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DELAWARE

STATE OF DELAWARE
THE PUBLIC SERVICE COMMISSION
861 SILVER LAKE BOULEVARD, SUITE 100
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DOVER, DELAWARE 19904

November 19, 2009

BY HAND

Ms. Alisa C. Bentley
Secretary
Delaware Public Service Commission
861 Silver Lake Boulevard
Suite 100, Cannon Building
Dover, DE 19904

RE: *In the Matter of the Application of Delmarva Power & Light Company for the Approval of a Modified Fixed Variable Rate Design for Natural Gas Rates (Filed June 25, 2009):* PSC Docket No. 09-277T

Dear Ms. Bentley:

I enclose for filing in the above-captioned docket an original and ten copies of the **Direct Testimony and Exhibits of Howard Solganick on Behalf of the Staff of the Delaware Public Service Commission**. Copies have been provided to all persons on the service electronically and in the manner indicated on the service list.

Very truly yours,

Regina A. Iorii

Regina A. Iorii
Deputy Attorney General

Encs.
cc: Service List (attached; w/encs.; via electronic mail and as indicated thereon)

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF DELAWARE

IN THE MATTER OF THE APPLICATION	)	
OF DELMARVA POWER & LIGHT	)	
COMPANY FOR APPROVAL OF A	)	**PSC DOCKET NO. 09-277T**
MODIFIED FIXED VARIABLE	)	
RATE DESIGN FOR NATURAL GAS RATES	)	
(Filed June 25, 2009)	)	

CERTIFICATE OF SERVICE

Regina A. Iorii hereby certifies that on November 19, 2009, she caused a copy of the **DIRECT TESTIMONY AND EXHIBITS OF HOWARD SOLGANICK ON BEHALF OF THE STAFF OF THE DELAWARE PUBLIC SERVICE COMMISSION** to be served electronically upon all the persons on the attached service list, and upon those same persons by hand, regular or state mail, as indicated on the service list.

/s/ Regina A. Iorii

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Dated: November 19, 2009

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BEFORE THE
PUBLIC SERVICE COMMISSION
OF THE STATE OF DELAWARE

In the Matter of the Application of Delmarva Power & Light Company for the Approval of a Modified Fixed Variable Rate Design for Natural Gas Rates (Filed June 25, 2009)	)))))	Docket No. 09-277T

Direct Testimony and Exhibits of Howard Solganick

On Behalf of the Staff of the Delaware Public Service Commission

November 19, 2009

Qualifications

Q. **Please state your name, position and business address.**

A. My name is Howard Solganick. I am a Principal at Energy Tactics & Services, Inc. My business address is 810 Persimmon Lane, Langhorne, PA 19047.

Q. **Please summarize your qualifications and experience.**

A. I am licensed as a Professional Engineer in Pennsylvania (active) and New Jersey (inactive). I hold a Professional Planner's license (inactive) in New Jersey. I served on the Electric Power Research Institute's Planning Methods Committee and on the Edison Electric Institute Rate Research Committee. I have been appointed as an arbitrator in cases involving a pricing dispute between a municipal entity and an on-site power supplier and a commercial landlord-tenant case concerning submetering and billing. I also served on two New Jersey Zoning Boards of Adjustment as Chairman and member. Presently, I am Chairman of the Middletown Township (Bucks County, PA) Planning Commission.

I have been actively engaged in the utility industry for over 33 years, holding utility management positions in generation, rates, planning, operational auditing, facilities permitting, and power procurement. I have delivered expert testimony in utility planning and operations, including rate design and cost of service, tariff administration, generation, transmission, distribution and customer service operations, load forecasting, demand side management, capacity and system planning, and regulatory issues.

I have also led and/or participated in consulting projects to develop, design, optimize, and implement both traditional utility operations and e-

commerce businesses. These projects focused on the marketing, sale and delivery of retail energy, energy related products and services, and support services provided to utilities and retailers.

I have been engaged by clients to review proposed distributed generation contracts and the operation and integration of generating assets within power pool operations, and have advised the Board of Directors of a public power utility consortium. For a period of four years I was engaged by a multiple site commercial real estate organization to manage its solicitation for the purchase of retail energy. As a subcontractor, I have performed management audits for the Connecticut Department of Public Utility Control and the Public Utilities Commission of Ohio. I also provide (as a subcontractor) support for the Staff and Commissioners of the District of Columbia Public Service Commission for an electric rate case and have previously provided similar services to the D.C. Commission.

I have also been engaged to review utility performance before, during and after outages resulting from major storms including hurricane Ike.

From 1994 to the present, I have been President of Energy Tactics & Services, Inc. From 1996 to 1998, I was a Managing Consultant for AT&T Solutions. From 1990 to 1994, I was Vice President of Business Development for Cogeneration Partners of America. In that position, I was responsible for the development of independent power facilities, most of which were fueled by natural gas and oil.

From 1978 to 1990, I held progressively increasing positions of responsibility with Atlantic City Electric Company in generation, regulatory, performance, planning, major procurement, and permitting areas.

From 1971 to 1978, I was an Engineer or Project Engineer for Univac, Soabar, Bickley Furnaces and deLaval Turbine designing card handling equipment, tagging and printing machines, high temperature industrial furnaces, and utility and industrial power generation equipment, respectively.

I received a Bachelor of Science in Mechanical Engineering (minor in Economics) from Carnegie-Mellon University and a Master of Science in Engineering Management (minor in Law) from Drexel University. I have also taken courses on arbitration and mediation presented by the American Arbitration Association, scenario planning presented by the Electric Power Research Institute and load research presented by the Association of Edison Illuminating Companies. I have also taken courses in zoning and planning theory, practice and implementation in both New Jersey and Pennsylvania.

Q. **Have you previously submitted testimony in regulatory proceedings?**

A. Yes. I have testified and/or presented testimony (summarized in Exhibit HS-1) before the following regulatory bodies.

- Delaware Public Service Commission
- Georgia Public Service Commission
- Jamaica (West Indies) Electricity Appeals Tribunal
- Maine Public Utilities Commission
- Maryland Public Service Commission
- Michigan Public Service Commission
- Missouri Public Service Commission
- New Jersey Board of Public Utilities
- Public Utilities Commission of Ohio
- Pennsylvania Public Utility Commission
- Public Utility Commission of Texas

Direct Testimony

Q. **For whom are you appearing in this proceeding?**

A. I am appearing on behalf of the Staff of the Delaware Public Service Commission ("Staff").

Q. **What is the purpose of your testimony?**

A. My testimony analyzes the Company's proposed fixed variable rate design and the limited supporting information provided by Delmarva Power & Light Company ("Company").

- The Company's failure to provide tariff sheets for the proposed rate design leaves the mechanism ambiguous and seasonal customers may create unintended costs.
- The bill impact information provided by the Company is not sufficient to alleviate concerns about the transitional impact on customers.
- While the Company is proposing a revenue neutral situation for itself, the Company has not demonstrated any vision of the future benefits for its customers as a result of this proposal and its implementation of advanced metering.
- The Company's proposed rate design provides revenue stability for the Company but no corresponding benefit for customers.

I also analyze the Company's proposal in light of the Staff's criteria described in Order No. 7420.

Following my opinion that the Company's filing is incomplete, to resolve the open issues of limited information, customer bill impact, customer education, implementation of the rate design, revenue stability and

customer benefits, I suggest a workshop process be incorporated into the procedural schedule.

