It should also be noted that the true PTC residential customers pay for utility service changes monthly, quarterly or every four months depending on the utility. As such, ignoring variations in residential monthly kWh volumes across months and utilities would skew and likely understate the annual weighted average utility price since higher priced months where kWh usage would presumably be higher would get the same weighting as lower priced months with lower associated kWh usage.

The numerous analytical fallacies, lack of sophistication and omission of essential detail render the Abell Report EIA analysis meaningless and the claim that residential customers overpaid \$255 million for retail supplier service between 2014 and 2017 completely invalid.

C. Flawed assessment of 40 customer bills says nothing about the market at large

The Abell Report compares the price paid to retail suppliers by 40 residential customers in BGE's service area to what they would have paid to their respective utility and concludes that for "the month" checked these customers overpaid for retail service. 10 Checking bill differentials for a single month, if done correctly, at best shows that customers paid more for retail supplier service for a single month. It absolutely does not suggest that the 40 customers analyzed pay or paid more for retail service for the life of their retail contract or provides even minimal insight into the market at large. Much like the Abell Report's purported EIA analysis, this dubious exercise is laden with questionable analytics and fails to pass as a serious market study.

To begin with, the Abell Report doesn't sufficiently explain why only BGE's service area was analyzed, why only 40 customers were chosen, what supplier products or terms the 40 customers were on, which month was analyzed or why, raising the prospect that the data may

⁸ See RESA Report at 9

⁹ See Abell Report at 10

¹⁰ See Abell Report at 18



have been cherry picked for the purpose of reaching a desired outcome. The report also doesn't provide a breakdown of results, tables, links, related data, work papers or even a deep explanation of what was done. Further, comparing one month of retail supplier prices to SOS prices does not provide any indication that a customer ultimately over or underpaid for supplier service for the term of the associated supplier contract.

As previously discussed, retail supply contracts can extend as far as 36 months. That means that the price embedded as part of those contracts incorporates the market price for the entire term of the contract, not just a single month. As per the previous example, the contract price of a residential customer who entered into a 12-month fixed price contract with a retail supplier in July of 2014 would incorporate the market price of both low and high-priced months for the 12-month forward period. As such, a one-month comparison between the annual contract price and a Maryland utility PTC may show that the customer paid more for retail service when a 12-month comparison would show the customer paid less. The one-month bill assessment claimed in the Abell Report simply represents an inadequate analysis period by which to draw meaningful conclusions.

The Abell Report also claims that over 442,000 residential customers take electric service and over 226,000 residential customers take gas service from retail suppliers.¹¹ Assuming the report is correct, a survey of 40 customers in only one utility simply does not represent a valid sample from which to draw any conclusions regarding the market at large. So, in addition to an inadequate analysis period the analysis also incorporates an inadequate customer sample, rendering conclusions reached by the exercise negligible at best.

D. So-called "deep dive" bill analysis for 9 customers is misleading

The Abell report does a so-called "deep dive" analysis for 9 low income customers in BGE's service area where they compare the prices paid by these customers for retail service to what they would have paid for utility service for a 5 to 24-month period and then claim that customers overpaid for retail service. This again is a questionable exercise that raises the prospect that associated data was cherry picked to show a desired outcome.

The entire analysis approach is puzzling. The Abell Report does not explain why only 9 customers were analyzed or how those 9 customers were chosen. This is particularly perplexing since the report claims to have surveyed 40 customers. Why not perform a deep dive on all 40, especially given that over 442,000 electric and over 226,000 gas customers take retail supplier service in Maryland by the report's own account?

Much like the 40-customer analysis, the Abell Report deep dive does not provide a breakdown of the analysis performed, underlying data or related work papers. It is not unreasonable to expect that an analysis proclaimed to be a deep dive would at least include monthly

¹¹ See Abell Report at 5 & 6

¹² See Abell Report at 12 & 13



breakdowns in an appendix along with more information on the data and assumptions so that results could be cross-verified.

The analysis is also purportedly run on each customer for a different number of months where the precise months analyzed are not provided, meaning the analysis lacks uniformity even across the mere 9 customers analyzed. The report also claims to calculate a 17-month average overpayment by the 9 customers even though the 9 customers were supposedly on retail supply for differing terms and 3 out of the 9 customers surveyed were only on retail supply for 5 to 10 months. Given these glaring analytical fallacies the so-called deep dive can't even be used to draw meaningful conclusions about the group of 9 customers analyzed much less about the market at large.

III. Other Issues with the Abell Report

A. Attacks on the Retail Energy Supply Association ("RESA") are without merit

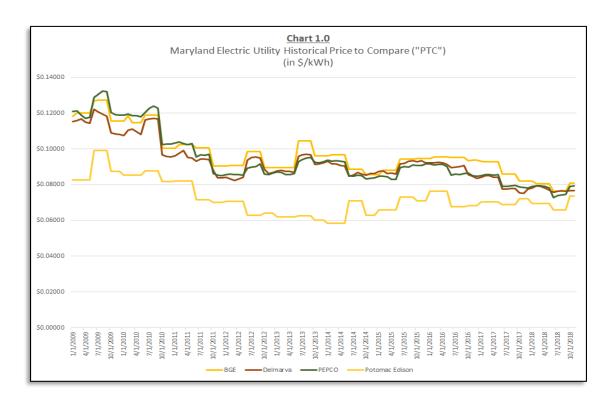
The Abell Report attacks the Retail Energy Supply Association ("RESA") for stating that fixed supplier rates "over a year or more can insulate the customer from price changes in the Standard Offer Service, which are adjusted twice a year under PSC supervision" because "Standard Offer Service rates can go down as well as up; in fact, in recent years, they have been declining."¹³ Much like the Abell Report's claim that residential customers overpay for retail choice, the report's attacks on RESA are erroneous and illustrate a lack of expertise regarding retail energy markets.

