Docket 12-292

Ck# 0090932 62-8
$100.00 TN 6-25-10

Docket Rm
Susan
Janis
Jason
Malika
Alisa
Donna
Jo

CHESAPEAKE UTILITIES

RECEIVED
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DELAWARE P.S.C.

June 25, 2012

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

RE: Chesapeake Utilities Corporation
Proposed Natural Gas Expansion Service Offerings

Dear Ms. Bentley:

Enclosed for filing are an original and ten (10) copies of Chesapeake Utilities Corporation's ("Chesapeake") application for proposed natural gas expansion service offerings to increase the availability of natural gas within its Delaware service areas. Chesapeake is proposing various service offerings to expand the availability of its natural gas distribution service in order to meet the energy needs of residents, communities, and businesses throughout its service territory, and specifically in areas of southeastern Sussex County, Delaware, where natural gas service is not widely available today.

In the attached application, Chesapeake is proposing several initiatives and programs designed to achieve the above objectives. The basis and reasons for the attached proposal are discussed and explained in the direct testimony and attachments as well as in the proposed tariff sheets accompanying the enclosed application. Also enclosed is the Delaware Public Service Commission's "Filing Cover Sheet" along with the application fee of $100.00.

Should you have any questions with regard to this application, please contact me at 302.734.6742, or William A. Denman of Parkowski, Guerke & Swayze, P.A. at 302.678.3262.

Sincerely,

Jeffrey R. Tietbohl

Jeffrey R. Tietbohl
Vice President

Enclosures

CC: William A. Denman, Esquire
Michael Sheehy, Public Advocate
Janis Dillard (w/o enclosure)
Susan Neidig (w/o enclosure)

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF DELAWARE

IN THE MATTER OF THE APPLICATION OF CHESAPEAKE UTILITIES CORPORATION FOR APPROVAL OF NATURAL GAS EXPANSION SERVICE OFFERINGS TO BE EFFECTIVE SEPTEMBER 1, 2012 (FILED JUNE 25, 2012)	))))))	P.S.C. DOCKET NO. 12-

CERTIFICATE OF SERVICE

I, Jeffrey R. Tietbohl, do hereby certify that on June 25, 2012, a copy of the attached CHESAPEAKE UTILITIES CORPORATION application was issued to the following persons in the manner indicated:

VIA OVERNIGHT DELIVERY
MICHAEL SHEEHY, PUBLIC ADVOCATE
DIVISION OF THE PUBLIC ADVOCATE
820 N. FRENCH STREET, 4TH FLOOR
WILMINGTON, DELAWARE 19801

VIA HAND DELIVERY
WILLIAM A. DENMAN, ESQUIRE
PARKOWSKI, GUERKE AND SWAYZE P.A.
116 WEST WATER STREET
P. O. BOX 598
DOVER, DELAWARE 19903

VIA HAND DELIVERY W/O ENCLOSURE
SUSAN NEIDIG
DELAWARE PUBLIC SERVICE COMMISSION
861 SILVER LAKE BLVD
CANNON BUILDING, SUITE 100
DOVER, DELAWARE 19904

VIA HAND DELIVERY W/O ENCLOSURE
JANIS DILLARD
DELAWARE PUBLIC SERVICE COMMISSION
861 SILVER LAKE BLVD
CANNON BUILDING, SUITE 100
DOVER, DELAWARE 19904

Jeffrey R. Tietbohl
Jeffrey R. Tietbohl
~~Vice~~ President

For PSC Use Only:
Docket No. _____
Filing Date: _____
Reviewer: _____
Given to: _____

DELAWARE PUBLIC SERVICE COMMISSION
FILING COVER SHEET

1. NAME OF APPLICANT: Chesapeake Utilities Corporation
2. TYPE OF FILING:

RATE CHANGE	X
FUEL ADJUSTMENT	__
ADMINISTRATIVE	__
CPCN	__
NEW SERVICE OFFERING	X
OTHER	__

IF A TELECOMMUNICATIONS FILING, WHAT TYPE OF SERVICE IS IMPACTED? (PLEASE CHECK)

BASIC____ COMPETITIVE____ DISCRETIONARY

3. PROPOSED EFFECTIVE DATE: September 1, 2012

IS EXPEDITED TREATMENT REQUESTED? YES X NO ___

4. SHORT SYNOPSIS OF FILING: Chesapeake Utilities Corporation proposes natural gas expansion service offerings to be effective for bills rendered on and after September 1, 2012.

5. DOES THIS FILING RELATE TO PENDING DOCKETS? YES__ NO X

IF SO, PLEASE LIST DOCKET(S) NO(S):

6. IS PUBLIC NOTICE REQUIRED? YES X NO__
IF YES, PLEASE ATTACH COPY OF PROPOSED PUBLIC NOTICE.

7. APPLICANT'S CONTACT PERSON:

(NAME)	Jeffrey R. Tietbohl
(TITLE)	Vice President
(TELE. NO.)	302.734.6742
(FAX NO.)	302.735.3061

8. DID YOU PROVIDE A COMPLETE COPY OF THE FILING TO THE PUBLIC ADVOCATE?

YES X NO ___ IF SO, WHEN? On or about June 25, 2012.

9. FILING FEE ENCLOSED: $100.00 (AMOUNT)

NOTE: House Bill 681, enacted into law 7/13/98, authorizes the Commission to recover the cost of time spent by in-house staff to process all filings initiated after the date of enactment. You may be required to reimburse the Commission for staff time.

"DRAFT"

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF DELAWARE

IN THE MATTER OF THE APPLICATION OF	)	
CHESAPEAKE UTILITIES CORPORATION	)	
FOR APPROVAL OF NATURAL GAS	)	**PSC DOCKET NO. 12-**
EXPANSION SERVICE OFFERINGS	)	
TO BE EFFECTIVE SEPTEMBER 1, 2012	)	
(FILED JUNE 25, 2012)	)	

PUBLIC NOTICE

TO: ALL NATURAL GAS CUSTOMERS OF CHESAPEAKE UTILITIES CORPORATION AND ANY OTHER INTERESTED PERSONS

Pursuant to 26 Del. C. 201, Chesapeake Utilities Corporation ("Chesapeake") has filed with the Delaware Public Service Commission ("the Commission") an application proposing natural gas expansion service offerings to expand the availability of residents, communities, and businesses throughout its service territory, and specifically in areas of southeastern Sussex County, Delaware, where natural gas service is not widely available.

In this application Chesapeake has requested approval of a proposed Infrastructure Expansion Service Rate that would allow Chesapeake to extend its distribution system further than it would otherwise be able to in order to provide service to a greater number of residents and businesses. Chesapeake has also requested approval of a Distribution Expansion Service Rate which would be used to cover the additional expenses incurred by the Company in expanding its distribution system. Chesapeake is proposing that these rates be collected through the monthly customer charge effective with bills rendered on and after September 1, 2012. The effect on the monthly charges is outlined below:

Rate Schedule	Current Monthly Customer Charge	Proposed Monthly Customer Charge
RS-1	$10.50	$11.75
RS-2	$13.00	$14.25
GS	$26.00	$27.25
MVS	$65.00	$66.25
LVS	$125.00	$126.25
HLFS	$75.00	$76.25
ERS-1	n/a	$19.75
ERS-2	n/a	$39.25
EGS	n/a	$67.25
EMVS	n/a	$191.25

Also contained in the application are mechanisms that would provide financing assistance for customers to assist with the cost of converting to natural gas as well as the convenience of Chesapeake acting as a liaison between the customer and any outside vendors.

Finally, in the application Chesapeake has proposed changes to the economic tests outlined in Chesapeake's natural gas tariff making it easier for customers to obtain natural gas service without having to pay a contribution.

At its meeting on _____, the Commission determined to open a proceeding to investigate the application and will render a decision pending public evidentiary hearings which will be conducted upon due public notice. The Commission's actions in this matter will be based upon the evidence presented at such hearing(s).

Any person or group who wishes to formally participate as a party to this Docket (PSC Docket No. 12-_____), must, in accordance with Rule 11 of the Commission's Rules of Practice, petition the Commission for and be granted leave to intervene in the proceedings in this docket. To be timely, all such petitions must be filed with the Delaware Public Service Commission at 861 Silver Lake Boulevard, Cannon Building, Suite 100, Dover, DE 19904 on or before _____, 2012. Petitions received thereafter will not be considered except for good cause shown.

Copies of Chesapeake's Application and the testimony and exhibits the Company has filed in this docket are available for public inspection at the Commission's office at the address set out above.

Any individual with disabilities, who wishes to participate in these proceedings, or to review this tariff filing, should contact the Commission to discuss any auxiliary aids or services needed to facilitate such review or participation. Such contact may be in person, by writing, telephonically, by use of the Telecommunications Relay Service, or otherwise. Persons with questions concerning this matter may contact the Commission at its toll-free number (for calls made within Delaware) (800) 282-8574, or by regular telephone at (302) 736-7500.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF DELAWARE

IN THE MATTER OF THE APPLICATION OF CHESAPEAKE UTILITIES CORPORATION FOR APPROVAL OF NATURAL GAS EXPANSION SERVICE OFFERINGS TO BE EFFECTIVE SEPTEMBER 1, 2012 (FILED JUNE 25, 2012)	))))))	**P.S.C. DOCKET NO. 12-**

Chesapeake Utilities Corporation (hereinafter sometimes called "Chesapeake" or "Applicant") pursuant to 26 Del. C. Sections 201, 301, and 304. makes the following application with the Public Service Commission of the State of Delaware ("Commission") for approval of various natural gas expansion service offerings that would enable Chesapeake to extend its natural gas distribution facilities in certain areas of Delaware more efficiently than would otherwise be practical under current tariff provisions, to be effective for bills rendered on and after September 1, 2012. In support thereof, Applicant states the following:

1. Applicant is Chesapeake Utilities Corporation, 909 Silver Lake Boulevard, Dover, Delaware 19904. All communications should be addressed to the Applicant at the following address, Attention: Jeffrey R. Tietbohl, Vice President, 350 South Queen Street, P.O. Box 1769, Dover, Delaware 19903 or at the following e-mail address: jtietbohl@chpk.com. The respective phone number and fax number are 302.734.6742 and 302.735.3061. All communications should also be addressed to Sarah E. Hardy, Regulatory Analyst II, 350 South Queen Street, P.O. Box 1769, Dover, Delaware 19903 or at the following email address: shardy@chpk.com. The respective phone number and fax number are 302.734.6797, extension 6201 and 302.734.6011.