Background

Q. Please describe the genesis of this filing

A. On September 16, 2008 the Public Service Commission of the State of Delaware ("Commission") issued Order No. 7420 ("Order"). This order concluded that imposing surcharges for energy efficiency programs and revenue deficiencies related to conservation efforts was not the preferred approach,[1] and discussed:

- The adoption of the Staff's recommendations regarding the potential adoption of a modified fixed variable ("MFV") rate design for Delaware distribution utilities in the context of a rate proceeding;[2]
- The flexibility to address these rate design changes outside of a base rate case if the situation is warranted;[3] and
- The approval of the diffusion of advanced metering technology into the electric and natural gas distribution system networks and the establishment of a regulatory asset for the technology subject to the rate case process.[4]

Q. Please explain the concept of the Staff's MFV rate design.

A. In the Findings and Recommendations of the Hearing Examiner (Attachment A to the Order), the Hearing Examiner determined that the Staff:

[1] Order No. 7420 page 4
[2] Order No. 7420 page 5
[3] Order No. 7420 page 5
[4] Order No. 7420 page 5

- Supported the concept of revenue decoupling for energy, using alternate rate designs that collect more fixed costs through customer or demand charges as part of a base rate proceeding.[5]
- Proposed a modified fixed variable method that would stratify rate classes to mitigate the potential high cost impact on low-income customers resulting from a change in rate design.[6]
- Asserted that the MFV rate design moves toward a rate design that more appropriately aligns fixed costs with rates that comport with cost causation principles.[7]
- Observed that the MFV rate design sends a proper price signal regarding a customer's decision to engage in conservation and reduces customer cross-subsidization.[8]

The Order highlighted that Staff's modification of the fixed variable rate design creates particular classes of customers to avoid rate subsidization.[9]

Q. Did the Staff suggest any criteria for the Commission to evaluate a MFV rate design proposal?

A. Yes, those factors were listed in the Hearing Examiner's findings as:[10]

- Rate gradualism;
- Customer equity;
- Impact on the Company's risk profile;
- Over/under earning protection; and
- Customer service and reliability protection.

[5] Order No. 7420 Attachment A at 12
[6] Order No. 7420 Attachment A at 13
[7] Order No. 7420 Attachment A at 13
[8] Order No. 7420 Attachment A at 13
[9] Order No. 7420 page 5 (footnote)
[10] Order No. 7420 Attachment A at 14

Fixed Variable Rate Design

Q. What are the positive aspects of a fixed variable rate design?

A. As correctly highlighted by Staff, a fixed variable rate design better aligns costs and rates and reduces the cross subsidization of various usage levels within a rate class. The fixed portion is designed to recover costs that are independent of demand or volume, such as customer service, metering and the service line.

For the utility, a fixed variable rate design provides better revenue stability and more predictable earnings when compared to a volumetric rate. Inherent in volumetric rates is the risk that weather will not be "normal," such as a warmer than normal heating season. Another risk that is mitigated by a fixed variable rate design is business risk. As the economy suffers customers may reduce their consumption, which is directly seen as a decrease in volumetric usage and related revenues.

For the customer, a fixed variable rate design provides better bill stability when compared to a volumetric rate. Inherent in volumetric rates is the risk that weather will not be "normal," such as a colder than normal heating season.

Q. What are the negative aspects of a fixed variable rate design?

A. To the extent that a volumetric (usage) based rate design is replaced by a fixed variable rate design, customers that have not been paying for their full cost of service will see an increase and customers in the opposite situation would see a decrease. The rate impact on a particular customer depends on the differences between the old volumetric based rate and the fixed variable rate proposed.

Once a fixed variable rate design is in place the negative aspect is the customer's perception of how the demand charge operates, because most small customers have not yet been subjected to them. This perception can become negative if the utility does not clearly define how the demand charge is determined, when it will change and how the customer's behavior (usage and conservation) affects the demand level. A utility provided customer education program that starts with the adoption of the new fixed variable rate design and continues with each update of the customer's demand level is necessary to obtaining customer understanding.

Q. Have gas distribution fixed variable rate designs been implemented in other jurisdictions?

A. Yes. In Georgia, Atlanta Gas Light ("AGL") implemented a fixed variable rate design for residential customers.[11] The rate structure includes:

- Customer Charge;
- Ancillary Service (meter reading cost);
- Dedicated Design Day Capacity ("DDDC");
- Peaking Service (some areas only); and
- Various other charges.

AGL explains that the customer's monthly gas bill from a marketer will include a base charge from AGL, regulated by the Georgia Public Service Commission ("GA PSC") that will not vary between marketers.

AGL explains that the DDDC covers the common costs of delivering gas based on the customer's demand on the system on the coldest day of the year. AGL also explains that the DDDC is recalculated each year and is

[11] http://www.atlantagaslight.com/Home/EstablishServiceChooseAMarketer/GuidetoOurCharges.aspx

approved by the GA PSC to update usage patterns (summer and winter) for each customer for the most recent year. The DDDC is based on premise-specific information such as past usage patterns or gas appliances. The new DDDC is effective on September 1st.

For new residential structures the DDDC is based upon specific premise information, including size, type and gas equipment used.

In February 2001 AGL implemented a seasonal rate plan for DDDC charges, resulting in higher charges in the winter and lower base charges in the summer.

The information provided within this answer is provided for illustrative purposes only and should not be compared to the Company's proposal.

Q. What has the experience been in Georgia?

A. To gain insight into the adoption of the fixed variable rate design by AGL and the GA PSC, I interviewed members of the Staff of the GA PSC that were actively involved in the transition to both customer choice and a straight fixed variable rate design in the late 1990s.

Q. Please describe the changes in Georgia.

A. On June 30, 1998 the GA PSC ruled on the filing made by AGL. The ruling adopted a straight fixed variable ("SFV") rate design with a constant (equal in each month of the year) DDDC. The SFV rate design was required by legislation. The GA PSC also implemented customer choice simultaneously. Therefore any inferences should be made carefully as the customer reaction spans both customer choice and the SFV rate design implementation.

Q. Did AGL propose a customer education program?

A. All firm customers (residential and customers) contributed through a $0.13 per month rider to support a customer education program proposed by AGL. The majority of the funds was used for customer choice, although rate design was part of the education program.

Q. Did the GA PSC change the residential DDDC portion of the rate design?

A. Effective February 2001, the residential DDDC was "sculpted" to better reflect the seasonality of the previous volumetric rate design. This change appears to have been in response to customer concerns.

Q. Did the GA PSC consider phasing in the SFV rate design?

A. While phasing in the SFV rate design was considered, the final ruling did not include a phase in. One reason may nave been that AGL did not provide detailed rate impact analysis.

Q. Is the SFV rate design now accepted by customers?

A. The Staff members of the GA PSC indicate that the rate design is accepted. Although two different working groups have explored rate design alternatives, their recommendations have been to retain the existing SFV structure. The working groups did recommend several modifications to the DDDC calculation, which have been implemented.

Q. Is the Georgia implementation of SFV a decoupling mechanism?

A. The GA PSC Staff members indicate that there is a revenue neutral settlement process that occurs based on the March 31st customer count. This process effectively removes any advantage to AGL from customer growth. Presently, there is an open docket considering economic development and growth.