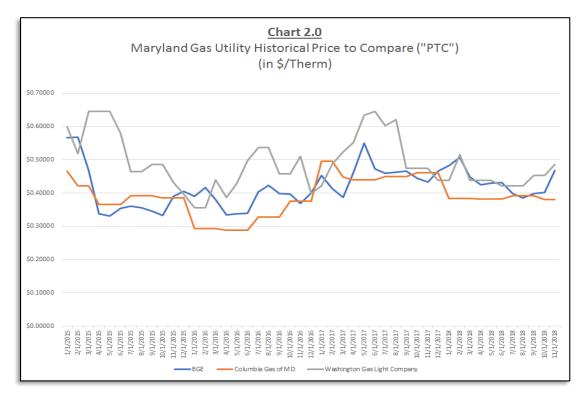
1) First, the PTC price, meaning the price that residential customers actually pay for utility default service, changes much more frequently than twice a year. As previously discussed, this price changes monthly, quarterly or every four months depending on the utility. Further, the month to month change of the utility price can be significant. The tables below, taken from the RESA Report¹⁴, illustrate the movement of Maryland electric PTC prices from 2009 through most of 2018 and gas PTC prices from 2015 through most of 2018. As illustrated by the graphs, Maryland utility default service prices change frequently and significantly. As such, it is perfectly reasonable that a residential customer, low income or otherwise, would want to shield their budget from these price fluctuations.

¹³ See Abell Report at 8

¹⁴ See RESA Report at 6

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2) The fact that "SOS rates go down as well as up" is precisely why customers choose fixed price contracts. A fixed price agreement with a retail supplier insulates the customer



from the volatility of price changes, whether prices increase or decrease. In addition to changing frequently, Maryland utility PTC prices are also unknown to the customer in advance of their bill, so a fixed price supplier contract offers price transparency as well as price stability. Making the claim that a customer is worse off for entering into a long-term fixed price contract because the price of a short-term variable price option declined is like saying a customer who bought health insurance is worse off for not getting sick.

3) The claim that utility prices "in recent years...have been declining" is also puzzling. Looking at PTC price fluctuations in the graphs above makes clear that both electric and gas prices showed marked increases in 2017. The Abell Report does not explain what is meant by the term "in recent years" but it stands to reason that 2017 would be included since the Abell Foundation published the Abell Report in 2018. Finally, even if a Maryland utility price trend was showing an overall decline it is by no means an indication that prices will continue to decrease indefinitely. Maryland utilities procure electric and gas supply from the market and it doesn't take an industry expert to know that over time market prices fluctuate in both directions.

The Abell Report also takes aim at RESA for claiming that retail suppliers offer incentives like cash or "smart thermostats that allow customers to conserve energy, reduce usage, and lower bills" because the "cost of all incentives must be recovered by charges that consumers pay". This accusation is particularly baffling since all entities including private businesses, utilities, government agencies and even the Abell Foundation must recover the cost of their operations. That doesn't mean, however, that their product offerings are worth nothing. If that was the case all businesses would shut their doors. It should also be noted that if customers are using smart thermostats to lower their bills how can the Abell Report claim the cost of those thermostats isn't worth the value provided without hard evidence? The Abell Report does not present any data or evidence indicating what cost retail suppliers embed in their supply prices to cover incentives, yet the report insists that retail suppliers are not providing value.

B. Claim that POR leads to higher retail supplier prices is pure fiction

The Abell Report claims that because Purchase of Receivables ("POR") enabled retail suppliers to offload uncollectible risk to Maryland utilities retail suppliers were free to charge higher prices. Setting aside that this bizarre and baseless claim is unaccompanied by any research, study or analysis of any kind, it also speaks of profound unfamiliarity regarding how retail suppliers set their prices and how retail energy markets work.

A retail supply price is generally comprised of components costed individually and summed up to the final offer price. These components can include, among others, energy, capacity ancillary services, ISO fees and associated term supply risk components. The chance of uncollectible customer payment is one of the risks recovered through a retail supply price. Prior to POR retail

¹⁵ See Abell Report at 8

¹⁶ See Abell Report at 9



suppliers priced this risk individually. With POR, retail suppliers now account for this risk in their supply price based on the POR charge from a regulated entity. Whether the POR charge results in a higher or lower retail supply price than before, the impact would be negligible. To claim that any retail supplier deliberately increased their price to pad their margins since they no longer had the risk of uncollectible payments is ludicrous on its face. Any retail supplier who increases their price simply to pad margins would be undercut by competitors and driven out of the market. The only way to avoid this scenario would be market wide collusion on the part of Maryland retail suppliers and there is absolutely no evidence to suggest this is occurring.

Any offer search of the Maryland Public Service Commission ("Maryland PSC") shopping website¹⁷ shows a wide variation in retail supply offer prices indicating that no collusion exists. Further, many offers provided on the Maryland PSC website are priced below the associated utility PTC, making it quite clear that the presence of POR does not result in retail supplier price gouging. The Intelometry Maryland Market Savings Report for January 2019 shows that in January of this year alone 115 retail supply offers posted were below their associated utility PTC and that total market savings if all residential customers took advantage of the lowest offer would be almost \$24 million for the month.¹⁸ Certainly these results run counter to the claim that the presence of POR creates retail supplier gouging.

The Abell Report also claims without a shred of evidence that the POR charge "does not take into account the higher risk of default when third-party rates are higher". ¹⁹ Even if this claim was true (which again the Abell Reports provides no evidence for) and POR payments did not sufficiently insulate Maryland utilities from uncollectible risk, a reconciliation process would be triggered and the POR charge for the following year would be adjusted since Maryland utilities are afforded cost recovery plus their regulated rate of return by law. Simply put, the claim that POR results in retail supplier price gouging is preposterous on its face.

C. Disregards reasons why low-income customers may opt for retail service

The Abell Report blames retail supplier marketing tactics for low-income residential customers signing up for retail supplier service. The report makes two fallacies here; first the report insinuates that low-income customers that choose retail supply always lose money, and second the report suggests that low-income customers are incapable of acting in their own best interest.

As this document repeatedly shows all claims made by the Abell Report that customers are overpaying for retail supply service are without merit and there is absolutely no real evidence that residential customers, including low income customers, overpay for retail supply. There is, however, solid evidence that residential customers can save substantially over their respective PTC via signing up for retail supplier service. The Intelometry Maryland Market Savings Report

¹⁷ http://www.psc.state.md.us/electricchoice/shop-and-compare

¹⁸ See Intelometry Maryland Market Savings Report – January 2019 in the Appendix section

¹⁹ See Abell Report at 9

²⁰ See Abell Report at 14



for 2018 shows that many retail supply offers were below their associated PTC in every single month of that year. Further, the report shows that if all residential customers took advantage of the lowest offer available and remained on that offer for the contract term the total market savings in 2018 would have surpassed \$203 million.²¹

Since no credible evidence exists that residential customers generally overpay for retail supply, the accusation that low-income customers only choose to take service from retail suppliers because they are hoodwinked into doing so falls apart. Further, as discussed in <u>part A</u> above, utility PTCs are highly volatile and residential customers don't know the price they will be paying prior to receiving their utility bill. Retail supply contracts that fix the price of power or natural gas for terms of up to 36 months offer both price stability and transparency in addition to potential savings. Given all of this, it would be perfectly rational that residential customers, low income or otherwise, would actively choose retail supply service to avoid the volatile nature of utility prices and save money in addition to obtaining other value-added benefits associated with retail supply.