2. Counsel for the Applicant is William A. Denman, Esquire, Parkowski, Guerke & Swayze P.A., 116 West Water Street, P.O. Box 598, Dover, Delaware 19903.

Correspondence and other communications concerning this application should be directed to counsel at the foregoing address, or at the following e-mail address: wdenman@pgslegal.com. The respective phone number and fax number are 302.678.3262 and 302.678.9415.

3. Chesapeake is a corporation incorporated under the laws of the State of Delaware. The voting stock of Chesapeake is publicly owned. Shares of common stock, 9,567,307 of which were outstanding as of December 31, 2011, are the only voting securities of Chesapeake.

4. Chesapeake is a Delaware public utility authorized to sell and distribute natural gas in portions of New Castle County and throughout Kent and Sussex County, Delaware. Chesapeake, through its Delaware Division, serves approximately 41,500 natural gas customers in Delaware pursuant to rates heretofore approved by the Commission. Chesapeake's distribution rates currently in effect were approved by the Commission in PSC Docket No. 07-186 on September 2, 2008.

5. Chesapeake is proposing various natural gas expansion service offerings to expand the availability of natural gas distribution service in order to meet the energy needs of residents, communities, and businesses throughout its service territory, and specifically in areas of southeastern Sussex County, Delaware, where natural gas service is not widely available today. Making natural gas available to southeastern Sussex County will provide significant benefits to Delaware residents and business consumers in this newly served area. These benefits include: (a) the introduction of a lower-cost fuel source and (b) the potential to reduce greenhouse gas emissions by displacing fuels with higher carbon content. Natural gas is a cleaner and lower priced fuel than other alternatives, so the quicker that Chesapeake can begin providing service, the quicker that residents and businesses can begin saving money. These savings, in the form of increased disposable income for customers, will have a direct positive

economic impact on the local economies.

6. Chesapeake's existing tariff provisions will hinder Chesapeake's ability to extend service to a large group of customers. Under existing line extension policies and rates, service cannot be provided to many customers without the customer paying a substantial up-front contribution or advance.

7. One of the natural gas expansion service offerings is a newly proposed Infrastructure Expansion Service ("IES") Rate. Revenue collected through this rate would be utilized by Chesapeake to enable it to extend its natural gas distribution system further than it would otherwise be able to in order to provide service to residents and businesses in the newly defined geographic areas in southeastern Sussex County, Delaware. Chesapeake is proposing that the "IES" rate be applicable only to customers on its proposed Expansion Area Residential Service – 1, Expansion Area Residential Service -2, Expansion Area General Service, and Expansion Area Medium Volume Service rate schedules. Chesapeake's proposed "IES" rates are $8 per month for the Expansion Area Residential Service – 1 rate schedule, $25 per month for the Expansion Area Residential Service – 2 rate schedule, $40 per month for the Expansion Area General Service rate schedule, and $125 per month for the Expansion Area Medium Volume Service rate schedule. For the reasons set forth in the pre-filed testimony submitted with this Application, customers receiving service under the rates described herein will still receive substantial savings in their respective energy costs when compared to alternative fuel sources.

8. In order to support the administration and implementation of the proposed natural gas service offerings contemplated in this application, Chesapeake is proposing a slight rate increase to be recovered from all customers and for purposes of identification will be referred to as the Distribution Expansion Service ("DES") Rate. Revenue collected would be utilized by Chesapeake to support the necessary resources

and administrative requirements to facilitate the large number of anticipated conversions from propane, fuel oil, and electricity to natural gas. Chesapeake proposes that the "DES" rate be applicable to all of its customers in the Residential Service – 1, Residential Service – 2, Expansion Area Residential Service – 1, Expansion Area Residential Service – 2, General Service, Expansion Area General Service, Medium Volume Service, Expansion Area Medium Volume Service, Large Volume Service, and High Load Factor Heat Service rate schedules. Chesapeake's proposed "DES" rate would be $1.25 per month for the above mentioned rate schedules or $15 per customer on an annual basis.

9. Another offering that would be optional for customers would be a service to assist interested residential and smaller commercial customers with the cost of converting their existing equipment and internal fuel piping so as to make the same compatible with natural gas. Through this optional Conversion Finance Service Chesapeake will provide potential customers with financing assistance to assist with the cost of conversion. The maximum level of assistance will be $1,500.00 for residential customers and $3,000.00 for commercial customers with payback periods of 3, 5, or 10 years, with a return component payable to the Company at a rate equal to the Company's authorized rate of return. The Company proposes to recover the cost of this financing assistance by including a charge on each customer's bill dependent upon the amount of the conversion cost to be incurred by the customer as well as the time period selected for repayment. In addition to the aforesaid Conversion Finance Service, Chesapeake also proposes to offer an optional Conversion Management Service for a one-time fee of $100.00 per customer and pursuant to which the Company will assist the customer in managing and coordinating the conversion process with outside contractors who will be responsible for performing the actual conversion work. The proposed one-time fee will be adequate to cover the cost of providing the service. These optional

services will be available to residential and smaller commercial customers in Chesapeake's service territory in the State of Delaware.

10. Chesapeake is also proposing natural gas tariff changes that would allow Chesapeake to evaluate the economics of service installations and main extensions to new and existing residential developments based on an Internal Rate of Return Model as opposed to the existing six (6) times net-revenue test. For the reasons set forth in the pre-filed testimony submitted with this Application, the six (6) times net-revenue test does not provide an accurate measure of the economics of expanding service to existing residential developments.

11. Finally, for the reasons set forth in the pre-filed testimony submitted with this Application, the Company is proposing to eliminate the existing tariff provisions that would exempt customers from (a) any charge for service installations of less than seventy-five (75) feet from the existing distribution main or (b) any charge for main extensions of less than one hundred (100) feet from the existing distribution mains.

12. The proposed revisions and rates set forth above will not adversely affect the availability, cost, or quality of service to existing or future ratepayers, and will not unduly provide a subsidy to customers of the Company.

WHEREFORE, the Applicant prays as follows:

A. That the Commission file this Application, set the form of public notice to be provided, and schedule it for hearing;

B. That the Commission approve (i) the proposed Infrastructure Expansion Service ("IES") Rate; (ii) the proposed Distribution Expansion Service ("DES") Rate and the resulting slight base rate increase; (iii) the conversion cost finance service and the conversion management service; and (iv) the other changes to its natural gas tariff dealing with minimum service and main extensions and the economic analysis of customer additions for existing residential developments, all in the form set forth in the

tariff provisions set forth as attachments to this Application;

C. That the Commission grant such other relief as deemed appropriate to enable the Company to implement the above tariff revisions on a timely basis.

SIGNATURES APPEAR ON THE FOLLOWING PAGE

CHESAPEAKE UTILITIES CORPORATION

BY: Jeffrey R. Tietbohl
Jeffrey R. Tietbohl
Vice President

Parkowski, Guerke & Swayze P.A.

BY: _____
William A. Denman
116 West Water Street
Dover, DE 19903
Attorney for Applicant

DATED: June 25, 2012

DATED: JUNE 25, 2012

STATE OF DELAWARE)
)
COUNTY OF KENT)

BE IT REMEMBERED that on this 25th day of June 2012 personally appeared before me, a notary public for the State and County aforesaid, Jeffrey R. Tietbohl, who being by me duly sworn, did depose and say that he is Vice President for Chesapeake Utilities Corporation, a Delaware corporation and insofar as the Application of Chesapeake Utilities Corporation states facts, said facts are true and correct, and insofar as those facts are not within his personal knowledge, he believes them to be true, and that the schedules accompanying this application and attached hereto are true and correct copies of the originals of the aforesaid schedules, and that he has executed this Application on behalf of the Company.

Jeffrey R. Tietbohl

Jeffrey R. Tietbohl

SWORN TO AND SUBSCRIBED before me the day and year above written.

Rebecca K. Little

Notary Public
My Commission Expires: 8-7-2014

REBECCA K. LITTLE
COM. EXP.
NOTARY
PUBLIC
8-07-14
STATE OF DELAWARE

CHESAPEAKE UTILITIES CORPORATION
DELAWARE DIVISION

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RULES AND REGULATIONS

SECTION VI – SERVICE INSTALLATIONS AND MAIN EXTENSIONS

6.1 SERVICE INSTALLATIONS

The Company will install the service line from its existing distribution main to the Customer's meter location. The Company's initial investment in the entire service installation shall be limited to six (6) times the related estimated annual base tariff revenue excluding all fuel costs ("net revenue") from the Customer. The amount of the investment that exceeds the six (6) times net revenue test for the service installation shall be paid by the Customer in accordance with the terms of Section 6.3.

Service Installations, as used in this section for purposes of the six (6) times net revenue test, refers to the costs associated with the service line piping, meter installation and associated materials from the tap on the Company's gas distribution main system up to and including the Customer's meter.

6.2 MAIN EXTENSIONS

Main extensions to the Company's gas system shall be provided, owned and maintained under the terms and conditions stated herein. Main extensions, as used in this section for purposes of the economic evaluation criteria, refers to the cost of gas distribution mains and associated materials that must be constructed along public streets, roads and highways, or on private property from the Company's existing gas distribution main system to the initiation of the service line. Main extensions are limited to the extent of new investment warranted by the anticipated revenues as stated in this Section VI.