Q. How has the GA PSC dealt with the seasonality issue?

A. Due to customer misunderstanding and confusion, the present seasonality concept no longer collects the "phantom" revenue for months when the customer has disconnected. However, there is a $25 reconnection charge.

Q. Did the implementation of SFV led to a loss of customers?

A. The implementation of the DDDC rate design caused some poultry growers and greenhouses to convert to propane.

Q. Does AGL reset a customer's DDDC during the year?

A. For a customer who has made a demonstrable change such as removing one of two heating units in conjunction with a change in building use from office space to warehouse, AGL will recalculate and adjust the DDDC when the change takes place.

Delmarva's Proposal

Q. Please summarize the Company's application for a fixed variable rate design.

A. The Company filed an "Application for the approval of the modified fixed variable rate design for natural gas rates" on June 25, 2009.[12] The

[12] Application of Delmarva Power, June 25, 2009 Filing Cover Sheet

purpose of the application is approval of a decoupling mechanism to the Company's natural gas delivery rate structure, which is intended to better levelize and stabilize the recovery of delivery-related costs from all customer classes over the course of each year.[13]

The Company is not seeking implementation of the rates in this proceeding and envisioned that actual rates would be implemented only after a proceeding designed to implement rates.[14]

The major objective of the proposed decoupled rates is to eliminate the relationship between delivery revenue and the level of customer gas consumption.[15] The modified fixed variable rate design is a method of revenue decoupling that breaks the link between a customer's energy consumption and the Company's delivery related revenues.[16]

According to the Company, its delivery-related rate design removes disincentives related to the promotion of conservation programs, better aligning the interests of customers, utilities, the environment and the State of Delaware in the area of energy conservation.[17] The Company intends to promote more efficient use of energy by customers with programs of an educational nature for gas.[18]

Q. Please summarize the Company's proposed fixed variable rate design.

A. The Company proposes to modify the gas delivery rate design for Residential Gas Sales Service (Service Classification RG), General Gas

[13] Application of Delmarva Power, June 25, 2009 at 3
[14] Application of Delmarva Power, June 25, 2009 at 3
[15] Application of Delmarva Power, June 25, 2009 at 4
[16] Application of Delmarva Power, June 25, 2009 at 5
[17] Application of Delmarva Power, June 25, 2009 at 5

Sales Service (Service Classification GG) and General Volume Firm Transportation (Service Classification GVFT). The existing two part customer and volumetric rate designs will be replaced by a two-part rate structure consisting of a customer related charge and a demand-related charge.[19]

To simulate results from that case with the proposed fixed variable rates, the Company uses a revenue neutral approach[20] using the revenue requirements determined by the Commission in its Order No. 7152 in Docket No. 06-284.[21]

The proposed rate structure has been developed using test year data from Docket No. 06-284 to allow for the development of comparative analyses between the present and proposed rate structures.[22]

The filing does not include any changes to service classifications MVG, LVG, MVFT and LVFT because the large commercial and industrial customers are served under a rate structure that already includes customer and demand components.[23]

Q. How does the Company define the Design Day Contribution ("DDC") Factor and its calculation?

A. The DDC Factor is designed to align customers' delivery rates with the underlying costs associated with overall design of the delivery infrastructure. The DDC is intended to provide a measure of an individual's contribution to the Design Day usage. The Design Day

[18] Application of Delmarva Power, June 25, 2009 at 6
[19] Delmarva at 4:17-21 (Janocha Direct)
[20] Delmarva at 4:22-23 (Janocha Direct)
[21] Delmarva at 5:1-2 (Janocha Direct)
[22] Delmarva at 5:5-7 (Janocha Direct)

reflects the Company's investment in gas mains, distribution lines, valves and other supporting equipment.[24]

The Company describes the calculation of a DDC Factor as a calculation for each service classification based on customer sales activity for the prior January and February billing months and the previous August billing month. Aggregate examples for service classifications RG and GG are provided in Schedule JFJ-3 (updated in response to Staff Dr 1-12).[25]

The Company indicates that a DDC will also be developed for each customer premise using information in the Company's Customer Information System and the same calculation method delineated in Schedule JFJ-3.[26]

In a data response the Company indicated that each customer would have a customer-specific DDC Factor based on the individual customer's usage pattern.[27]

Q. How often would the Company reset the DDC Factor for a customer?

A. The Company's filing does not answer this question. However, the filing does indicate, "The DDC is intended to provide a measure of an individual's contribution to the Design Day usage."[28]

The Company did not provide any proposed tariff sheets or rate schedules to provide details of the application of the DDC to individual customers.[29]

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[23] Delmarva at 5:14-18 (Janocha Direct)
[24] Delmarva at 5:23-6:5 (Janocha Direct)
[25] Delmarva at 6:6-9 (Janocha Direct)
[26] Delmarva at 6:10-15 (Janocha Direct)
[27] Response to Data Request DPA 1-5 (Janocha)
[28] Delmarva at 6:2-3 (Janocha Direct)
[29] Response to Data Request PSC Staff 1-4 (Janocha)

Q. What is the DDC for a customer that does not heat with natural gas?

A. The Company does not address the operational impacts of its proposed rate design on specific customer types. However, from Schedule JFJ-3 and the Company's testimony, I infer that since all customers press equally at the margin (the Design Day) regardless of whether that usage is for space heating or uses such as water heating, drying, cooking or other processes, each customer will have a DDC.

Q. How did the Company develop its proposed fixed variable rate design?

A. The Company indicated that its Recommended Rates were derived through a direct calculation in the spreadsheet provided in response to Staff 1-6, which produces Schedule JFJ-4.[30]

Q. What Company research supports the proposed fixed variable rate design?

A. Staff 1-21 asked the Company to "[s]pecifically address the source and any underlying studies, calculations, reports, adjustments or other support, including class cost of service unitized rate elements or comparison to other utilities for the "Recommended Rates" column in Schedule JFJ-4 (pages 1 and 2)."

The Company responded, "[t]he column "Recommended Rates" is derived through a direct calculation in the spreadsheet provided in response to Staff 1-6."

[30] Response to Data Request PSC Staff 1-21 (Janocha)

From this I infer that the process was purely mechanical and did not include any studies, research or other support.

In response to data requests, the Company indicated that: (1) it has not performed analyses to determine the risk of loss of customers, volume or revenue due to the proposed rate design;[31] and (2) it has not performed gas load research for gas customers by class for the period from January 1, 2001 to the present.[32]

Q. How did the Company estimate and review the bill impact of the proposed fixed variable rate design?

A. The Company provided Schedule JFJ-5 as an analysis of the impact of the proposed rate design on Service Classification RG customers. That single point analysis indicates that 77% of all customers would experience average overall monthly bill impacts of between -5% and +5%. 89% of all customers would experience a bill impact of between -10% and +10%.[33] Notably, Schedule JFJ-5 shows that the average monthly bill impact increase for 10.3% of the Company's residential customers would be $5.45.