IV. Conclusion

The Abell Report misleads the reader by first making an unsubstantiated claim that residential customers overpay for retail service and then declaring that retail choice exerts undue harm on low income customers as a result. The report also makes easily debunked accusations that retail supplier products don't offer value to customers and that the exitance of POR results in retail supplier price gouging. Finally, the Abell Report completely disregards the perfectly rational reasons why residential customers, low income or otherwise, would choose retail supply over utility default service, thereby implying that Maryland consumers are incapable of making their own choices. Retail supplier products offer price transparency, price certainty, value added services and potential savings while Maryland utility default service offers none of these benefits. Given all of this, the Abell Report should be disregarded as an input in retail energy policy making both at the regulatory and legislative levels.

²¹ See Intelometry Maryland Market Savings Report – Calendar 2018 in the Appendix section



Appendix

A. Author Bio

Guy Sharfman

Principal and Managing Director at Intelometry, Inc.

Guy Sharfman has over twenty years of operational and consulting experience in the energy industry and is a recognized industry expert in the retail and wholesale electricity arenas. Mr. Sharfman has held key leadership roles in risk management, structuring and pricing, hedging and position management, and wholesale and retail market development and expansion. In his present role Mr. Sharfman oversees Intelometry Inc.'s data services business which encompasses the development, collection, maintenance and distribution of retail energy data and market reports utilized by energy companies, brokers, governmental entities, consulting firms, trade associations and aggregators to support retail energy operations and analysis across U.S. markets. Mr. Sharfman also heads Intelometry's consulting business which specializes in retail energy market operations, market strategy, regulation and valuations.

Mr. Sharfman has testified in cases before numerous state utility commissions as well as the Massachusetts legislature. Mr. Sharfman's industry experience includes buying and selling power, creating hedging strategies to manage risks associated with term supply, developing physical delivery capabilities for companies to serve new markets, electricity product structuring and pricing, wholesale and retail contract negotiation, utility tariff modeling, power plant value assessment, supply and demand forecasting, benchmarking evaluations, and electric procurement analyses.

PREVSIOUS INDUSTRY EXPERIENCE

Econ One Research, Inc. (2001 - 2004)

Director of Energy Strategy responsible for establishing a new business consulting practice centering on the power and natural gas industries in North America. Acquired and managed consulting projects for major energy companies, law firms and energy publications. Conducted studies and gave presentations on the future of energy markets to clients and associations.

Enron Wholesale Services (2001-2002)

Managed Enron's retail power positions and developed new markets in the Central region. Created and managed retail power forward curves into all major control areas in the ECAR, MAIN and MAPP regions. Structured financial and physical products for retail power customers in Illinois, Michigan, Ohio and Virginia. Assisted Enron regulatory affairs group in various energy proceedings in front of FERC and State Commissions in Illinois, Ohio and Michigan.

Nicor Energy, L.L.C. (2000-2001)

Manager of Electric Services responsible for structuring and pricing retail electricity in Illinois control areas. Trained and supervised Nicor Energy's power pricing desk. Negotiated electric supply agreements with wholesale companies to supply portions of Nicor Energy's retail load obligations. Developed retail



electric service capabilities for Nicor Energy in Michigan and Ohio control areas. Developed a Green Power supply option for Nicor Energy in Illinois.

Analytical Support Network, Inc. (1998-2000)

Performed open access pricing for an alternative retail electric supplier. Constructed retail power pricing models for the Commonwealth Edison control area. Created indices that predicted a company's open access savings potential based on variables such as SIC codes in order to develop a target market. Conducted open access option assessment for various electric consumers. Performed all types of economic cost and efficiency analyses including contract assessment, price and demand forecasting, future revenue expectations and efficiency of operations assessments. Assessed expert testimony and prepared cross-examination questions for legal staff. Assisted in the testimony strategy of expert witnesses testifying in various electric deregulation proceedings before the Illinois Commerce Commission and the Public Utility Commission of Wisconsin.

TESTIFYING EXPERIENCE

The Massachusetts Legislature

Provided testimony before the Joint Committee on Telecommunications, Utilities and Energy regarding the Office of the Massachusetts General study that claimed retail suppliers are over charging customers in Massachusetts. Illustrated the flaws inherent in the study and demonstrated that retail suppliers do save customers money in Massachusetts as well as provide other benefits.

New York Public Service Commission

Provided testimony before the New York Public Service Commission ("NY PSC") in the Matter of Eligibility Criteria for Energy Service Companies (ESCOs). Prepared analysis and related testimony and exhibits that demonstrated the benefits of ESCO supply to mass market customers.

New York Public Service Commission

Submitted an expert report to the New York Public Service Commission ("NY PSC") commenting on a reference price proposal put forth by the NY PSC staff that presented a methodology to cap ESCO electric and natural gas mass market price offers in the State of New York. Prepared detailed analyses using historical market and utility data illustrating issues with the proposed reference price and demonstrating that the reference price proposal did not meet its stated goals.

Illinois Commerce Commission

Provided testimony before the Illinois Commerce Commission ("ICC") in a docket to determine distribution rate increases and related riders for Commonwealth Edison Company ("ComEd"). Prepared analysis and related testimony and exhibits illustrating historical and forecasted distribution and bundled rate costs paid by ComEd customer classes.

Massachusetts Department of Public Utilities

Provided an expert report and testimony before the Massachusetts Department of Public Utilities ("Department") regarding NSTAR Electric's filed request to enter into two proposed purchased power agreements ("PPA") for wind generation. The report and related testimony assessed the value of the wind PPAs to NSTAR customers and measured the impacts of the PPAs on existing default rates.



Connecticut Department of Public Utility Control

Provided an expert report to the Connecticut Department of Public Utility Control ("Department") regarding historical cost differentials between CL&P regulated and market prices. Participated in a round-table style hearing before the Department to determine the benefits and detriments of allowing Connecticut utilities to engage in portfolio management.