RULES AND REGULATIONS

SECTION VI – SERVICE INSTALLATIONS AND MAIN EXTENSIONS (Continued)

6.2 MAIN EXTENSIONS (Continued)

New Residential Development

The economic evaluation criteria for installing natural gas service to the new residential development will be based on an Internal Rate of Return Model ("IRRM") with certain predetermined conditions and guidelines. The applicable procedures and guidelines in the implementation of the IRRM are on file with and have been approved by the Delaware Public Service Commission. The procedure used to determine whether a financial guarantee will be required from a Customer(s) is part of the IRRM methodology on file with the Commission.

Existing Residential Developments

The economic evaluation criteria for installing natural gas service to an existing residential development will be based on an Internal Rate of Return Model ("IRRM") with certain predetermined conditions and guidelines. The applicable procedures and guidelines in the implementation of the IRRM are on file with and have been approved by the Delaware Public Service Commission. The procedure used to determine whether a financial guarantee will be required from a Customer(s) is part of the IRRM methodology on file with the Commission.

Commercial and Industrial Main Extensions

The economic evaluation criteria for installing natural gas service to commercial and industrial customers, including transportation and non-firm customers, will be the six (6) times net revenue test based on the commercial and industrial customers' estimated level of annual non-fuel revenue. The estimated annual non-fuel revenue is defined as the estimated annual base tariff revenue or delivery service revenue excluding all fuel related costs for the respective customer. If the estimated investment in the facilities necessary to provide gas service exceeds six (6) times the related annual non-fuel revenue from the respective Customer(s), the Customer(s) shall provide a financial guarantee in accordance with the terms of Section 6.3.

RATE SCHEDULE "RS - 1"

RESIDENTIAL SERVICE - 1

AVAILABILITY

This rate schedule is available to any individually metered customer using gas in a residential dwelling or unit for space heating, cooking, water heating, or other domestic purpose with an annual consumption of 240 Ccf or less. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm residential rate schedule should their annual consumption warrant such a change. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$11.75 per month
First 20 Ccf	$0.607 per Ccf
Next 30 Ccf	$0.280 per Ccf
Over 50 Ccf	$0.170 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "RS-1" provided on Sheet No. 42.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

RATE SCHEDULE "RS - 2"

RESIDENTIAL SERVICE – 2

AVAILABILITY

This rate schedule is available to any individually metered customer using gas in a residential dwelling or unit for space heating, cooking, water heating, or other domestic purpose with annual consumption of greater than 240 Ccf. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm residential rate schedule should their annual consumption warrant such a change. A Customer on RS-1 Service will be moved to this rate schedule with annual consumption equal to or greater than 264 Ccf. A Customer on this rate schedule will be moved to RS-1 Service with annual consumption less than 216 Ccf. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$14.25 per month
First 20 Ccf	$0.578 per Ccf
Next 30 Ccf	$0.319 per Ccf
Over 50 Ccf	$0.132 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "RS-2" provided on Sheet No. 42.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

RATE SCHEDULE "ERS-1"

EXPANSION AREA RESIDENTIAL SERVICE – 1

AVAILABILITY

This rate schedule is available to any individually metered customer within the southeastern Sussex County, Delaware, expansion area using gas in a residential dwelling or unit for space heating, cooking, water heating, or other domestic purpose with an annual consumption of 240 Ccf or less. The southeastern Sussex County, Delaware, expansion area is defined as the area east of Chesapeake's district regulator station located on Route 9 in Lewes, Delaware, that is connected to Chesapeake's distribution main and any area that is connected to Chesapeake's distribution main behind the three Eastern Shore Natural Gas transmission pipeline City Gates located in Dagsboro, Frankford, and Selbyville, Delaware. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm residential rate schedule should their annual consumption warrant such a change. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$19.75 per month
First 20 Ccf	$0.607 per Ccf
Next 30 Ccf	$0.280 per Ccf
Over 50 Ccf	$0.170 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "RS" provided on Sheet No. 42.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

RATE SCHEDULE "ERS-1"

EXPANSION AREA RESIDENTIAL SERVICE – 1
(Continued)

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

SPECIAL TERMS AND CONDITIONS OF SERVICE

(1) Service under this rate schedule is subject to the standard terms and conditions of service as in effect from time to time under authority of the Public Service Commission of Delaware. It is also subject to the limitations stated under the "Availability" clause above.

(2) Natural gas purchased hereunder is for the use of the customer in one location only and is not to be shared or sold to others.

(3) In addition to the above Delivery Service rates, customers served under this rate schedule may be subject to one or more riders containing additional charges applicable to the service received, such as ER and any applicable franchise fees.

RATE SCHEDULE "ERS-2"

EXPANSION AREA RESIDENTIAL SERVICE – 2

AVAILABILITY

This rate schedule is available to any individually metered customer within the southeastern Sussex County, Delaware, expansion area using gas in a residential dwelling or unit for space heating, cooking, water heating, or other domestic purpose with annual consumption of greater than 240 Ccf. The southeastern Sussex County, Delaware, expansion area is defined as the area east of Chesapeake's district regulator station located on Route 9 in Lewes, Delaware, that is connected to Chesapeake's distribution main and any area that is connected to Chesapeake's distribution main behind the three Eastern Shore Natural Gas transmission pipeline City Gates located in Dagsboro, Frankford, and Selbyville, Delaware. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm residential rate schedule should their annual consumptions warrant such a change. A Customer on ERS-1 Service will be moved to this rate schedule with annual consumption equal to or greater than 264 Ccf. A Customer on this rate schedule will be moved to ERS-1 Service with annual consumption less than 216 Ccf. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$39.25 per month
First 20 Ccf	$0.578 per Ccf
Next 30 Ccf	$0.319 per Ccf
Over 50 Ccf	$0.132 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "RS" provided on Sheet No. 42.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

RATE SCHEDULE "ERS-2"

EXPANSION AREA `RESIDENTIAL SERVICE – 2
(Continued)

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

SPECIAL TERMS AND CONDITIONS OF SERVICE

(1) Service under this rate schedule is subject to the standard terms and conditions of service as in effect from time to time under authority of the Public Service Commission of Delaware. It is also subject to the limitations stated under the "Availability" clause above.

(2) Natural gas purchased hereunder is for the use of the customer in one location only and is not to be shared or sold to others.

(3) In addition to the above Delivery Service rates, customers served under this rate schedule may be subject to one or more riders containing additional charges applicable to the service received, such as ER and any applicable franchise fees.

RATE SCHEDULE "GS"

GENERAL SERVICE

AVAILABILITY

This rate schedule is available to any customer using gas for commercial and/or industrial purposes with an annual consumption of less than 4,000 Ccf. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption warrant such a change. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$27.25 per month
First 20 Ccf	$0.447 per Ccf
Next 30 Ccf	$0.278 per Ccf
Over 50 Ccf	$0.140 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "GS" provided on Sheet No. 42.

PUBLIC UTILITIES TAX

The Delivery Service, Gas Sales Service, and any other applicable rates or charges are subject to the Delaware Public Utilities Tax unless the customer is exempt from such tax.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

RATE SCHEDULE "EGS"

EXPANSION AREA GENERAL SERVICE

AVAILABILITY

This rate schedule is available to any customer within the southeastern Sussex County, Delaware, expansion area using gas for commercial and/or industrial purposes with an annual consumption of less than 4,000 Ccf. The southeastern Sussex County, Delaware, expansion area is defined as the area east of Chesapeake's district regulator station located on Route 9 in Lewes, Delaware, that is connected to Chesapeake's distribution main and any area that is connected to Chesapeake's distribution main behind the three Eastern Shore Natural Gas transmission pipeline City Gates located in Dagsboro, Frankford, and Selbyville, Delaware. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption warrant such a change. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$67.25 per month
First 20 Ccf	$0.447 per Ccf
Next 30 Ccf	$0.278 per Ccf
Over 50 Ccf	$0.140 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "GS" provided on Sheet No. 42.

PUBLIC UTILITIES TAX

The Delivery Service, Gas Sales Service, and any other applicable rates or charges are subject to the Delaware Public Utilities Tax unless the customer is exempt from such tax.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

RATE SCHEDULE "EGS"

EXPANSION AREA GENERAL SERVICE
(Continued)

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

SPECIAL TERMS AND CONDITIONS OF SERVICE

(1) Service under this rate schedule is subject to the standard terms and conditions of service as in effect from time to time under authority of the Public Service Commission of Delaware. It is also subject to the limitations stated under the "Availability" clause above.

(2) Natural gas purchased hereunder is for the use of the customer in one location only and is not to be shared or sold to others except for retail sale as a fuel to natural gas vehicles.

(3) A firm customer that transfers from Gas Sales Service to Transportation and Balancing Service or to Interruptible Sales Service, as authorized under the Company's tariff, will be billed for or receive credit for any under or over collection of gas costs from prior periods.

(3) In addition to the above Delivery Service rates, customers served under this rate schedule may be subject to one or more riders containing additional charges applicable to the service received, such as ER and any applicable franchise fees.

RATE SCHEDULE "MVS"

MEDIUM VOLUME SERVICE

AVAILABILITY

This rate schedule is available to any customer using gas for commercial and/or industrial purposes with an annual consumption generally equal to or greater than 4,000 Ccf and less than 15,000 Ccf. The Company will annually review those Customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption warrant such a change. A Customer on General Service will be moved to this rate schedule with annual consumption equal to or greater than 4,400 Ccf. A Customer on this rate schedule will be moved to General Service with annual consumption less than 3,600 Ccf. The annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$66.25 per month
First 200 Ccf	$0.227 per Ccf
Over 200 Ccf	$0.115 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "MVS" provided on Sheet No. 42.