Schedule JFJ-5 does not provide any bill impact information for Service Classification GG or GVFT customers. On November 12th the Company provided its single point analysis that indicates almost 54% of the GG customers would see average monthly bill impacts of +- 10%. Over 45% of all GG customers will see increases of over 10%.[34]

[31] Response to Data Request PSC Staff 2-27 (Janocha)
[32] Response to Data Request PSC Staff 2-28 (Janocha)
[33] Delmarva at 7:2-7 (Janocha Direct)
[34] Response to Data Request PSC Staff 1-23 (Janocha)

At present, I am unable to replicate the Company's Schedule JFJ-5, as the full operating Excel worksheet has not been provided. Nor am I able to use the Company model to estimate the billing impact of alternative MFV rate designs on customers. In response to a data request the Company has indicated that its model does not have any logic to examine alternative rate designs.[35] Further, although customer impact information was requested for a range of potential MFV rate designs, the Company provided no such information.[36]

Q. How often would a customer's DDC be reset?

A. The Company did not provide proposed tariff sheets for its rate design; however, from the Company's filing I infer that an individual customer's DDC would be recalculated annually based on information in the Company's Customer Information System.[37]

This recalculation of the DDC is important to afford customers a response to their conservation efforts. The annual recalculation also ameliorates the impacts of a mechanical assignment of a DDC to new homes or the carryover of a previous owner or tenant's usage to a new owner or tenant.

Revenue Reconciliation

Q. Would the Company reconcile its distribution revenue?

A. This operational issue was not defined in the Company's proposal; however, in response to a data request the Company responded that there would not be a true-up to guarantee recovery of its annual revenue requirement.[38]

[35] Response to Data Request PSC Staff 2-43 (Janocha)
[36] Response to Data Request PSC Staff 2-43 (Janocha)
[37] Delmarva at 6:10-15 (Janocha Direct)
[38] Response to Data Request DPA 1-9 (2) (Janocha)

However, the Company's testimony states, "The final step in the process is to reconcile the sum total of the individually developed customers (sic) DDC factors with the aggregate DDC."[39] This statement appears to indicate that the Company has *some* mechanism planned to recoup, on an annual basis, any DDC lost due to changes in customers' usage or usage patterns, such as conservation.

Customer Education

Q. How does the Company propose to explain the proposed fixed variable rate design to its customers?

A. The Company's filing does not include any details regarding how it plans to educate customers in the operation or impact of the proposed rate structure. In response to Staff 1-5, the Company stated that it "has not developed a detailed educational program to introduce, implement, explain or detail the proposed rate design proposed in this Application. Depending on the outcome of this proceeding, the Company will work with Staff and DPA in developing educational materials to explain the modified fixed variable rate design to Customers." This offer of cooperation is positive.

Seasonal Customers

Q. If seasonal gas customers "game the system" after a fixed variable rate design is implemented does that increase costs for the Company?

A. Unlike electric service, which is hard for a customer to live without, certain gas customers that use gas for space heating only can shut down and disconnect their gas service during warmer months. The customer's goal

[39] Delmarva at 6:12-14 (Janocha Direct)

is to avoid paying the monthly customer and demand charges when there is no usage.

This "gaming" practice raises the costs to the utility by causing two additional service events for disconnection and reconnection, one potentially at a time of high service volume (first cold day of heating season).

Under Section XVI of the Company's tariff it appears that there is no charge for customer-initiated disconnections and reconnections. Therefore the service events may be viewed by customers as free even though the costs of a visit to a customer's home or business is an expense for the Company eventually borne by all other customers.

The Company has indicated that there are no seasonal service provisions in the Company's Tariff for Gas Service.[40]

Q. Are there solutions for the seasonal problem?

A. Yes. To ensure that all customers pay their share of the fixed costs of the delivery system, all customers should pay for all twelve months of the customer and demand charges to fairly recoup the fixed expenses their service entails.

I cannot be sure that the Company has addressed "seasonal risk" because this filing does not include any tariff sheets. The Company indicated that a seasonal service mechanism was informally considered but rejected in favor of the proposed two-season payment schedule.[41] I

[40] Response to Data Request PSC Staff 2-29 (Janocha)
[41] Response to Data Request PSC Staff 2-30 (Janocha)

assume that the Company is referring to the two levels of the DDC charge with winter being November through March.

Q. How can the "seasonal risk" be addressed?

A. The Company can adjust its disconnection terms and conditions to recoup the avoided monthly delivery charges. This ensures that there are no savings to the space-heating customer that requests a seasonal disconnection.

Q. Has this concept been implemented at a Delaware gas utility?

A. Yes. The Commission has approved terms and conditions for Chesapeake Utilities Corporation that may minimize the "seasonal risk."[42] The provision should be carefully analyzed because the disconnect period is limited to 180 days and recoups only the customer charge. A longer period and the addition of the DDC demand component may be appropriate in the Company's situation to keep customers from gaming the proposed fixed variable rate design.

Q. Has a seasonal concept been implemented by Delmarva?

A. Yes. Delmarva's electric tariff provides that seasonal service, defined as service for periods of less than one year or at the same location annually, provides that any charges shall be increased by an additional 25%.[43] The Company indicates that this seasonal service provision has been included in the electric tariff since at least the early 1980s.[44]

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[42] Chesapeake Utilities Corporation, P.S.C. Del. No. 4, Second Revised Sheet No. 26.1, Section 14.2

[43] Delmarva Power & Light Company, P.S.C. Del. No. 8 – Electric, Second Revised Leaf No. 10

[44] Response to Data Request PSC Staff 2-31 (Janocha)

Q. What is the magnitude of the cost shifting caused by a seasonal customer?

A. Assuming a residential customer disconnects for six months, the customer would avoid the existing customer charge of $9.56[45] or $57.36 plus the costs of two service events that might range in cost from $25 to $100 each. Assuming a cost of $50 per service event (the disconnection visit by a Company serviceperson or the visit to reconnect service), other customers are subsidizing the seasonal residential customer by approximately $157 under the existing residential rate structure and $264 for the existing GG rate structure[46].

Under the Company's proposed rate structure the residential customer charge will now be $15.74[47] per month along with a DDC charge. The cost of the DDC charge cannot be estimated without further information but other customers will subsidize the seasonal customer by at least $194 for a residential customer and $380 for a GG customer[48].

Background Customer Statistics

Q. What is the history in number of gas distribution customers?

A. I have prepared Exhibit HS-2 from the Company's response to Data Request PSC Staff 1-24. This exhibit plots the calendar year annual average number of residential and GG customers from the Company's data. While there appears to be a data anomaly in 2000 for residential customers and in 1999-2001 for GG customers, the trend is clear. The annual number of customers increases in every year.

[45] Delmarva Schedule JFJ-4 page 1
[46] Customer charge of $27.31 from Delmarva Schedule JFJ-4 page 2
[47] Delmarva Schedule JFJ-4 page 1
[48] Customer charge of $46.63 from Delmarva Schedule JFJ-4 page 2

Q. What is the forecast for gas distribution customers?

I also prepared Exhibit HS-3 from the Company's response to PSC Staff 1-16. This exhibit plots the Company's various forecasts for both the GCR filing and its annual business forecasts. Estimates were developed starting in December 2004 and extending to the 2010 budget forecast ending in December 2014. While the individual forecasts have different starting points and there is some month-to-month variability within a forecast, all of the Company-supplied forecasts demonstrate an increasing number of customers in the Company's view of the future.

Q. Have you analyzed the change in the revenue profile from the existing two part (customer and volumetric) rate design as compared to the proposed fixed variable (customer and demand) rate design?