Public Service Commission of Maryland

Testified on behalf of a prominent energy company in a case before the Public Service Commission of Maryland ("PSCM") regarding historical cost differentials between BG&E regulated tariff prices and PJM market prices. Cross examination was conducted in front of the five Maryland Commissioners, who were interested in understanding the impacts of default price volatility that would be associated with a decrease in default rate price levels.

Pennsylvania Public Utilities Commission

Testified on behalf of a coalition of energy companies in a case before the Pennsylvania Public Utilities Commission ("PPUC") regarding historical cost differentials between Duquesne Light regulated tariff prices and PJM market prices. Testimony analyzed the savings that residential and small commercial customers would have attained had they procured their electric requirements directly from the market, as opposed to Duquesne Light tariffs.

Public Utilities Commission of Ohio

Testified on behalf of a coalition of energy companies and a manufacturer's association in a case before the Public Utilities Commission of Ohio (PUCO) on the market impacts of a rate stabilization plan proposed by First Energy Corporation. Testimony analyzed the impacts that the proposed plan would exert on regional energy markets and provided the PUCO with alternative options to the plan including a wholesale Provider of Last Resort (POLR) auction.

Illinois Commerce Commission

Testified in a hearing before the Illinois Commerce Commission to determine how energy values that set alternative electricity rates for all investor owned Illinois electric utilities should be calculated. Used the Retail Power Index ("RPI"), which I constructed and published in Platts Megawatt Daily and Power Markets Week, in testimony to demonstrate the inadequacies of the current energy value calculation. Testified as to which remedies to the current calculation would improve market efficiency.

Illinois Commerce Commission

Testified in a proceeding before the Illinois Commerce Commission to set an electricity default rate for Commonwealth Edison Company ("ComEd"). In testimony, presented an alternative tariff design to the one proposed by ComEd that offered greater transparency and allowed for more adequate cost recovery. The final negotiated design incorporated many of the revisions that I proposed.

ADDITIONAL EXPERT ENGAGEMENTS

Honorarium to discuss agent-based modeling of electricity markets at Argon National Laboratory, Chicago, Illinois



Attended an honorarium for power marketers to assist Argon National Laboratory in building an electricity market modeling system that will allow regulators to anticipate market gaming behavior on the part of generators and power marketers in the event of market rule changes. Discussed the differences in market structures between current independent system operators and how energy companies use these different structures to create arbitrage opportunities. Offered insights into trading behavior in different NERC regions across the United States in real time, day ahead and term wholesale and retail markets.

Illinois Commerce Commission Electric Market Roundtable, Chicago, Illinois

Participated in the annual electric market roundtable discussions at the Illinois Commerce Commission. The Chairman of the Illinois Commerce Commission hosts the roundtable discussions. Participants include CEOs and CFOs of energy firms, leaders of commercial and industrial consumer groups as well as selected industry experts. The topics center around the development of competition in the electricity markets in Illinois both on a wholesale and retail level and what can be done to further foster competition's development.

Operational Task Force for the Midwest Independent System Operator, Indianapolis, Indiana

Attended an operational task force comprised of representatives from transmission owners and market participants to resolve operational issues for the Midwest Independent System Operator. Discussed issues involving methods of interaction and settlement between the transmission owners participating in the Midwest Independent System operator, independent marketers serving or planning to serve retail load, and municipalities.

PRESENTATIONS AND PUBLISHED WORKS

"What happened to Enron? (And other issues in the energy industry)", presentation before the Rotary Club of Chicago Financial District.

"After Enron, Will Power Competition Survive?" Natural Gas - The Monthly Journal for Producers, Marketers, Pipelines, Distributors, and End-Users, Wiley Periodicals, Inc.

"The Impacts of The Enron Bankruptcy and the California Crisis on The Future of Wholesale and Retail Power Markets" Presentation to the International Association for Energy Economics.

The Retail Power Index ("RPI") published previously in Platts Megawatt Daily and Power Markets Week.

EDUCATION

MA Economics, DePaul University at Chicago, IL, 1998

BA Economics, University of Illinois at Champaign/Urbana, IL, 1994



B. Intelometry Maryland Market Savings Report – January 2019

Maryland Retail Supplier Offers v PTC

All Offers								Fixed Pr	ice Offers			Variable	Price Offers		Green O	ffers	
Jan-19	Price to Compare "PTC" (\$/kWh)	Lowest Offer (\$/kWh)	Customer Savings (\$/kWh)	Potential Market Savings for the Month (Total \$)	# of Offers	Offers Below PTC	Recorded Date	# of Offers	Offers Below PTC	Longest Term (bill cycles)	Lowest Offer (\$/kWh)	# of Offers	Offers Below PTC	Lowest Offer (\$/kWh)	# of Offers	Offers Below PTC	Lowest Offer (\$/kWh)
MARKETS																	
Maryland																	
BGE	\$0.08076	\$0.0675	\$0.0133	\$15,004,198	129	46	1/31/19	66	26	36	\$0.06750	15	3	\$0.07900	48	17	\$0.06850
Delmarva MD	\$0.07672	\$0.0689	\$0.0078	\$1,761,249	79	18	1/31/19	41	9	36	\$0.07100	4	2	\$0.06990	34	7	\$0.06890
Potomac Edison	\$0.06909	\$0.0590	\$0.0101	\$1,931,375	72	22	1/31/19	29	9	36	\$0.06250	12	4	\$0.05900	31	9	\$0.05900
Pepco MD	\$0.08057	\$0.0690	\$0.0116	\$5,222,910	93	29	1/31/19	44	16	36	\$0.06950	9	3	\$0.06900	40	10	\$0.06900

Data Sources and Assumptions

State	Utility	Rate Schedule	Number of Residential Customers	Utility Load Profile Assigned	Monthly kWh by Profile	Total Monthly kWh		Sources	Notes
	BGE	Schedule R	1,162,693	R: Residential Service	973	1,131,538,283	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis
l	Delmarva MD	Service Classification - R	178,151	MDDRS: Maryland - Residential Service	1,264	225,140,108	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricchoice/shop-and- compare	Green Offers defined as those with green provisions exceeding the state minimum
Maryland	Potomac Edison	Schedule R	234,972	RSNH: Residential Service - No Electric Heat	815	191,414,761	Source for Number of Residential Customers:	http://www.psc.state.md.us/electricity/electric-choice- monthly-enrollment-reports/#	Total Monthly kWh = Number of Residential Customers x Monthly kWh by Profile
	Pepco MD	Schedule R	523,518	RMNS: Residential Non-Space Heating (MD)	862	451,301,309			Offers classified by PSC as Variable with Term listed as 'Varies' are assumed to have a term of 1 month