PUBLIC UTILITIES TAX

The Delivery Service, Gas Sales Service, and any other applicable rates or charges are subject to the Delaware Public Utilities Tax unless the customer is exempt from such tax.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

RATE SCHEDULE "EMVS"

EXPANSION AREA MEDIUM VOLUME SERVICE

AVAILABILITY

This rate schedule is available to any customer within the southeastern Sussex County, Delaware, expansion area using gas for commercial and/or industrial purposes with an annual consumption generally equal to or greater than 4,000 Ccf and less than 15,000 Ccf. The southeastern Sussex County, Delaware, expansion area is defined as the area east of Chesapeake's district regulator station located on Route 9 in Lewes, Delaware, that is connected to Chesapeake's distribution main and any area that is connected to Chesapeake's distribution main behind the three Eastern Shore Natural Gas transmission pipeline City Gates located in Dagsboro, Frankford, and Selbyville, Delaware. The Company will annually review those Customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption warrant such a change. A Customer on Rate Schedule EGS will be moved to this rate schedule with annual consumption equal to or greater than 4,400 Ccf. A Customer on this rate schedule will be moved to rate schedule EGS with annual consumption less than 3,600 Ccf. The annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$191.25 per month
First 200 Ccf	$0.227 per Ccf
Over 200 Ccf	$0.115 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "MVS" provided on Sheet No. 42.

PUBLIC UTILITIES TAX

The Delivery Service, Gas Sales Service, and any other applicable rates or charges are subject to the Delaware Public Utilities Tax unless the customer is exempt from such tax.

RATE SCHEDULE "EMVS"

EXPANSION AREA MEDIUM VOLUME SERVICE
(Continued)

PAYMENT TERMS

Bills are due within ten (10) days of their date.

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

SPECIAL TERMS AND CONDITIONS OF SERVICE

(1) Service under this rate schedule is subject to the standard terms and conditions of service as in effect from time to time under authority of the Public Service Commission of Delaware. It is also subject to the limitations stated under the "Availability" clause above.

(2) Natural gas purchased hereunder is for the use of the customer in one location only and is not to be shared or sold to others except for retail sale as a fuel to natural gas vehicles.

(3) A firm customer that transfers from Gas Sales Service to Transportation and Balancing Service or Interruptible Sales Service, as authorized under the Company's tariff, will be billed for or receive credit for any under or over collection of gas costs from prior periods.

(4) In addition to the above Delivery Service rates, customers served under this rate schedule may be subject to one or more riders containing additional charges applicable to the service received, such as ER and any applicable franchise fees.

RATE SCHEDULE "LVS"

LARGE VOLUME SERVICE

AVAILABILITY

This rate schedule is available to any customer using gas for commercial and/or industrial purposes with an annual consumption generally equal to or greater than 15,000 Ccf. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption warrant such a change. A Customer on Medium Volume Service will be moved to this rate schedule with annual consumption equal to or greater than 16,500 Ccf. A Customer on this rate schedule will be moved to Medium Volume Service with annual consumption less than 13,500 Ccf. The annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer charge:	$126.25 per month
First 1000 Ccf	$0.326 per Ccf
Over 1000 Ccf	$0.083 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers purchasing their natural gas supply from the Company are subject to the gas cost rate applicable to Rate Schedule "LVS" provided on Sheet No. 42.

RATE SCHEDULE "HLFS"

HIGH LOAD FACTOR SERVICE

AVAILABILITY

This rate schedule is available to any customer using gas for commercial and/or industrial purposes that would otherwise qualify for Medium Volume Service or Large Volume Service and with winter months' consumption, defined as the months of January through March, being less than thirty-five percent (35%) of their annual consumption. In addition, the customer must use natural gas in at least eleven of the twelve months under review and usage must be fairly evenly distributed throughout the review period. The Company will annually review those Customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption or winter months consumption warrant such a change. A Customer will remain on this rate schedule as long as winter months' consumption is less than thirty-seven percent (37%) of their annual consumption and the Customer qualifies for Medium Volume Service or Large Volume Service. The annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption or winter months' consumption other than after the annual review.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$76.25 per month
All gas consumed	$0.087 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers purchasing their natural gas supply from the Company are subject to the gas cost rate applicable to Rate Schedule "HLFS" provided on Sheet No. 42.

RATE SCHEDULE "CFS"

CONVERSION FINANCE SERVICE

AVAILABILITY

The Conversion Finance Service is an **optional service** that is available to all residential and smaller commercial customers located in Chesapeake's service areas who are converting to natural gas from an alternative energy source. This optional service is applicable to the following rate schedules:

Rate Schedule "RS-1" – Residential Service -1
Rate Schedule "ERS-1" – Expansion Area Residential Service -1
Rate Schedule "RS-2" – Residential Service – 2
Rate Schedule "ERS-2" – Expansion Area Residential Service – 2
Rate Schedule "GS" – General Service
Rate Schedule "EGS" – Expansion Area General Service
Rate Schedule "MVS" – Medium Volume Service
Rate Schedule "EMVS" – Expansion Area Medium Volume Service

GENERAL TERMS OF SERVICE

Chesapeake is offering the Conversion Finance Service as an optional service which customers can choose to elect. Customers will receive financing assistance from the Company to assist with the cost of converting to natural gas with a choice of repayment terms. Under the terms of this service, the maximum level of assistance to be granted per customer is $1,500 for residential customers and $3,000 for commercial customers. The repayment options would be 3, 5, or 10 years. In instances where the cost of conversion exceeds the maximum level to be granted by the Company, the customer will be solely responsible for obtaining funds to cover these additional costs.

In order to qualify for this service, any respective customer will be required to satisfactorily establish credit under the terms and conditions of the natural gas tariff as outlined in Section XIII – Payment of Terms.

The Conversion Finance Service is tied to the respective customer, not the dwelling. If a customer sells a property for which a Conversion Finance Service balance remains, any unpaid balance would be due on the customer's final bill.

RATE SCHEDULE "CFS"

CONVERSION FINANCE SERVICE

RATE

The monthly fee applicable for this Conversion Finance Service is dependent upon the amount of the conversion costs to be incurred by the respective customer in converting to natural gas as well as the time period selected for repayment.

Conversion Cost	Monthly Charge		
	3 Year Term	5 Year Term	10 Year Term
< $250	$5.00	$3.00	$2.00
$251 - $500	$14.00	$9.00	$6.00
$501 - $750	$23.00	$15.00	$10.00
$751 - $1,000	$31.00	$21.00	$14.00
$1,001 - $1,250	$40.00	$27.00	$18.00
$1,251 - $1,500	$49.00	$33.00	$21.00
$1,501 - $1,750	$58.00	$39.00	$25.00
$1,751 - $2,000	$67.00	$45.00	$29.00
$2,001 - $2,250	$76.00	$51.00	$33.00
$2,251 - $2,500	$85.00	$57.00	$37.00
$2,501 - $2.750	$93.00	$63.00	$41.00
$2,751 - $3,000	$102.00	$69.00	$45.00

For those customers electing to receive service under this rate schedule, the monthly fees will be included on the customer's normal monthly billing.

RATE SCHEDULE "CMS"

CONVERSION MANAGEMENT SERVICE

AVAILABILITY

The Conversion Management Service is an **optional service** that is available to all residential and smaller commercial customers located in Chesapeake's service areas who are converting to natural gas from an alternative energy source. This optional service is applicable to the following rate schedules:

Rate Schedule "RS-1" – Residential Service -1
Rate Schedule "ERS-1" – Expansion Area Residential Service -1
Rate Schedule "RS-2" – Residential Service – 2
Rate Schedule "ERS-2" – Expansion Area Residential Service – 2
Rate Schedule "GS" – General Service
Rate Schedule "EGS" – Expansion Area General Service
Rate Schedule "MVS" – Medium Volume Service
Rate Schedule "EMVS" – Expansion Area Medium Volume Service

GENERAL TERMS OF SERVICE

Chesapeake is offering an optional Conversion Management Service to assist potential customers with the process of converting to natural gas primarily by assisting the customer with managing and coordinating processes with any outside vendors that would be performing the conversion.

Under the general terms and conditions of this service, Chesapeake will assist customers by performing such tasks as the following:

1. Assist in selecting the appropriate contractor to complete the conversion process, including providing the contractor with load and equipment information

2. Assist the selected contractor with ordering the proper conversion kits or new equipment

3. Coordinate the conversion of fuel lines and appliances inside the home with the selected contractor and the homeowner

4. Ensure that the conversion is completed in a timely manner and that the workmanship is consistent with Chesapeake's safety standards.

5. Evaluate contractor performance to ensure compliance with Chesapeake's Preferred Contractors Standard

RATE SCHEDULE "CMS"

CONVERSION MANAGEMENT SERVICE

RATE

The fee applicable to this Conversion Management Service will be a one-time fee of $100.00 per customer. This fee will be included on the customer's monthly billing statement following the completion of the conversion process.

CHESAPEAKE UTILITIES CORPORATION
DELAWARE DIVISION

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RULES AND REGULATIONS

SECTION VI – SERVICE INSTALLATIONS AND MAIN EXTENSIONS

6.1 SERVICE INSTALLATIONS

The Company will install the service line from its existing distribution main to the Customer's meter location. ~~at its expense. However, if the service line exceeds seventy-five (75) feet in length, the~~ The Company's initial investment in the entire service installation shall be limited to six (6) times the related estimated annual base tariff revenue excluding all fuel costs ("net revenue") from the Customer. The amount of the investment that exceeds the six (6) times net revenue test for the service installation shall be paid by the Customer in accordance with the terms of Section 6.3.

Service Installations, as used in this section for purposes of the six (6) times net revenue test, refers to the costs associated with the service line piping, meter installation and associated materials from the tap on the Company's gas distribution main system up to and including the Customer's meter.

6.2 MAIN EXTENSIONS

Main extensions to the Company's gas system shall be provided, owned and maintained under the terms and conditions stated herein. Main extensions, as used in this section for purposes of the economic evaluation criteria, refers to the cost of gas distribution mains and associated materials that must be constructed along public streets, roads and highways, or on private property from the Company's existing gas distribution main system to the initiation of the service line. ~~The Company will make extensions to existing mains of one hundred (100) feet per Customer without charge.~~ Main extensions ~~beyond one hundred (100) feet per Customer from existing mains~~ are limited to the extent of new investment warranted by the anticipated revenues as stated in this Section VI.