A. Yes. I prepared Exhibit HS-4 to demonstrate the magnitude of the shift to stable and predictable revenue as compared to the more risky volumetric revenue that is subject to both weather and business risk. This exhibit uses the format, billing determinants and revenue from Schedule JFJ-4 for both the residential and general gas service delivery rates. I added three columns and computed the percentage of revenue that is fixed between rate cases (that is, fixed for an annual (twelve month) period) and the percentage that is subject to volumetric change with weather and/or business conditions.

As shown in Exhibit HS-4 (Column (4)), at present only 29% of the residential revenue and 18.4% of the GG revenue is fixed (per customer) between rate cases. The remainder of the revenue is exposed to volumetric risk.

Upon the implementation of the Company's proposed fixed variable rate design, 47.7% of residential revenue and 31.2% of GG revenue is shifted to the stable customer charge (fixed between rate cases). The number of customers that will be charged this rate component has been and is forecasted to be increasing over time.

In the proposed rate design the remainder of the revenue is recovered by the demand (DDC) component, which also grows as the customer base grows. While the DDC Factor may readjust annually, for a residential customer it would most likely take an operational change (new furnace or insulation) or (less likely) a change in customer behavior. It is possible for the Company to forecast these types of operational changes for a customer population and adjust its budgets appropriately, as opposed to weather and business cycle impacts.

The Company's proposed fixed variable rate design offers the Company a much more stable and predictable revenue stream. The Company's forecasts show that the revenue stream will increase over time as the number of customers increases.

Q. Does the DDC concept reflect customer conservation?

A. The DDC does not adversely impact any customer's incentive to conserve and/or make structural improvements to its home or business. Any reduction in consumption is directly accompanied by a reduction in the commodity charge.

As I understand the Company's proposed rate design (no tariff sheets have been filed by the Company), the DDC will be recalculated annually and reflect the change in usage by a customer.

Q. Does the Company retain the conservation risk?

A. The Company retains a very modest portion of the conservation risk as it applies to delivery service. Moving the volumetric revenue recovery to a more appropriate customer charge eliminates a significant portion of the Company's conservation risk. Shifting the remaining portion of the volumetric revenue to the DDC stabilizes the remaining Company delivery revenue for one or more years. If the Company has a mechanism to annually reconcile the individual customers' DDC then that mechanism may eliminate any conservation risk.

Electric Fixed Variable Rates

Q. Has the Company made a fixed variable electric rate filing?

A. Yes. The Company's filing in Docket No. 09-414 includes a request for a revenue increase and a change in its delivery rate structure.

A preliminary schedule indicates that an order may be issued in summer 2010. Acceptance of the Company's electric proposal or some other form of fixed variable rate design would allow the Company to be in compliance with the provisions of the Energy Conservation and Efficiency Act (ECEA) of 2009 that requires all regulated electric and natural gas utilities to implement decoupled rate designs by December 2010.[49]

Unfortunately, the Company's electric filing has led to some confusion in the press (and public) because the intraclass impacts of changing the rate structure are also being confused with the impact of the proposed increase in class revenues.[50]

[49] Application of Delmarva Power, Docket No. 09-414, September 18, 2009 at 8
[50] http://www.delawareonline.com/apps/pbcs.dll/article?AID=2009909280325

Analysis of the Company's Proposed Gas Fixed Variable Rate Design

Q. Using the Staff's criteria for a rate design how does the Company's proposed fixed variable gas rate design perform?

A. As listed above, the Staff suggested that the evaluation criteria should include:

- Rate Gradualism

Although the Company reviewed the bill impact and the single point analysis found that 11% of the residential customers would experience an annual change in excess of 10%,[51] the Company has not proposed any rate stoppers, phase-in or other process to gradually introduce its proposed fixed variable rate design for residential customers. However, it is reasonable to ignore the concerns of customers receiving a rate decrease and focus on the customers that receive an average $5.45 monthly increase.

The Company has provided the bill impact for its GG customers. The proposed rate design is expected to result in an average monthly bill increase of over 10% for more than 45% of all GG customers.

Unfortunately the Company does not appear to have explored any other proposals such as different customer charges (and the associated revenue neutral DDC Factor) to provide all parties with information to evaluate the impact on customers of the change to a fixed variable rate design.

- Customer Equity

The Company's use of both a Customer Charge and a demand (DDC) charge tailors the fixed variable rate to the usage of the customer as

[51] Delmarva at 7:6-7 (Janocha Direct)

opposed to a one size fits all flat monthly or annual charge for delivery service. If properly administered, the DDC charge will provide a customer with a price response (although delayed to the next annual period) to its conservation or operational changes.

Because each customer's bill is derived directly from its individual usage, no customer's rates are impacted by the conservation efforts of other customers. This cross-subsidization of customers unable or unwilling to implement conservation measures (such as added insulation or new equipment) by customers that have the means or inclination to conserve has been a criticism of decoupling adjustments such as the Bill Stabilization Adjustment ("BSA").

- Impact on the Company's Risk Profile

As detailed above, the Company's risk profile is significantly enhanced by shifting all of the volumetric-based revenue (with its inherent weather and business risk) to the much more stable and increasing customer charge and the stable demand (DDC) component. If the Company annually reconciles the sum of the individual customers' DDC, then revenue per customer between rate cases will be essentially fixed.

- Over/under earning protection

The Company's earnings are the net result of its revenues and its expenses. The proposed fixed variable rate design will have little or no impact or change on the Company's expenses. The proposed rate design will stabilize revenues and thus stabilize the Company's earnings much better than a rate structure with 70 to 80% of the revenue subject to volumetric risk.

- Customer service and reliability protection.

The proposed natural gas rate design should not impact the quality of the Company's customer service and reliability performance and the existing performance standards should not be affected if a customer education program is implemented.

Q. What is your opinion of the Company's gas rate design proposal?

A. The Company's filing is incomplete. There are a number of important issues left unanswered.

- The Company's filing does not include *any tariff sheets* that would define the operations of the proposed rate design.
  - It is unclear how the DDC is calculated for an existing customer.
  - If and when the DDC is recalculated has not been defined clearly.
  - The Company's filing appears to provide for an annual reconciliation of the sum of the individual customer's DDC, but whether the proposal actually does so provide is unclear.
- There is no indication whether the Company proposes to adjust its terms and conditions to prevent space-heating customers from disconnecting during warmer months to avoid the increased fixed charges.
- There is no indication in the Company's filing that it has performed any specific competitive research to determine whether any customers will disconnect or switch to an alternate fuel based on this proposed rate design.[52]
- Although the Staff expressed concerns about the transition from the existing volumetric rate design to a MFV rate design due to the initial impact on low usage customers, the Company submitted only one potential rate design and submitted only a single point (one customer charge) bill impact analysis for residential and GG customers.

- The Company has not developed a customer education program to support the implementation of the proposed MFV rate design.
- There is no indication that the Company has considered the coordinated implementation of the proposed gas MFV rate design with the potential implementation of the proposed electric MFV rate design.[53]
- The Company has not addressed the reduction of business risk in its proposed (decoupling) rate design.

Most importantly, the Company's filing does not provide either the DE PSC or customers with any vision of where its proposed fixed variable rate design will go in the future.