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C. Intelometry Maryland Market Savings Report – Calendar 2018

Maryland Retail Supplier Offers v PTC

		nd																	
All Offers										Fixed Price	e Offers			Variable P	Price Offers		Green Of	fers	
						Potential Market Savings if													
Year to Date	Price to Compare "PTC"	Lowest Offer	Lowest Offer Term	Customer Savings	Potential Market Savings for the Month	Customers Remain on Lowest	# of	Offers	Recorded	# of	Offers	Longest Term	Lowest Offer	# of	Offers	Lowest Offer	# of	Offers	Lowest Offer
real to Date	(\$/kWh)	(\$/kWh)	(in Months)	(\$/kWh)	(Total \$)	Offer for Offer Term (Total \$)	Offers	Below PTC	Date	Offers	Below PTC	(bill cycles)		Offers	Below PTC	(\$/kWh)	Offers	Below PTC	(\$/kWh
						(Total \$)													
Estimated Potential To		Year to Da	ite			\$203,602,570													
Current Monthly Report																			
December, 2018	\$0.08076	\$0.0629	1	\$0.0179	\$29,867,643 \$19.483.118	\$20,229,548 \$10.756.077	126	42	12/30/18	64	26	36	\$0.07150	15	4	\$0.06290	47	12	\$0.07090
Delmarva MD	\$0.07652	\$0.0629	1	\$0.0179	\$1,319,498	\$10,756,077	126 80	14	12/30/18	42	26 6	36	\$0.07150	15 5	4	\$0.06290	33	12	\$0.07090
Potomac Edison	\$0.07370	\$0.0599	1	\$0.0138	\$2,558,488	\$2,725,346	74	34	12/30/18	30	17	36	\$0.07370	13	6	\$0.05990	31	11	\$0.05900
Pepco MD	\$0.07999	\$0.0649	1	\$0.0151	\$6,506,539	\$5,428,627	97	31	12/30/18	46	17	36	\$0.06950	10	4	\$0.06490	41	10	\$0.06900
Previous Monthly Report	t Summaries																		
January, 2018 BGE	\$0.08218	\$0.0679	1	\$0.0143	\$23,883,997 \$16,132,059	\$23,883,997 \$16,132,059	119	43	1/24/18	66	32	36	\$0.06990	16	5	\$0.06990	37	6	\$0.06790
Delmarya MD	\$0.08218	\$0.0679	21	\$0.0143	\$18,132,059	\$1,857,562	76	16	1/24/18	45	9	36	\$0.06990	5	4	\$0.06990	26	3	\$0.06790
Potomac Edison	\$0.06938	\$0.0590	3	\$0.0104	\$1,986,217	\$1.986.217	66	16	1/24/18	31	9	36	\$0.06590	12	4	\$0.06390	23	3	\$0.05900
Pepco MD	\$0.07858	\$0.0699	6	\$0.0087	\$3,908,159	\$3,908,159	91	33	1/24/18	53	25	36	\$0.06990	9	3	\$0.07100	29	5	\$0.07190
February, 2018					\$27,836,533	\$23,598,726										40.000			
BGE Delmarva MD	\$0.0809 \$0.0794	\$0.0675	10	\$0.0134 \$0.0101	\$15,160,520 \$2,266,590	\$15,160,520 \$2,131,672	120 79	43	2/22/18	65	30 19	36	\$0.06750	16 5	5	\$0.06990 \$0.07300	39	8	\$0.07090
Potomac Edison	\$0.0794	\$0.0585	6	\$0.0101	\$2,266,590	\$2,131,672 \$1,993,871	69	28	2/22/18	35	13	36	\$0.06930	12	5	\$0.07300	27	3	\$0.07090
Pepco MD	\$0.0795	\$0.0610	6	\$0.0185	\$8,319,876	\$4,312,663	92	38	2/22/18	51	28	36	\$0.05830	9	3	\$0.07400	32	7	\$0.07090
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March, 2018					\$19,217,799	\$16,625,297													
BGE	\$0.0807	\$0.0675	6	\$0.0132	\$9,927,604	\$9,927,604	124	48	3/28/18	68	36	36	\$0.06750	16	4	\$0.06990	40	8	\$0.07390
Delmarva MD Potomac Edison	\$0.0790 \$0.0694	\$0.0699 \$0.0585	21 6	\$0.0091 \$0.0109	\$1,535,789 \$1,848,414	\$1,535,789 \$1,763,779	81 71	34	3/28/18 3/28/18	47 35	24 15	36 36	\$0.06990 \$0.05850	5 12	5	\$0.07300 \$0.06390	29	6	\$0.07100
Pepco MD	\$0.0694	\$0.0585	6	\$0.0109	\$5,905,993	\$1,763,779	95	48	3/28/18	52	37	36	\$0.05850	9	3	\$0.06390	34	2	\$0.05900
repco Mo	30.0792	30.0030		30.0102	\$3,903,993	\$3,396,123	93	40	3/20/10	32	37	30	30.06300	,	3	30.07400	34		30.07090
April, 2018					\$13,392,050	\$13,842,587													
BGE	\$0.0807	\$0.0675	6	\$0.0132	\$8,275,823	\$8,275,823	124	41	4/18/18	69	30	36	\$0.06750	15	3	\$0.07400	40	8	\$0.07390
Delmarva MD	\$0.0781	\$0.0710	24	\$0.0071	\$850,164	\$981,509	81	26	4/18/18	47	18	36	\$0.07100	5	3	\$0.07100	29	5	\$0.07100
Potomac Edison	\$0.0694	\$0.0585	6	\$0.0109	\$1,695,165	\$1,695,165	70	21	4/18/18	34	14	36	\$0.05850	12	5	\$0.06390	24	2	\$0.05900
Pepco MD	\$0.0790	\$0.0709	6	\$0.0081	\$2,570,898	\$2,890,090	93	40	4/18/18	50	29	36	\$0.07120	9	3	\$0.07100	34	8	\$0.07090
May, 2018					\$14,392,545	\$14,334,931													