~~**New Residential Development - Main Extensions Less Than 500 Feet**~~

~~If a main extension to serve a new residential development is less than 500 feet in length, the Company will construct the facilities at no charge if the Company's estimated investment in both the main extension and service installation is equal to, or less than six (6) times the annual base tariff revenue, excluding all fuel costs ("net revenue") from Customers to be initially served from the main extension during the first year of the development. If the estimated investment exceeds the six (6) times net revenue test, the Customer(s) shall provide a financial guarantee in accordance with the terms of Section 6.3.~~

RULES AND REGULATIONS

SECTION VI – SERVICE INSTALLATIONS AND MAIN EXTENSIONS (Continued)

6.2 MAIN EXTENSIONS (Continued)

New Residential Development ~~- Main Extensions Over 500 Feet~~

~~If a main extension to serve a new residential development is greater than 500 feet in length, the~~The economic evaluation criteria for installing natural gas service to the new residential development will be based on an Internal Rate of Return Model ("IRRM") with certain predetermined conditions and guidelines. The applicable procedures and guidelines in the implementation of the IRRM are on file with and have been approved by the Delaware Public Service Commission. The procedure used to determine whether a financial guarantee will be required from a Customer(s) is part of the IRRM methodology on file with the Commission.

Existing Residential Developments

The economic evaluation criteria for installing natural gas service to an existing residential development will be based on an Internal Rate of Return Model ("IRRM") with certain predetermined conditions and guidelines. The applicable procedures and guidelines in the implementation of the IRRM are on file with and have been approved by the Delaware Public Service Commission. The procedure used to determine whether a financial guarantee will be required from a Customer(s) is part of the IRRM methodology on file with the Commission. ~~If the estimated investment in the facilities necessary to provide gas service to existing residential developments exceeds six (6) times the related annual net revenue from the respective Customer(s), the Customer(s) shall provide a financial guarantee in accordance with the terms of Section 6.3.~~

~~For purposes of existing residential developments, the number of customers to be used in the evaluation criteria will be based on the actual number of customers intending to convert to natural gas service within ninety (90) days and who have signed an application for natural gas service with the Company.~~

Commercial and Industrial Main Extensions

The economic evaluation criteria for installing natural gas service to commercial and industrial customers, including transportation and non-firm customers, will be the six (6) times net revenue test based on the commercial and industrial customers' estimated level of annual non-fuel revenue. The estimated annual non-fuel revenue is defined as the estimated annual base tariff revenue or delivery service revenue excluding all fuel related costs for the respective customer. If the estimated investment in the facilities necessary to provide gas service exceeds six (6) times the related annual non-fuel revenue from the respective Customer(s), the Customer(s) shall provide a financial guarantee in accordance with the terms of Section 6.3.

Issue Date: June 25, 2012~~April 17, 2002~~

Effective Date: For Bills~~Service~~ Rendered on and after September 1, 2012~~May 1, 2002~~

Authorization:

RATE SCHEDULE "RS - 1"

RESIDENTIAL SERVICE - 1

AVAILABILITY

This rate schedule is available to any individually metered customer using gas in a residential dwelling or unit for space heating, cooking, water heating, or other domestic purpose with an annual consumption of 240 Ccf or less. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm residential rate schedule should their annual consumption warrant such a change. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$11.75~~10.50~~ per month
First 20 Ccf	$0.607 per Ccf
Next 30 Ccf	$0.280 per Ccf
Over 50 Ccf	$0.170 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "RS-1" provided on Sheet No. 42.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

RATE SCHEDULE "RS - 2"

RESIDENTIAL SERVICE – 2

AVAILABILITY

This rate schedule is available to any individually metered customer using gas in a residential dwelling or unit for space heating, cooking, water heating, or other domestic purpose with annual consumption of greater than 240 Ccf. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm residential rate schedule should their annual consumption warrant such a change. A Customer on RS-1 Service will be moved to this rate schedule with annual consumption equal to or greater than 264 Ccf. A Customer on this rate schedule will be moved to RS-1 Service with annual consumption less than 216 Ccf. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$14.25~~13.00~~ per month
First 20 Ccf	$0.578 per Ccf
Next 30 Ccf	$0.319 per Ccf
Over 50 Ccf	$0.132 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "RS-2" provided on Sheet No. 42.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

RATE SCHEDULE "ERS-1"

EXPANSION AREA RESIDENTIAL SERVICE – 1

AVAILABILITY

This rate schedule is available to any individually metered customer within the southeastern Sussex County, Delaware, expansion area using gas in a residential dwelling or unit for space heating, cooking, water heating, or other domestic purpose with an annual consumption of 240 Ccf or less. The southeastern Sussex County, Delaware, expansion area is defined as the area east of Chesapeake's district regulator station located on Route 9 in Lewes, Delaware, that is connected to Chesapeake's distribution main and any area that is connected to Chesapeake's distribution main behind the three Eastern Shore Natural Gas transmission pipeline City Gates located in Dagsboro, Frankford, and Selbyville, Delaware. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm residential rate schedule should their annual consumption warrant such a change. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$19.75 per month
First 20 Ccf	$0.607 per Ccf
Next 30 Ccf	$0.280 per Ccf
Over 50 Ccf	$0.170 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "RS" provided on Sheet No. 42.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

RATE SCHEDULE "ERS-1"

EXPANSION AREA RESIDENTIAL SERVICE – 1
(Continued)

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

SPECIAL TERMS AND CONDITIONS OF SERVICE

(1) Service under this rate schedule is subject to the standard terms and conditions of service as in effect from time to time under authority of the Public Service Commission of Delaware. It is also subject to the limitations stated under the "Availability" clause above.

(2) Natural gas purchased hereunder is for the use of the customer in one location only and is not to be shared or sold to others.

(3) In addition to the above Delivery Service rates, customers served under this rate schedule may be subject to one or more riders containing additional charges applicable to the service received, such as ER and any applicable franchise fees.

RATE SCHEDULE "ERS-2"

EXPANSION AREA RESIDENTIAL SERVICE – 2

AVAILABILITY

This rate schedule is available to any individually metered customer within the southeastern Sussex County, Delaware, expansion area using gas in a residential dwelling or unit for space heating, cooking, water heating, or other domestic purpose with annual consumption of greater than 240 Ccf. The southeastern Sussex County, Delaware, expansion area is defined as the area east of Chesapeake's district regulator station located on Route 9 in Lewes, Delaware, that is connected to Chesapeake's distribution main and any area that is connected to Chesapeake's distribution main behind the three Eastern Shore Natural Gas transmission pipeline City Gates located in Dagsboro, Frankford, and Selbyville, Delaware. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm residential rate schedule should their annual consumptions warrant such a change. A Customer on ERS-1 Service will be moved to this rate schedule with annual consumption equal to or greater than 264 Ccf. A Customer on this rate schedule will be moved to ERS-1 Service with annual consumption less than 216 Ccf. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$39.25 per month
First 20 Ccf	$0.578 per Ccf
Next 30 Ccf	$0.319 per Ccf
Over 50 Ccf	$0.132 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "RS" provided on Sheet No. 42.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

RATE SCHEDULE "ERS-2"

EXPANSION AREA `RESIDENTIAL SERVICE – 2
(Continued)

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

SPECIAL TERMS AND CONDITIONS OF SERVICE

(1) Service under this rate schedule is subject to the standard terms and conditions of service as in effect from time to time under authority of the Public Service Commission of Delaware. It is also subject to the limitations stated under the "Availability" clause above.

(2) Natural gas purchased hereunder is for the use of the customer in one location only and is not to be shared or sold to others.

(3) In addition to the above Delivery Service rates, customers served under this rate schedule may be subject to one or more riders containing additional charges applicable to the service received, such as ER and any applicable franchise fees.

RATE SCHEDULE "GS"

GENERAL SERVICE

AVAILABILITY

This rate schedule is available to any customer using gas for commercial and/or industrial purposes with an annual consumption of less than 4,000 Ccf. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption warrant such a change. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$27.25~~26.00~~ per month
First 20 Ccf	$0.447 per Ccf
Next 30 Ccf	$0.278 per Ccf
Over 50 Ccf	$0.140 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "GS" provided on Sheet No. 42.

PUBLIC UTILITIES TAX

The Delivery Service, Gas Sales Service, and any other applicable rates or charges are subject to the Delaware Public Utilities Tax unless the customer is exempt from such tax.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

RATE SCHEDULE "EGS"

EXPANSION AREA GENERAL SERVICE

AVAILABILITY

This rate schedule is available to any customer within the southeastern Sussex County, Delaware, expansion area using gas for commercial and/or industrial purposes with an annual consumption of less than 4,000 Ccf. The southeastern Sussex County, Delaware, expansion area is defined as the area east of Chesapeake's district regulator station located on Route 9 in Lewes, Delaware, that is connected to Chesapeake's distribution main and any area that is connected to Chesapeake's distribution main behind the three Eastern Shore Natural Gas transmission pipeline City Gates located in Dagsboro, Frankford, and Selbyville, Delaware. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption warrant such a change. This annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$67.25 per month
First 20 Ccf	$0.447 per Ccf
Next 30 Ccf	$0.278 per Ccf
Over 50 Ccf	$0.140 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "GS" provided on Sheet No. 42.

PUBLIC UTILITIES TAX

The Delivery Service, Gas Sales Service, and any other applicable rates or charges are subject to the Delaware Public Utilities Tax unless the customer is exempt from such tax.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

RATE SCHEDULE "EGS"

EXPANSION AREA GENERAL SERVICE
(Continued)

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

SPECIAL TERMS AND CONDITIONS OF SERVICE

(1) Service under this rate schedule is subject to the standard terms and conditions of service as in effect from time to time under authority of the Public Service Commission of Delaware. It is also subject to the limitations stated under the "Availability" clause above.

(2) Natural gas purchased hereunder is for the use of the customer in one location only and is not to be shared or sold to others except for retail sale as a fuel to natural gas vehicles.