Q. Why is a vision of the future important for customers?

A. As the Company's proposal is presently structured, there are no benefits to customers. Customers exchange rates based on total usage for rates based on a few months' usage. Although the Company plans to install advanced metering for gas customers by the end of 2010,[54] the Company's filing is devoid of any indication or promise of benefits for its gas customers.

Recommendations

Tariff Sheets

Q. How can the Company's filing be made more complete?

I would hope that the Company would provide the missing tariff sheets and GG customer impact in its rebuttal.

[52] Response to Data Request PSC Staff 2-26 (Janocha)
[53] Response to Data Request PSC Staff 2-32 and 2-33 (Janocha)
[54] Response to Data Request DPA 2-9 (Phillips)

The Company should also propose disconnection and reconnection language for its terms and conditions to limit seasonal actions that increase the Company's operating costs and reduce class revenue.

Company Research

Q. Does the Company have an opportunity to begin customer research?

A. During the review of the Company's proposed rate design, I found a number of instances where studies or research would have provided further information to assist the Company in developing its proposal and the parties in their evaluation.

The Company is embarking on the diffusion of advanced metering infrastructure ("AMI") into its operations and has the opportunity to structure a coordinated package of research for the future. AMI will allow for lower cost and potentially better load research. Properly structured load research can include pre and post customer questionnaires to confirm proper stratification. Careful planning would allow the Company to add other questions such as income and appliance saturation at little to no cost. The Commission should consider encouraging the Company to start a collaborative process to define future benefits from coordination of customer research with the AMI program.

Rate Impact

Q. Can the Company provide additional information on the rate impact of its proposed fixed variable gas rate design?

A. If the Company's rebuttal provides more customer rate impact information, then all parties will have more information to consider the rate impact of the Company's proposed fixed variable rate design. The Company should consider other revenue neutral rate designs to determine if a different mix

of the customer charge and DDC Factor would minimize the bill impact. The desired effect would be a more gradual transition over two or more rate changes.

If the Company does not provide the information needed to evaluate the impact of the proposed rate design on both residential and GG customers, I suggest that the Commission institute a "rate cap" to protect customers from the Company's incomplete rate research. For a period after implementation (one to two years), the Company would cap the impact of its proposed rate design at a fixed dollar per bill limit (or a specific maximum percentage increase). Any customer whose bill under the new MFV rate design exceeds the previous volumetric cost bill by more than the fixed dollar limit would pay only the fixed limit amount. The lost revenue would provide an incentive for the Company to provide adequate rate research in future cases.

Customer Communications and Education

Q. Should the Company be ordered to develop a customer education and communications program to prepare for the implementation of the MFV rate design?

A. Yes. As the recent series of articles and the associated comments referenced above indicate, there is a real possibility that customers are misunderstanding and will continue to misunderstand the change from the existing volumetric based rate design to the MFV rate design. Customers will be challenged by the DDC concept and properly wonder if this will reduce their incentive to conserve and make energy efficiency improvements.

The AGL experience demonstrates the need for customer information.

Therefore, the Commission should order the Company to prepare a customer education and communications program. That order should adopt the Company's offer to work with the Staff and the Division of the Public Advocate ("DPA").[55]

The Company should use (at a minimum) bill inserts, newspaper advertisements and the Company website as printed methods of customer communication. Additionally, the Company should consider outreach to other organizations, energy efficiency and conservation seminars and its speaker bureau to provide verbal communications.

The DE PSC should consider the impact on its customer service operations of a change in rate design. If a utility fails to execute a customer education program effectively then many customers will seek information from the Commission and potentially overload its resources.

I view the Company's proposal to work with the parties to develop a customer education program as a positive offer.

Implementation of MFV Rate Design

Q. When do you recommend that the new rates be implemented?

A. The Company should be recognized for the positive step of filing this proceeding even though it did not file for an increase in gas service revenue. I look forward to the Company's rebuttal testimony, in which I expect that some of my concerns (tariff sheets; the education/communications program) will be addressed. Additionally, the Company has recently filed a request to increase electric revenues and implement a MFV rate design.

[55] Response to Data Request PSC Staff 1-5 (Janocha)

To avoid customer confusion for combination electric and gas customers and potentially have some minor offset of the winter gas and summer electric impact, I recommend that the Commission order the Company to plan to implement the gas MFV rate design simultaneously with the electric MFV rate design (if the change to an electric MFV rate design is subsequently approved). If an electric MFV rate design is not approved, then consideration of the Company's gas MFV rate design should be made during the Company's next request for an increase in gas revenues. A simultaneous implementation for both gas and electric service should also allow the Company's gas operations to meet the ECEA's December 2010 deadline.

While simultaneous implementation for gas customers would not result from an on-going rate case, PEPCO (a Company affiliate) has demonstrated its ability to implement a between-cases rate design change. The District of Columbia Public Service Commission recently ordered the implementation of a BSA for residential and commercial customers. This implementation included a return on equity ("ROE") reduction to reflect the reduced risk to PEPCO. The Company filed new, lower compliance rates for the affected classes with an effective date of November 1, 2009 as part of a detailed implementation schedule.

Business Risk Reduction

Q. When revenue stabilization is implemented have other regulators recognized the effect of increased stability?

A. Two decisions are on point.

On July 19, 2007 the Maryland PSC implemented PEPCO's request for a BSA for electric service.[56] This implementation was accompanied by a reduction in the company's ROE.

[56] MD PSC Order No. 81517 at page 81

On September 28, 2009 the District of Columbia PSC implemented PEPCO's request for a BSA for electric service.[57] This implementation was accompanied by a reduction in the company's ROE. The PSC's order provides the range of the ROE reduction that the various parties suggested during that case.

Q. Is the proposed fixed variable rate design in this proceeding comparable to a BSA?

A. A BSA as previously proposed by the Company and its affiliates "locks" the revenue per customer between rate cases. The utility also retains any new revenue due to growth in the number of customers during that period. Any change in usage per customer is adjusted away by the BSA. Thus the revenue per customer is very stable.

The BSA, as implemented by the Company's affiliate PEPCO, includes a cap on the increase or reduction of monthly revenue per customer at a level of 10%. Under this cap it is possible that the utility would not see all of the revenue it has lost in a month recouped for one or more months, creating a revenue lag. The Company's proposed gas fixed variable rate design in this proceeding does not include any lag in revenue collection because it is a rate structure, not an adjustment mechanism.

The Company's proposed rate design shifts all of the revenue associated with volumetric sales to either a higher customer charge or to a demand charge that will at most change once per year for a customer. Under the proposed rate design the Company will retain any new revenue due to the growth in the number of customers.

[57] DC PSC Order No. 15556 at 29

Q. How do you recommend that the Commission recognize the value of the reduction in business risk of the proposed MFV rate design?

A. The proposed rate design in this proceeding offers the Company almost completely stable revenue compared to the existing rate structure. It also preserves the Company's opportunity to profit from its forecasted increases in the number of customers. It stabilizes revenue by employing the DDC charge as a form of a demand ratchet with a term of at least one year. If the proposed rate design were combined with simple protection from seasonal disconnection the risk of customers gaming the new rate design would be eliminated. The proposed rate design does not include any caps and does not delay the recovery of revenue.

Therefore I suggest that if the proposed rate design is implemented, the Company's ROE for the classes affected should be reduced concurrent with that change. As previously noted, a very similar situation occurred in the recent implementation of a BSA for PEPCO in the District of Columbia. In that case the Commission ordered that the ROE reduction be implemented based on the associated class rate base.[58]

Customer Benefits

Q. Should the Company articulate the benefits to its customers of the proposed fixed variable rate design and other Company initiatives?