BGE	\$0.08068	\$0.0679	12	\$0.0128	\$8,745,119	\$9,018,832	128	37	5/22/18	68	27	36	\$0.06920	15	3	\$0.07700	45	7	\$0.06790
Delmarva MD	\$0.07699	\$0.0699	1	\$0.0071	\$848,326	\$848,326	81	19	5/22/18	43	9	36	\$0.07100	6	5	\$0.06990	32	5	\$0.07100
Potomac Edison	\$0.06942	\$0.0585	6	\$0.0109	\$1,757,128	\$1,757,128	71	22	5/22/18	33	12	36	\$0.06180	12	5	\$0.06390	26	5	\$0.05850
Pepco MD	\$0.07808	\$0.0689	6	\$0.0092	\$3,041,971	\$2,710,645	96	33	5/22/18	48	23	36	\$0.06920	9	3	\$0.07350	39	7	\$0.06890
June, 2018					\$13,667,880	\$13,564,782													
BGE	\$0.0764	\$0.0679	6	\$0.0085	\$8,913,287	\$9,331,751	127	20	6/27/18	67	14	36	\$0.06920	14	3	\$0.07200	46	3	\$0.06790
Delmarva MD	\$0.0759	\$0.0699	1	\$0.0060	\$1,011,279	\$1,011,279	81	12	6/27/18	42	5	36	\$0.07190	5	2	\$0.06990	34	5	\$0.07100
Potomac Edison	\$0.0659	\$0.0585	6	\$0.0074	\$1,682,202	\$1,682,202	74	16	6/27/18	32	8	36	\$0.06180	12	4	\$0.06000	30	4	\$0.05850
Pepco MD	\$0.0729	\$0.0689	6	\$0.0040	\$2,061,112	\$1,539,549	99	8	6/27/18	47	4	36	\$0.07140	9	2	\$0.07000	43	2	\$0.06890
July, 2018					\$18,593,417	\$19,112,641													
BGF	\$0.0764	\$0.0679	6	\$0.0085	\$18,593,417	\$19,112,641	125	21	7/30/18	65	14	36	\$0.06870	14	3	\$0.07200	46	4	\$0.06790
Delmarva MD	\$0.0763	\$0.0699	1	\$0.0064	\$1,380,412	\$1,380,412	80	16	7/30/18	42	7	36	\$0.07120	5	4	\$0.06990	33	5	\$0.07100
Potomac Edison	\$0.0659	\$0.0585	6	\$0.0074	\$2,102,323	\$2,102,323	74	15	7/30/18	32	7	36	\$0.06180	12	4	\$0.06000	30	4	\$0.05850
Pepco MD	\$0.0738	\$0.0674	24	\$0.0064	\$4,051,197	\$4,051,197	97	14	7/30/18	46	7	36	\$0.06740	9	3	\$0.07000	42	4	\$0.06890
August, 2018	4	4	2		\$9,496,554	\$10,891,426				64		36							
BGE Delmanya MD	\$0.0764 \$0.0766	\$0.0720	1	\$0.0044	\$4,614,807 \$1,169,953	\$4,614,807 \$1,169,953	122 76	20 13	8/28/18	41	15	36	\$0.07250	5	3 4	\$0.07200	44	3	\$0.07290
Potomac Edison	\$0.0659	\$0.0590	3	\$0.0067	\$1,675,386	\$1,796,615	69	16	8/28/18	29	9	36	\$0.06350	12	4	\$0.06990	28	3	\$0.07100
Pepco MD	\$0.0659	\$0.0700	1 and 12	\$0.0069	\$2,036,408	\$3,310,052	94	12	8/28/18	47	5	36	\$0.07000	9	3	\$0.07000	38	4	\$0.05900
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September, 2018					\$14,568,215	\$15,506,157													
BGE	\$0.08076	\$0.0719	12	\$0.0089	\$7,285,877	\$7,203,644	122	22	9/26/18	65	16	36	\$0.07250	13	2	\$0.07200	44	4	\$0.07190
Delmarva MD Potomac Edison	\$0.07681	\$0.0699	1	\$0.0069	\$947,958 \$2,715,309	\$947,958 \$2,807,667	80	15	9/26/18	44	7	36	\$0.07370	5	4	\$0.06990	31	4 3	\$0.07100
Potomac Edison Pepco MD	\$0.07370	\$0.0590	12	\$0.0147	\$2,715,309	\$2,807,667 \$4,546,888	72 98	15 13	9/26/18	31 50	8 5	36 36	\$0.06250	9	3	\$0.06000	29 39	3 5	\$0.05900
r epco MD	30.07310	30.0036	12	30.0034	\$3,613,070	\$4,540,000	20	15	5/20/10	30	3	30	JU.0036U	,	3	JU.00590	39	3	30.00 3 90
October, 2018					\$14,758,881	\$15,463,548													
BGE	\$0.0808	\$0.0709	12	\$0.0099	\$8,220,814	\$8,220,814	126	44	10/31/18	66	29	36	\$0.07150	13	2	\$0.07790	47	13	\$0.07090
Delmarva MD	\$0.0768	\$0.0699	1	\$0.0069	\$836,480	\$836,480	79	16	10/31/18	43	8	36	\$0.07370	4	3	\$0.06990	32	5	\$0.07100
Potomac Edison	\$0.0737	\$0.0590	3	\$0.0147	\$2,459,619	\$2,459,619	72	32	10/31/18	31	17	36	\$0.06250	11	4	\$0.06390	30	11	\$0.05900
Pepco MD	\$0.0792	\$0.0695	12	\$0.0097	\$3,241,969	\$3,946,636	96	33	10/31/18	48	20	36	\$0.06950	8	2	\$0.07450	40	11	\$0.06990
November, 2018					\$24,688,619	\$16.548.931													
BGE	\$0.08076	\$0.0629	1	\$0.0179	\$16,221,620	\$8,955,497	126	42	11/29/18	64	26	36	\$0.07150	15	4	\$0.06290	47	12	\$0.07090
Delmarva MD	\$0.07663	\$0.0699	1	\$0.0067	\$1,004,114	\$1,004,114	80	14	11/29/18	42	6	36	\$0.07370	5	4	\$0.06990	33	4	\$0.07100
Potomac Edison Pepco MD	\$0.07370 \$0.07943	\$0.0590	3	\$0.0147 \$0.0145	\$2,385,411 \$5,077,474	\$2,385,411 \$4,203,909	97	34 31	11/29/18	30	17	36 36	\$0.06240	13	6	\$0.05990	31 41	11	\$0.05900