(3) A firm customer that transfers from Gas Sales Service to Transportation and Balancing Service or to Interruptible Sales Service, as authorized under the Company's tariff, will be billed for or receive credit for any under or over collection of gas costs from prior periods.

(3) In addition to the above Delivery Service rates, customers served under this rate schedule may be subject to one or more riders containing additional charges applicable to the service received, such as ER and any applicable franchise fees.

RATE SCHEDULE "MVS"

MEDIUM VOLUME SERVICE

AVAILABILITY

This rate schedule is available to any customer using gas for commercial and/or industrial purposes with an annual consumption generally equal to or greater than 4,000 Ccf and less than 15,000 Ccf. The Company will annually review those Customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption warrant such a change. A Customer on General Service will be moved to this rate schedule with annual consumption equal to or greater than 4,400 Ccf. A Customer on this rate schedule will be moved to General Service with annual consumption less than 3,600 Ccf. The annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$66.25~~65.00~~ per month
First 200 Ccf	$0.227 per Ccf
Over 200 Ccf	$0.115 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "MVS" provided on Sheet No. 42.

PUBLIC UTILITIES TAX

The Delivery Service, Gas Sales Service, and any other applicable rates or charges are subject to the Delaware Public Utilities Tax unless the customer is exempt from such tax.

PAYMENT TERMS

Bills are due within ten (10) days of their date.

RATE SCHEDULE "EMVS"

EXPANSION AREA MEDIUM VOLUME SERVICE

AVAILABILITY

This rate schedule is available to any customer within the southeastern Sussex County, Delaware, expansion area using gas for commercial and/or industrial purposes with an annual consumption generally equal to or greater than 4,000 Ccf and less than 15,000 Ccf. The southeastern Sussex County, Delaware, expansion area is defined as the area east of Chesapeake's district regulator station located on Route 9 in Lewes, Delaware, that is connected to Chesapeake's distribution main and any area that is connected to Chesapeake's distribution main behind the three Eastern Shore Natural Gas transmission pipeline City Gates located in Dagsboro, Frankford, and Selbyville, Delaware. The Company will annually review those Customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption warrant such a change. A Customer on Rate Schedule EGS will be moved to this rate schedule with annual consumption equal to or greater than 4,400 Ccf. A Customer on this rate schedule will be moved to rate schedule EGS with annual consumption less than 3,600 Ccf. The annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$191.25 per month
First 200 Ccf	$0.227 per Ccf
Over 200 Ccf	$0.115 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers served under this rate schedule are subject to the gas cost rate applicable to Rate Schedule "MVS" provided on Sheet No. 42.

PUBLIC UTILITIES TAX

The Delivery Service, Gas Sales Service, and any other applicable rates or charges are subject to the Delaware Public Utilities Tax unless the customer is exempt from such tax.

RATE SCHEDULE "EMVS"

EXPANSION AREA MEDIUM VOLUME SERVICE
(Continued)

PAYMENT TERMS

Bills are due within ten (10) days of their date.

MINIMUM BILL

The minimum monthly bill under this rate schedule is the customer charge.

SPECIAL TERMS AND CONDITIONS OF SERVICE

(1) Service under this rate schedule is subject to the standard terms and conditions of service as in effect from time to time under authority of the Public Service Commission of Delaware. It is also subject to the limitations stated under the "Availability" clause above.

(2) Natural gas purchased hereunder is for the use of the customer in one location only and is not to be shared or sold to others except for retail sale as a fuel to natural gas vehicles.

(3) A firm customer that transfers from Gas Sales Service to Transportation and Balancing Service or Interruptible Sales Service, as authorized under the Company's tariff, will be billed for or receive credit for any under or over collection of gas costs from prior periods.

(4) In addition to the above Delivery Service rates, customers served under this rate schedule may be subject to one or more riders containing additional charges applicable to the service received, such as ER and any applicable franchise fees.

RATE SCHEDULE "LVS"

LARGE VOLUME SERVICE

AVAILABILITY

This rate schedule is available to any customer using gas for commercial and/or industrial purposes with an annual consumption generally equal to or greater than 15,000 Ccf. The Company will annually review those customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption warrant such a change. A Customer on Medium Volume Service will be moved to this rate schedule with annual consumption equal to or greater than 16,500 Ccf. A Customer on this rate schedule will be moved to Medium Volume Service with annual consumption less than 13,500 Ccf. The annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption other than at the annual review time.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer charge:	$126.25~~125.00~~ per month
First 1000 Ccf	$0.326 per Ccf
Over 1000 Ccf	$0.083 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers purchasing their natural gas supply from the Company are subject to the gas cost rate applicable to Rate Schedule "LVS" provided on Sheet No. 42.

RATE SCHEDULE "HLFS"

HIGH LOAD FACTOR SERVICE

AVAILABILITY

This rate schedule is available to any customer using gas for commercial and/or industrial purposes that would otherwise qualify for Medium Volume Service or Large Volume Service and with winter months' consumption, defined as the months of January through March, being less than thirty-five percent (35%) of their annual consumption. In addition, the customer must use natural gas in at least eleven of the twelve months under review and usage must be fairly evenly distributed throughout the review period. The Company will annually review those Customers receiving service under this rate schedule in order to determine the appropriate firm commercial and/or industrial rate schedule should their annual consumption or winter months consumption warrant such a change. A Customer will remain on this rate schedule as long as winter months' consumption is less than thirty-seven percent (37%) of their annual consumption and the Customer qualifies for Medium Volume Service or Large Volume Service. The annual review process will be based on the twelve months ended August. Customers will not be shifted between rate schedules due to changes in annual consumption or winter months' consumption other than after the annual review.

DELIVERY SERVICE RATES

The following rates for delivering gas to the customer's location apply to all customers served under this rate schedule.

Customer Charge:	$76.25~~75.000~~ per month
All gas consumed	$0.087 per Ccf

GAS SALES SERVICE

In addition to the above Delivery Service rates, customers purchasing their natural gas supply from the Company are subject to the gas cost rate applicable to Rate Schedule "HLFS" provided on Sheet No. 42.

RATE SCHEDULE "CFS"

CONVERSION FINANCE SERVICE

AVAILABILITY

The Conversion Finance Service is an **optional service** that is available to all residential and smaller commercial customers located in Chesapeake's service areas who are converting to natural gas from an alternative energy source. This optional service is applicable to the following rate schedules:

Rate Schedule "RS-1" – Residential Service -1
Rate Schedule "ERS-1" – Expansion Area Residential Service -1
Rate Schedule "RS-2" – Residential Service – 2
Rate Schedule "ERS-2" – Expansion Area Residential Service – 2
Rate Schedule "GS" – General Service
Rate Schedule "EGS" – Expansion Area General Service
Rate Schedule "MVS" – Medium Volume Service
Rate Schedule "EMVS" – Expansion Area Medium Volume Service

GENERAL TERMS OF SERVICE

Chesapeake is offering the Conversion Finance Service as an optional service which customers can choose to elect. Customers will receive financing assistance from the Company to assist with the cost of converting to natural gas with a choice of repayment terms. Under the terms of this service, the maximum level of assistance to be granted per customer is $1,500 for residential customers and $3,000 for commercial customers. The repayment options would be 3, 5, or 10 years. In instances where the cost of conversion exceeds the maximum level to be granted by the Company, the customer will be solely responsible for obtaining funds to cover these additional costs.

In order to qualify for this service, any respective customer will be required to satisfactorily establish credit under the terms and conditions of the natural gas tariff as outlined in Section XIII – Payment of Terms.

The Conversion Finance Service is tied to the respective customer, not the dwelling. If a customer sells a property for which a Conversion Finance Service balance remains, any unpaid balance would be due on the customer's final bill.

RATE SCHEDULE "CFS"

CONVERSION FINANCE SERVICE

RATE

The monthly fee applicable for this Conversion Finance Service is dependent upon the amount of the conversion costs to be incurred by the respective customer in converting to natural gas as well as the time period selected for repayment.

Conversion Cost	Monthly Charge		
	3 Year Term	5 Year Term	10 Year Term
< $250	$5.00	$3.00	$2.00
$251 - $500	$14.00	$9.00	$6.00
$501 - $750	$23.00	$15.00	$10.00
$751 - $1,000	$31.00	$21.00	$14.00
$1,001 - $1,250	$40.00	$27.00	$18.00
$1,251 - $1,500	$49.00	$33.00	$21.00
$1,501 - $1,750	$58.00	$39.00	$25.00
$1,751 - $2,000	$67.00	$45.00	$29.00
$2,001 - $2,250	$76.00	$51.00	$33.00
$2,251 - $2,500	$85.00	$57.00	$37.00
$2,501 - $2.750	$93.00	$63.00	$41.00
$2,751 - $3,000	$102.00	$69.00	$45.00

For those customers electing to receive service under this rate schedule, the monthly fees will be included on the customer's normal monthly billing.

RATE SCHEDULE "CMS"

CONVERSION MANAGEMENT SERVICE

AVAILABILITY

The Conversion Management Service is an **optional service** that is available to all residential and smaller commercial customers located in Chesapeake's service areas who are converting to natural gas from an alternative energy source. This optional service is applicable to the following rate schedules:

Rate Schedule "RS-1" – Residential Service -1
Rate Schedule "ERS-1" – Expansion Area Residential Service -1
Rate Schedule "RS-2" – Residential Service – 2
Rate Schedule "ERS-2" – Expansion Area Residential Service – 2
Rate Schedule "GS" – General Service
Rate Schedule "EGS" – Expansion Area General Service
Rate Schedule "MVS" – Medium Volume Service
Rate Schedule "EMVS" – Expansion Area Medium Volume Service

GENERAL TERMS OF SERVICE

Chesapeake is offering an optional Conversion Management Service to assist potential customers with the process of converting to natural gas primarily by assisting the customer with managing and coordinating processes with any outside vendors that would be performing the conversion.