A. Yes. The Company should immediately articulate its vision of the future and detail the benefits for its customers from advanced metering and the proposed fixed variable rate design. This vision should not focus solely on the intermediate step of the proposed fixed variable DDC rate, but should also demonstrate the long-term benefits to customers of a series of changes and innovation.

[58] DC PSC Order No. 15556 at 31

For example, when advanced metering is in place does the Company intend to move the DDC calculation from a few months to a few critical service days? If so, this concept would allow the Company to influence the Design Day. As the Company's response to a previous docket's data request indicated, its Design Day is now influenced by choices made by New Castle County heating contractors as opposed to the ASHRAE design handbook.[59] By focusing customers on the impact of their consumption decisions on critical days the Company might, over time, alter the effects of those contractors, who neither design/operate the Company's system nor pay for the system as customers.

Q. Faced with an incomplete filing, how can the parties resolve the open issues?

A. The Company's rebuttal is due on January 7, 2010. Under that schedule the Company has seven weeks to provide the missing tariff sheets, outline a customer education/communications program, provide better customer bill impact information, define the DDC Factor reconciliation process and clearly state a vision for the future that relates customer benefits to the proposed rate design. Most of these open items were raised in the discovery process.

If the Company's rebuttal addresses the issues raised by the parties, then the period between January 7, 2010 and the hearings scheduled for February 24, 2010 allows for a workshop process or technical conference(s) to resolve open issues. To facilitate a fast start of the workshop/conference the Company should file all its workpapers and the associated models with its rebuttal.

[59] Response to Data Request COS-RD-86 Docket No. 06-284 (Driggs)

Q. **Does this conclude your testimony?**

A. Yes.

Testimony - Howard Solganick

Public Service Commission of Delaware
Case - Delmarva Power & Light Company Docket No. 06-284 (January 2007)
Client - Staff of the Delaware Public Service Commission
Scope - Testimony covered cost of service, revenue allocation, rate design and other related issues including revenue stabilization or normalization.

Georgia Public Service Commission
Case – Atmos Energy Corporation Docket No. 27163 (July 2008)
Client – Public Interest Advocacy Staff of the Georgia Public Service Commission
Scope - Testimony covered rate design and other related issues.

Jamaica (West Indies) Office of Utility Regulation
Case - Electricity Appeals Tribunal (August 2007)
Client - Jamaica public Service Company, Ltd.
Scope - "Witness Statement" on behalf of the Jamaica Public Service Company Limited. This Statement covered issues relating to recovery of expenses incurred due to Hurricane Ivan.

Maine Public Utilities Commission
Case - Northern Utilities, Accelerated Cast Iron Replacement Program Docket No. 2005-813 (2005)
Client - Public Advocate of the State of Maine
Scope - Testimony covered an analysis of the program's economics and implementation.

Public Service Commission of Maryland
Case - Chesapeake Utilities Corporation Case No. 9062 (August 2006)
Client - Office of the Maryland People's Counsel
Scope - Testimony covered cost of service, rate design and other related issues.

Case - Baltimore Gas & Electric's (1993)
Client - As president of the Mid Atlantic Independent Power Producers
Scope - Testimony covered BG&E's capacity procurement plans.

Michigan Public Service Commission
Case - Consumers Energy Company Case No. U-15245 (November 2007)
Client - Attorney General Michael A. Cox (Don Erickson, Esq.)
Scope - Testimony covered cost of service, rate design and revenue allocation.

Case - Consumers Energy Company Case No. U-15190 (July 2007)
Client - Attorney General Michael A. Cox (Don Erickson, Esq.)
Scope - Testimony covered issues related to Consumers Energy's gas revenue decoupling proposal.

Case - Consumers Energy Company Case No. U-15001 (June 2007)
Client - Attorney General Michael A. Cox (Don Erickson, Esq.)
Scope - Testimony covered issues related to Consumers Energy and the MCV Partnership.

Case - Consumers Energy Company Case No. U-14981 (September 2006)
Client - Attorney General Michael A. Cox (Don Erickson, Esq.)
Scope - Testimony covered issues relating to the sale of Consumers interest in the Midland Cogeneration Venture.

Case - Consumers Energy Company Case No. U-14347 (June 2005)
Client - Attorney General Michael A. Cox (Don Erickson, Esq.)
Scope – Testimony covered cost of service and revenue allocation.

Missouri Public Service Commission
Case – AmerenUE Storm Adequacy Review (July 2008)
Client – KEMA/AmerenUE
Scope – Oral testimony covered KEMA's review of AmerenUE's system major storm restoration efforts.

New Jersey Board of Public Utilities
Case - Cogeneration and Alternate Energy Docket # 8010-687 (1981)
Case - PURPA Rate Design and Lifeline Docket # 8010-687 (1981)
Case - Atlantic Electric Rate Case - Phases I & II Docket # 822-116 (1982)
Case - Power Supply Contract Litigation – Wilmington Thermal Systems Docket # 2755-89 (1989)
Case - NJBPU Atlantic Electric Rate Case - Phase II (1980-81) Docket # 7911-951 (Before the Commissioners of the New Jersey Board of Public Utilities)
Client - Employer was Atlantic City Electric Company.
Scope - The cases listed above covered load forecasting, capacity planning, load research, cost of service, rate design and power procurement.

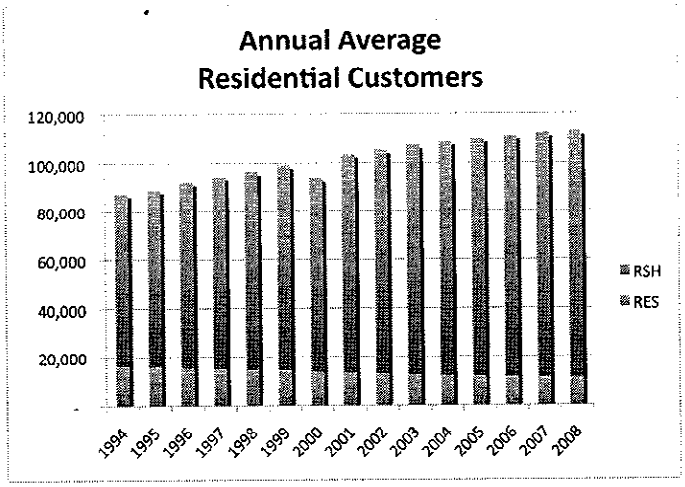
Public Utilities Commission of Ohio
Case - The Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company Case 07-551-EL-AIR (January 2008)
Client - Ohio Schools Council
Scope - Testimony covers issues related to rate treatment of schools.