Notable Maryland Retail Supplier Offers

State	REP	Description						
Maryland		Includes access to AEP Energy Reward Store, a one-stop online marketplace filled with a variety of energy-saving						
	AEP Energy, Inc.	products for your home and is exclusively for AEP Energy customers. You can earn Reward Dollars to use in the						
		Reward Store by enrolling in this price plan.						
		We charge at the wholesale price +5% and cap first month at SOS. We are non-profit and developing the market						
	Balance Power Systems, LLC	for dual fuel appliances and thermal energy storage to enable households to save money while using renewables						
		the instance they generate.						
	Constellation NewEnergy, Inc.	A 90-day satisfaction guarantee that gives you the ability to cancel your contract during the 90-day period without an early termination fee.						
	Discount Power, Inc.	Receive \$1200 annually in Discount Power Rewards. Save on shopping, dining, travel, movies, and so much more!						
	CleanChoice Energy Inc.	Claim your promotional National Park Pass when you use the offer NPSPass over the phone at 1-800-379-9619 or online at cleanchoiceenergy.com/MDNPSOffer						
	Great American Power, LLC	This plan includes \$50 of Shopping Rewards per Month. This product is 100% GREEN.						
		Take advantage of cash-back rebates and offers on the energy you consume. Enroll and register to earn Rewards						
	IDT Energy, Inc.	on the energy you consume. Redeem points for branded merchandise and retailer gift cards. Visit						
		www.IDTEnergy.com.						
	Liberty Power Maryland, LLC	Our customer loyalty program is offered to new and existing customers that sign up for or renew onto a fixed						
		rate plan. You'll receive two \$25 gift cards, one at 3 months and another at 12 months, for a total of \$50!						
	Reliant Energy Northeast LLC d/b/a NRG Home	The NRG Home Online Exclusive Plan includes: 3-month or 6-month promotional supply price, 1% Cash Back afte						
		every 12 months of active service with us. See Important Offer Details at nrghomepower.com/md6781						
	SFE Energy Maryland Inc d/b/a SFE Energy or SFE	SFE will plant 1 tree on your behalf. Introductory rate for first 2 months of 0.0971c/kWh. You may receive up to						
		\$75 cash back if you don't save money over the course of your term.						
	SFE Energy Maryland Inc d/b/a SFE Energy or SFE	You may receive up to \$50 cash back if you don't save money over the course of your term.						
		Prepare and protect 12:Lock in a low rate for 12 months and get a LuminAID solar lantern that can get you						
	Spark Energy, LP	through almost any storm. Plus, we lil donate a lantern in your name to an area in need. A cancellation fee of \$100 applies.						
	Spring Energy RRH LLC d/b/a Spring Power & Gas	Customers can select either 5% Ecogold Rewards to redeem for gift cards and movie tickets or 3% Cash Back. Rewards are calculated based on Spring's supply charges.						
	Starion Energy PA, Inc.	A cancellation fee of \$100 applies if you cancel Starion Energy during the fixed rate initial term. Active customers can also enroll in Starion Rewards, our free loyalty rewards program. Visit our website for more information.						
	XOOM Energy Maryland, LLC	Enroll on RescueLock 12 and 5% of your monthly energy charges will be donated to PetSmart Charities!						