Under the general terms and conditions of this service, Chesapeake will assist customers by performing such tasks as the following:

1. Assist in selecting the appropriate contractor to complete the conversion process, including providing the contractor with load and equipment information
2. Assist the selected contractor with ordering the proper conversion kits or new equipment
3. Coordinate the conversion of fuel lines and appliances inside the home with the selected contractor and the homeowner
4. Ensure that the conversion is completed in a timely manner and that the workmanship is consistent with Chesapeake's safety standards.
5. Evaluate contractor performance to ensure compliance with Chesapeake's Preferred Contractors Standard

RATE SCHEDULE "CMS"

CONVERSION MANAGEMENT SERVICE

RATE

The fee applicable to this Conversion Management Service will be a one-time fee of $100.00 per customer. This fee will be included on the customer's monthly billing statement following the completion of the conversion process.

Testimony of
Jeffrey R. Tietbohl

BEFORE THE DELAWARE PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION OF	)	
CHESAPEAKE UTILITIES CORPORATION	)	
FOR APPROVAL OF NATURAL GAS	)	P.S.C. DOCKET NO. 12-
EXPANSION SERVICE OFFERINGS	)	
TO BE EFFECTIVE SEPTEMBER 1, 2012	)	
(FILED JUNE 25, 2012)	)	

DIRECT TESTIMONY OF JEFFREY R. TIETBOHL

On Behalf of Chesapeake Utilities Corporation

Delaware Division

Submitted for Filing: June 25, 2012

1 Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS
2 ADDRESS.
3 A. My name is Jeffrey R. Tietbohl. I am a Vice President of Chesapeake
4 Utilities Corporation ("Chesapeake" or "the Company"). My business
5 address is 350 South Queen Street, Dover, Delaware 19904.
6
7 Q. BRIEFLY DESCRIBE YOUR EDUCATION AND RELEVANT
8 PROFESSIONAL BACKGROUND.
9 A. I received a Bachelor of Science Degree in Accounting from Wesley
10 College in Dover, Delaware in 1989. I was hired by Chesapeake Utilities
11 Corporation as a Rate Analyst in June 1989 primarily working with
12 purchased gas adjustments, rate of return reports, cost of service studies
13 and assisting in base rate proceedings for our Delaware, Florida and
14 Maryland natural gas distribution companies. I was promoted to a Rate
15 Analyst II in January 1993. I left Chesapeake in August 1994 to accept a
16 position with the State of Delaware in the Office of the Insurance
17 Commissioner dealing with financial examination and regulatory oversight
18 of insurance companies. I rejoined Chesapeake as a Rate Analyst III in
19 March 1995 primarily dealing with rate design, cost of service studies, and
20 the restructuring of Chesapeake's natural gas services in Maryland and
21 Delaware. I was promoted to Natural Gas Accounting Manager in June
22 1997 where I was responsible for managing the accounting functions and
23 supporting various regulatory filings for our natural gas operations in

Maryland and Delaware. I accepted the position of Director of Regulatory Affairs in February 1998 with responsibility for all rate and regulatory matters in Chesapeake's Maryland and Delaware Divisions. In January 2002, I was promoted to Controller of Natural Gas whereby my responsibilities were expanded to include the oversight of the accounting and accounts payable functions for the Company's natural gas business segment. In July 2005, I was promoted to the position of Director of Regional Business Planning and Development for Chesapeake's natural gas distribution divisions on the Delmarva Peninsula having direct responsibility for the regional areas of Business Planning and Financial Analysis, Gas Supply and Procurement, Pricing and Regulation, Engineering, and Business Development. In January 2007, I was promoted to the Director of Delmarva Natural Gas Distribution in which I assumed the direct responsibility and oversight of the operations of the Delaware and Maryland natural gas distribution companies. I was promoted to Assistant Vice President in May 2009 and subsequently to my current role as Vice President of Chesapeake Utilities Corporation in June 2010 whereby I am currently the senior business unit leader for the regulated natural gas distribution utility operations in Delaware and Maryland. My direct oversight and responsibility extends to the areas of field operations and engineering, gas supply and procurement, pricing and regulatory affairs, strategic planning and development, and sales and marketing. I have pre-filed testimony and testified before the Maryland

1 Public Service Commission and Delaware Public Service Commission on
2 several occasions during my time at Chesapeake relating to such rate and
3 regulatory issues as revenue requirements, gas cost recovery,
4 environmental cost recovery, cost of service studies, rate design and
5 codes of conduct.
6
7 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS
8 PROCEEDING?
9 A. The primary purpose of my direct testimony in this proceeding is to
10 support the development of Chesapeake's proposed natural gas
11 expansion service offerings for residential and smaller commercial
12 customers throughout its service territory in the State of Delaware, and
13 specifically in defined geographic areas in southeastern Sussex County,
14 Delaware. Chesapeake is essentially proposing three natural gas
15 expansion service offerings in this application; (1) Infrastructure Expansion
16 Service Rates for residential, general commercial, and medium volume
17 commercial customers in specifically defined areas in southeastern
18 Sussex County, (2) a Conversion Management Service for residential,
19 general commercial, and medium volume commercial customers
20 throughout its service areas in New Castle, Kent, and Sussex Counties
21 who are converting to natural gas from an alternative energy source and
22 (3) a Conversion Finance Service for residential, general commercial, and
23 medium volume commercial customers throughout its service areas in

1 New Castle, Kent, and Sussex Counties who are converting to natural gas
2 from an alternative energy source. In support of these new proposed
3 service offerings, Chesapeake is proposing various modifications and
4 additions to its current natural gas tariff as well as requesting a slight rate
5 increase to be applied to all of its currently existing customers and
6 potential customers throughout its service territory in Delaware. This slight
7 rate increase will be referred to as the Distribution Expansion Service
8 ("DES") Rate. As part of this testimony, I will also be specifically
9 addressing the various rates and terms of service related to the proposed
10 natural gas expansion service offerings.
11
12 Q. PLEASE BRIEFLY DESCRIBE THE ATTACHMENTS INCLUDED AS
13 PART OF YOUR DIRECT TESTIMONY?
14 A. Attachment JRT-1 contains an illustration of the components of an existing
15 residential customer's bill in Chesapeake's existing service territories
16 relative to other alternative energy sources (propane) at the time of the
17 Company's last rate case and under current conditions. This attachment
18 also demonstrates the minimal impact of the DES Rate on a residential
19 customer under the Company's proposal. Attachment JRT-2 contains an
20 illustration of the impacts of the proposed natural gas expansion service
21 offerings on average residential customers, an average general service
22 commercial customer, and an average medium volume service
23 commercial customer. Attachment JRT-3 is a copy of the State of

1 Delaware Energy Efficiency Resource Standards Workgroup Report that
2 was submitted to the Department of Natural Resources and Environmental
3 Control ("DNREC") Secretary on June 14, 2011 with a consensus vote of
4 participating workgroup members. A complete list of the participating
5 members is included in the attached report. In addition, throughout my
6 testimony I will be referencing various natural gas tariff sheets that have
7 been included as part of the Application. These attachments have been
8 prepared by me or under my direct supervision.
9
10 Q. WHY IS CHESAPEAKE PROPOSING NEW NATURAL GAS
11 EXPANSION SERVICE OFFERINGS FOR RESIDENTIAL AND
12 SMALLER COMMERCIAL CUSTOMERS AT THIS TIME?
13 A. Chesapeake is proposing these new natural gas expansion service
14 offerings to enhance and expand the availability of natural gas distribution
15 service in order to meet the energy needs of residents, communities, and
16 businesses throughout its service territory, and specifically in the areas of
17 southeastern Sussex County, Delaware, where natural gas service is not
18 widely available today. While Chesapeake provides natural gas service to
19 numerous residents and businesses in portions of Sussex County,
20 Delaware, there are still areas where natural gas is either not available at
21 all or available on a very limited basis. Chesapeake desires to increase
22 the availability of natural gas service through the extension of distribution
23 mains and services to these areas. In addition, Chesapeake wishes to

1 directly assist and support customers with their efforts in converting to
2 natural gas from an alternative energy source. With the implementation of
3 the proposed service offerings contained herein, Chesapeake will have
4 the ability to provide a greater portion of the population with a lower cost,
5 environmentally friendlier fuel choice. Expanding its natural gas
6 infrastructure in southeastern Sussex County will provide residential and
7 small business customers with the opportunity to save significant amounts
8 of money on their energy expenses. Such savings, in the form of
9 increased disposable income for customers, can have a positive direct
10 economic impact on the local economies. Chesapeake believes there is
11 a significant amount of competition in the energy industry today, although
12 the residences and businesses in southeastern Sussex County have not
13 had the choice of natural gas as a fuel source.
14
15 Q. WHY DOES CHESAPEAKE BELIEVE IT IS IN A POSITION TO EXPAND
16 ITS DISTRIBUTION SYSTEM IN SUCH A MANNER?
17 A. One of Chesapeake's goals and objectives over the past several years
18 has been to support the communities it serves by providing consumers
19 with the option of choosing natural gas service to meet their energy needs
20 by making investments in infrastructure to increase the availability of
21 natural gas. By doing so, Chesapeake is enabling our communities to
22 improve their energy efficiency, minimize their environmental impact in a
23 responsible manner, and reduce their dependence on foreign oil by

1 offering a domestic fuel alternative. The Delaware Division has completed
2 successful distribution projects to serve large commercial and industrial
3 customers and extend its geographic presence in certain areas of Sussex
4 County over the past few years. These extensions to serve large
5 commercial and industrial customers have positioned the Company to
6 potentially serve residential and small commercial customers in these
7 areas as well. Chesapeake has invested nearly $20 million in capital over
8 the past few years enabling Chesapeake to serve an additional 3,700
9 customers in Delaware. Among the 3,700 new customers are 15 large
10 commercial and industrial customers in southern Delaware alone that are
11 currently saving approximately $8,091,000 in energy costs per year,
12 reducing their carbon emissions by 24,107 tons (the equivalent of taking
13 almost 4,150 vehicles off the road), and reducing their consumption of
14 foreign oil by approximately 6,885,861 gallons annually.
15
16 Q. WHAT MAKES CHESAPEAKE BELIEVE THAT RESIDENTS AND
17 SMALL BUSINESSES IN SOUTHEASTERN SUSSEX COUNTY DESIRE
18 OR WANT NATURAL GAS SERVICE AS AN ENERGY CHOICE?
19 A. Chesapeake, over the course of the last year, has executed three new
20 franchise agreements with the following towns or cities in southeastern
21 Sussex County; (1) City of Lewes (2) Town of Frankford and (3) Town of
22 Selbyville. During this time, Chesapeake has participated in several public
23 meetings and events with most being heavily attended and well received