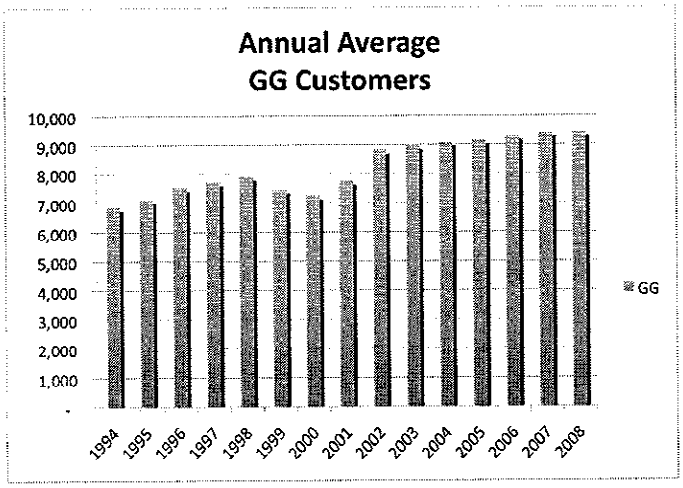
Case - The Application of the Columbus Southern Power Company 08-917-EL-SSO and the Ohio Power Company Case 08-918-EL-SSO (October 2008)
Client - Ohio Hospital Association
Scope - Testimony covers issues related to rates for net metering and alternate feed service and related treatment of hospitals.

Pennsylvania Public Utilities Commission
Case - York Water Company Docket No. R-00061322 (July 2006)
Client - Pennsylvania Office of Consumer Advocate
Subject - Testimony covered cost of service, rate design and other related issues, also supported the settlement process.

Case – Pennsylvania- American Water Company Docket No. R-2008-232689 (August 2008)
Client – Municipal Sewer Group
Subject - Testimony covered cost of service, rate design, capacity fee and other related issues, also supported the settlement process.

Public Utilities Commission of Texas
Case – Determination of Hurricane Restoration Costs Docket No. 36918 (April 2009)
Client – CenterPoint Energy Houston Electric, LLC
Subject – Testimony covered the reasonableness of the client's Hurricane Ike restoration process.


Annual Average
Residential Customers
120,000
100,000
80,000
60,000
40,000
20,000
-
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
RSH
RES


Annual Average
GG Customers
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
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1995
1996
1997
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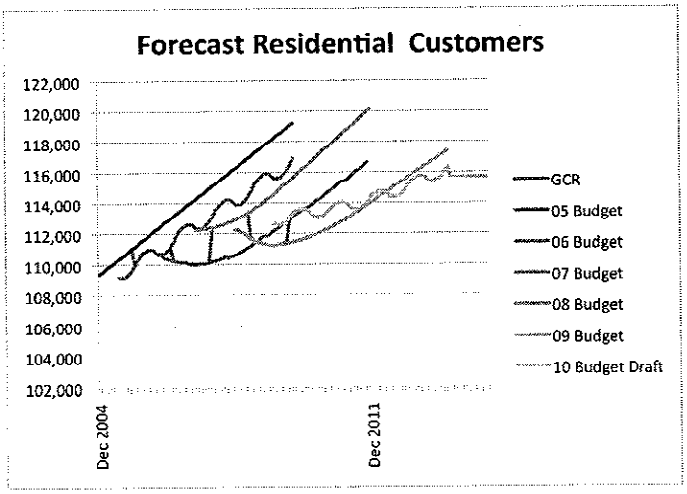
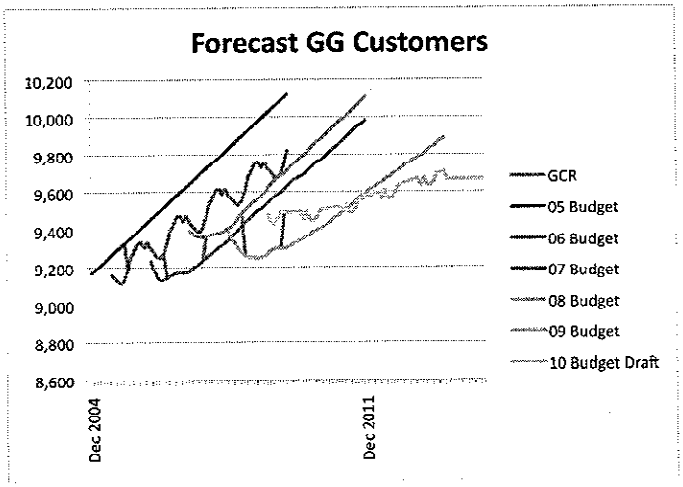
2000
2001
2002
2003
2004
2005
2006
2007
2008
GG


Forecast Residential Customers
122,000
120,000
118,000
116,000
114,000
112,000
110,000
108,000
106,000
104,000
102,000
Dec 2004
Dec 2011
GCR
05 Budget
06 Budget
07 Budget
08 Budget
09 Budget
10 Budget Draft


Forecast GG Customers
10,200
10,000
9,800
9,600
9,400
9,200
9,000
8,800
8,600
Dec 2004
Dec 2011
GCR
05 Budget
06 Budget
07 Budget
08 Budget
09 Budget
10 Budget Draft

Delmarva Power & Light Company - Delaware
DDC Based Gas Delivery Rates

Residential Gas Service Rate Design

Total	$ 43,533,327
Customer	$ 20,754,439
Demand	$ 22,778,888

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Existing Rate Design		Existing Rate Design				Proposed Rate Design		Proposed Rate Design		
				Customer Focused		External Influenced				Customer Focused		External Influenced
Rate Element	Billing Determinants	Existing Rate	Existing Revenue	Fixed	Annual	Volumetric	Billing Determinants	Recommended Rate	Recommended Revenue	Fixed	Annual	Volumetric
Customer Charge ($ per month)	1,318,177	$ 9.56	$ 12,601,772	28.95%			1,318,177	$ 15.74	$ 20,754,439	47.67%		
First 50 CCF Commodity Rate	40,539,430	$ 0.42101	$ 17,067,505			39.21%						0.00%
Winter Over 50 CCF Commodity Rate	41,037,324	$ 0.33784	$ 13,864,050			31.85%						0.00%
Design Day Contribution Rate ($ per CCF of DDC per Year)					0.00%		1,022,656	$ 22.27424	$ 22,778,885		52.33%	
Total			$ 43,533,327	28.95%	0.00%	71.05%			$ 43,533,324	47.67%	52.33%	0.00%
				28.95%						100.00%		

General Gas Service Rate Design

Total	$ 16,567,364
Customer	$ 5,170,620
Demand	$ 11,396,744

	Existing Rate Design			Existing Rate Design			Proposed Rate Design			Proposed Rate Design		
				Customer Focused		External Influenced				Customer Focused		External Influenced
Rate Element	Billing Determinants	Existing Rate	Existing Revenue	Fixed	Annual	Volumetric	Billing Determinants	Recommended Rate	Recommended Revenue	Fixed	Annual	Volumetric
Customer Charge ($ per month)												
GG	110,067	$27.31	$ 3,005,930	18.14%			110,067	46.63	$ 5,132,346	30.98%		
GVFT	119	$302.31	$ 35,975	0.22%			119	$ 321.63	$ 38,274	0.23%		
									$ 5,170,620			
First 750 CCF Commodity Rate	20,840,431	$ 0.34675	$ 7,288,941			44.00%						0.00%
Over 750 CCF Commodity Rate	23,871,842	$ 0.26125	$ 6,236,519			37.64%						0.00%
Design Day Contribution Rate ($ per CCF of DDC per Month)					0.00%		518,084	$ 1.83316	$ 11,396,764		68.79%	
Total			$ 16,567,364	18.36%	0.00%	81.64%			$ 16,567,384	31.21%	68.79%	0.00%
				18.36%						100.00%		