Data Sources and Assumptions

Month	Utility	Rate Schedule	Number of Residential	Utility Load Profile	Monthly kWh by	Total Monthly kWh		Sources	Notes
	BGE	Schedule R	1,160,800	Assigned R: Residential	Profile 973	1,129,696,006	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis
	Delmarva MD		177,933	Service MDDRS: Maryland -	1,264	224,864,608	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricchoice/shop-and-	Green Offers defined as those with green provisions exceeding the state
January		Service Classification - R		Residential Service RSNH: Residential			Source for Number of Residential	compare http://www.psc.state.md.us/electricity/electric-choice-	minimum 3) Total Monthly kWh = Number of Residential Customers x Monthly kWh by
	Potomac Edison	Schedule R	234,893	Service - No Electric Heat RMNS: Residential	815	191,350,406	Customers:	menthly-enrollment-reports/#	Profile
	Pepco MD	Schedule R	522,297	Non-Space Heating (MD)	862	450,248,740			
	BGE	Schedule R	1,160,800	Service MDDRS: Maryland -	596	1,129,696,006	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis
February	Delmarva MD	Service Classification - R	177,933	Residential Service	878	224,864,608	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricchoice/shop-and- compare	Green Offers defined as those with green provisions exceeding the state minimum
	Potomac Edison	Schedule R	234,893	Service - No Electric Heat	669	191,350,406	Source for Number of Residential Customers:	http://www.psc.stete.md.us/electricity/electric-choice- monthly-enrollment-reports/#	3) Total Monthly kWh = Number of Residential Customers x Monthly kWh by Profile
	Pepco MD	Schedule R	522,297	RMN5: Residential Non-Space Heating (MD)	639	450,248,740			
	BGE	Schedule R	1,160,800	R: Residential Service	649	753,232,441	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis
March	Delmarva MD	Service Classification - R	177,933	MDDR5: Maryland - Residential Service	946	168,289,031	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricrhoice/shop-and- compare	Green Offers defined as those with green provisions exceeding the state minimum
	Potomac Edison	Schedule R	234,893	RSNH: Residential Service - No Electric Heat	721	169,268,642	Source for Number of Residential Customers:	http://www.psc.state.md.us/electricity/electric-choice- monthly-enrollment-reports/#	3) Total Monthly kWh = Number of Residential Customers x Monthly kWh by Profile
	Pepco MD	Schedule R	522,297	RMNS: Residential Non-Space Heating (MD)	696	363,459,170			
	BGE	Schedule R	1,154,242	R: Residential Service	544	627,907,648	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis
April	Delmarva MD	Service Classification - R	177,422	MDDRS: Maryland - Residential Service	673	119,405,006	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricchoice/shop-and- compare	2) Green Offers defined as those with green provisions exceeding the state minimum
April	Potomac Edison	Schedule R	232,736	RSNH: Residential Service - No Electric Heat	667	155,234,912	Source for Number of Residential Customers:	http://www.psc.state.md.us/electricity/electric-choice- monthly-enrollment-reports/#	3) Total Monthly kWh = Number of Residential Customers x Monthly kWh by Profile
	Pepco MD	Schedule R	519,011	RMN5: Residential Non-Space Heating (MD)	615	319,191,765			
	BGE	Schedule R	1,154,023	R: Residential Service	593	684,281,631	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis
	Delmarva MD	Service Classification - R	177,413	MDDRS: Maryland - Residential Service	675	119,689,906	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricrhoice/shop-and- compare	Green Offers defined as those with green provisions exceeding the state minimum
May	Potomac Edison	Schedule R	232,484	RSNH: Residential Service - No Electric Heat	692	160,909,190	Source for Number of Residential Customers:	http://www.psc.state.md.us/electricity/electric-choice- monthly-enrollment-reports/#	Total Monthly kWh = Number of Residential Customers x Monthly kWh by Profile
	Pepco MD	Schedule R	519,328	RMN5: Residential Non-Space Heating (MD)	638	331,326,071			
	BGE	Schedule R	1,154,306	(MD) R: Residential Service	906	1,046,160,456	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis
	Delmarva MD	Service Classification - R	177,536	MDDRS: Maryland - Residential Service	949	168,510,070	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricchoice/shop-and-	Green Offers defined as those with green provisions exceeding the state and the second seco
June	Potomac Edison	Schedule R	232,905	RSNH: Residential Service - No Electric	975	227,017,864	Source for Number of Residential	http://www.psc.state.md.us/electricity/electric-choice- monthly-enrollment-reports/#	Total Monthly kWh = Number of Residential Customers x Monthly kWh by Profile
	Pepco MD	Schedule R	520,011	RMN5: Residential Non-Space Heating (MD)	1,003	521,562,713	Customers:	monthly-uniquiment-Typot578	Profile
	BGE	Schedule R	1,154,938	R: Residential	1,124	1,298,061,613	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis
	Delmarva MD	Service Classification - R	177,608	Service MDDRS: Maryland -	1,221	216,919,755	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricchoice/shop-and-	Green Offers defined as those with green provisions exceeding the state
July	Potomac Edison	Classification - R Schedule R	233,139	Residential Service	1,217	283,714,257	Source for Number of Residential	http://www.psc.state.md.us/electricity/electric-choice-	minimum 3) Total Monthly kWh = Number of Residential Customers x Monthly kWh by
	Pepco MD	Schedule R	520,415	RSNH: Residential Service - No Electric Heat RMNS: Residential	1,211	630,104,951	Customers:	monthly-enrollment-reports/#	Profile
	BGE	Schedule R	1,155,419	Non-Space Heating (MD)		1,044,074,044			
		Service		Service MDDRS: Maryland -	904		Rate Schedule: Utility Tariff	http://www.psc.state.md.us/electricchoice/shop-and-	Green Offers not included in fixed and Variable offer analysis Green Offers defined as those with green provisions exceeding the state
August	Delmarva MD	Classification - R	177,907	Residential Service RSNH: Residential	983	174,969,755	Offers taken from Maryland PSC: Source for Number of Residential	compare	minimum
	Potomac Edison	Schedule R	233,640	Service - No Electric Heat RMNS: Residential	1,038	242,458,110	Customers:	http://www.psc.state.md.us/electricity/electric-choice- monthly-enrollment-reports/#	Total Monthly kWh = Number of Residential Customers x Monthly kWh by Profile
	Pepco MD	Schedule R	521,348	Non-Space Heating (MD)	940	489,862,752			
	BGE	Schedule R	1,156,708	R: Residential Service	711	822,333,792	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis
September	Delmarva MD	Service Classification - R	177,844	MDDRS: Maryland - Residential Service RSNH: Residential	772	137,243,993	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricchoice/shop-and- compare	Green Offers defined as those with green provisions exceeding the state minimum
	Potomac Edison	Schedule R	233,733	Service - No Electric Heat RMN5: Residential	790	184,714,930	Source for Number of Residential Customers:	http://www.psc.state.md.us/electricity/electric-choice- monthly-enrollment-reports/#	3) Total Monthly kWh = Number of Residential Customers x Monthly kWh by Profile
	Pepco MD	Schedule R	521,333	Non-Space Heating (MD)	742	386,590,837			Offers classified by PSC as Variable with Term listed as 'Varies' are assumed to have a term of 1 month
	BGE	Schedule R	1,157,615	R: Residential Service	720	833,753,930	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis.
October	Delmarva MD	Service Classification - R	177,627	MDDRS: Maryland - Residential Service	682	121,104,312	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricchoice/shop-and- compare	Green Offers defined as those with green provisions exceeding the state minimum
	Potomac Edison	Schedule R	234,125	RSNH: Residential Service - No Electric Heat	715	167,320,996	Source for Number of Residential Customers:	http://www.psc.state.md.us/electricity/electric-choice- monthly-enrollment-reports/#	3) Total Monthly kWh = Number of Residential Customers x Monthly kWh by Profile
	Pepco MD	Schedule R	521,040	RMNS: Residential Non-Space Heating (MD)	644	335,555,491			Offers classified by PSC as Variable with Term listed as 'Varies' are assumed to have a term of 1 month
	BGE	Schedule R	1,159,202	R: Residential Service	784	908,265,413	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis
November	Delmarva MD	Service Classification - R	177,879	MDDRS: Maryland - Residential Service	839	149,235,145	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricchoice/shop-and- compare	Green Offers defined as those with green provisions exceeding the state minimum
	Potomac Edison	Schedule R	234,440	RSNH: Residential Service - No Electric Heat	692	162,272,853	Source for Number of Residential Customers:	http://www.psc.state.md.us/electricity/electric-shoice- monthly-enrollment-reports/#	3) Total Monthly kWh = Number of Residential Customers x Monthly kWh by Profile
	Pepco MD	Schedule R	522,005	RMNS: Residential Non-Space Heating (MD)	669	349,425,971			Offers classified by PSC as Variable with Term listed as 'Varies' are assumed to have a term of 1 month
	BGE	Schedule R	1,160,800	R: Residential Service	940	1,090,880,042	Rate Schedule: Utility Tariff		Green Offers not included in Fixed and Variable offer analysis
	Delmarva MD	Service Classification - R	177,933	MDDRS: Maryland - Residential Service	1,121	199,434,424	Offers taken from Maryland PSC:	http://www.psc.state.md.us/electricchoice/shop-and- compare	Green Offers defined as those with green provisions exceeding the state minimum
December	Potomac Edison	Schedule R	234,893	RSNH: Residential Service - No Electric Heat	789	185,397,676	Source for Number of Residential Customers:	http://www.psc.state.md.us/electricity/electric-choice- monthly-enrollment-reports/#	3) Total Monthly kWh = Number of Residential Customers x Monthly kWh by Profile
	Pepco MD	Schedule R	522,297	RMNS: Residential Non-Space Heating (MD)	826	431,165,053	1		Offers classified by PSC as Variable with Term listed as 'Varies' are assumed to have a term of 1 month
				(MD)					.,