1 by the respective communities. Chesapeake has met with city and town
2 officials, several Homeowner Associations in and around the City of
3 Lewes, small commercial businesses, and individual residents who have
4 expressed strong interest in having natural gas as an energy choice. In
5 addition to having a strong interest in natural gas service, Chesapeake
6 has also received in these meetings numerous questions and inquiries
7 regarding Chesapeake's ability to provide some form of assistance and
8 support in the conversion process for those customers converting to
9 natural gas from an alternative energy source. Chesapeake has received
10 an unprecedented amount of interest from southeastern Sussex County
11 residents and developers as nearly fifty (50) residential subdivisions have
12 expressed some level of interest in receiving natural gas service. The
13 desire for natural gas service is particularly evidenced in a recent
14 franchise agreement with the City of Lewes. In the franchise agreement it
15 states "Chesapeake acknowledges the City's desire to maximize the
16 number of City residents who have access to natural gas service." As a
17 result of this desire, the franchise agreement contains provisions in which
18 at least 25% of the residential properties must be offered service within
19 the first five years, 60% of the residential properties must be offered
20 service within ten years, and 100% of the residential properties must be
21 offered service within fifteen years. In addition, Chesapeake agreed in the
22 franchise agreement to conduct at least three open public workshops
23 during the first year of the agreement to inform residential and commercial

1 property owners of the requirements to obtain natural gas service as well
2 as the status of its projects in the City of Lewes.
3
4 Q. WHAT OBSTACLES EXIST UNDER THE CURRENT PARAMETERS OF
5 CHESAPEAKE'S EXISTING NATURAL GAS TARIFF THAT IMPEDE
6 CHESAPEAKE'S ABILITY TO PROVE SERVICE TO NEW
7 CUSTOMERS?
8 A. There are currently a number of obstacles that will prevent Chesapeake
9 from serving customers in these areas in a timely manner under the
10 parameters of its existing natural gas tariff. The obstacles the Company
11 faces for residential and small commercial customers are more
12 complicated than those faced with larger, more sophisticated customers.
13 First, there are increased costs associated with construction in downtown
14 areas and developed communities as opposed to yet-to-be-built
15 residential developments. The Company estimates the cost of
16 constructing mainline distribution extensions in already existing and
17 developed communities to be three times higher than similar costs for new
18 home or residential subdivision construction. Second, there are a large
19 number of seasonal customers (i.e. secondary dwellings that are not a
20 primary residence) in southeastern Sussex County. These residences are
21 typically not inhabited in the coldest winter months meaning that average
22 consumption per customer in the area is likely to be lower than in other
23 parts of Chesapeake's service territory. As a result, margin achieved from

these seasonal customers on an annual basis under current Delaware division rates is estimated to be $32 a year lower than a typical residential customer. Third, there is a general reluctance of residential customers to pay large up-front costs for conversions to natural gas, including mainline distribution extensions that require a contribution in aid of construction. Finally, the timing and magnitude of residential customers converting to natural gas service has the potential for being a significant obstacle. The necessary coordination and communications with many individual residential customers requires more resources than required when dealing with a single builder or developer. Accordingly, the administrative cost of adding new customers becomes higher for existing homes. These obstacles make it difficult for the Company to economically expand its distribution system to serve many of the potential customers, thereby preventing them from benefitting from any of the savings. Chesapeake's proposed natural gas expansion service offerings will enable Chesapeake to overcome these obstacles and provide the economic benefit of relatively low cost natural gas to customers where it is not currently available today.

Q. WHAT ARE THE MAJOR OBJECTIVES OF THE NATURAL GAS EXPANSION SERVICE OFFERINGS PROPOSAL?

A. Chesapeake is submitting this proposal in order to increase the availability of natural gas in areas in southeastern Sussex County where it is not

currently available and to offer complementary optional services to customers throughout its service territory in order to assist and support their efforts in converting to natural gas from an alternative energy source. Chesapeake's plan was developed taking into consideration the results and outcome of the State of Delaware Energy Efficiency Resource Standards Workgroup Report that was submitted to the Department of Natural Resources and Environmental Control ("DNREC") Secretary in June 2011. The Company's proposal will provide prospective customers with their heating fuel of choice at a lower cost than currently available alternatives. Natural gas costs have historically been lower than most alternative fuels used for heating. Additionally, many consumers prefer the environmentally friendly nature of natural gas, the reliability of supply and the fact that no individual fuel storage tanks are required on their property. Chesapeake's proposal will accelerate the expansion of natural gas service with minimal impact on the cost of service for existing customers as compared to what they are paying today.

Q. CAN YOU PLEASE COMMENT FURTHER ON THE STATE OF DELAWARE ENERGY EFFICIENCY RESOURCE STANDARDS WORKGROUP REPORT THAT IS INCLUDED AS ATTACHMENT JRT-3 TO THIS DIRECT TESTIMONY?

A. Yes. The overall workgroup report was supportive of natural gas expansion throughout the State of Delaware. As stated in the Executive

Summary on Pages 3 and 4 under the section titled 1.7 Natural Gas Efficiency;

"As part of the Workgroup's directive, the legislation asked for comparative review of the full-fuel-cycle measurement (from source to point-of-use) of electricity and natural gas. Significant amounts of energy can be used or lost along the complete energy delivery path, that is, in the extraction, processing, transportation, conversion, and distribution of energy. On a full- fuel-cycle energy basis, taking into consideration the site use efficiencies, the direct use of natural gas in primary residential appliances is the most efficient energy source compared to electricity, propane, and fuel oil on an MMBtu basis. The full-fuel-cycle energy requirement for an average home using natural gas is approximately 27% less than for a similar home using electricity, 11% less than the similar fuel oil home, and 3% less than the similar propane home. The full-fuel-cycle energy analysis indicates that natural gas is the most efficient energy source taking into consideration the idea that electricity is the most efficient when only considering the energy requirements on site at the home. Given the benefits of natural gas and the potential energy savings on a full-fuel-cycle basis, the Workgroup supports the expansion of gas service in all areas of the state and recommends inclusion of fuel switching and gas fired combined heat and power systems (CHP) toward energy efficiency savings."

Furthermore, Section 7.2.3 Broaden the Scope of Energy Efficiency on Page 48, item listing number (3) states "Establish a fuel switching program and promote gas distribution expansion with incentives or shared savings." Within the paragraph that immediately follows this statement, the last sentence indicates, "Utility tariffs that provide for a shared savings could help pay for expansions and help meet State energy and environmental goals." The Company's proposed natural gas expansion offerings were designed and developed taking into consideration the statements and positions outlined in the above workgroup report.

1 Q. PLEASE BEGIN TO DISCUSS THE SPECIFIC DETAILS AND
2 PROPOSALS CONTAINED IN THE COMPANY'S APPLICATION.
3 A. Chesapeake is essentially proposing three natural gas expansion service
4 offerings in this application: (1) Infrastructure Expansion Service ("IES")
5 Rates for residential, general commercial, and medium volume
6 commercial customers in specifically defined areas in southeastern
7 Sussex County, (2) a Conversion Management Service for residential,
8 general commercial, and medium volume commercial customers
9 throughout its service areas in New Castle, Kent, and Sussex Counties
10 who are converting to natural gas from an alternative energy source and
11 (3) a Conversion Finance Service for residential, general commercial, and
12 medium volume commercial customers throughout its service areas in
13 New Castle, Kent, and Sussex Counties who are converting to natural gas
14 from an alternative energy source. In support of these new proposed
15 service offerings, Chesapeake is proposing various modifications and
16 additions to its current natural gas tariff as well as requesting a slight rate
17 increase to be applied to all of its currently existing customers and
18 potential customers throughout its service territory in Delaware. As
19 mentioned previously, this slight rate increase will be referred to as the
20 Distribution Expansion Service ("DES") Rate.

1 Q. PLEASE BRIEFLY INTRODUCE THE CONCEPT OF THE
2 INFRASTRUCTURE EXPANSION SERVICE ("IES") RATES AND THE
3 DISTRIBUTION EXPANSION SERVICES ("DES") RATE?
4 A. The Infrastructure Expansion Service ("IES") Rates are applicable to
5 residential and smaller commercial customers in specifically defined
6 geographic areas in southeastern Sussex County, DE. The southeastern
7 Sussex County, Delaware geographic expansion areas are defined as the
8 area east of Chesapeake's district regulator station located on Route 9 in
9 Lewes, Delaware connected to Chesapeake's distribution main and any
10 areas that are connected to Chesapeake's distribution mains located
11 behind or beyond the three Eastern Shore Natural Gas transmission
12 pipeline City Gates located in Dagsboro, Frankford, and Selbyville,
13 Delaware. The Infrastructure Expansion Service ("IES") Rates are fixed
14 charges and will be collected through the monthly customer charge. The
15 rate would be paid by customers being served under Rate Schedule
16 Expansion Area Residential Service – 1 ("ERS-1"), Expansion Area
17 Residential Service – 2 ("ERS-2"), Expansion Area General Service
18 ("EGS") and Expansion Area Medium Volume Service ("EMVS") located
19 within the specifically defined geographic areas. The delivery service
20 revenue collected through these rates will be used by Chesapeake to
21 enable it to spend a larger amount of capital construction costs per
22 customer in order to be able to provide more customers with the
23 opportunity for service. The Distribution Expansion Service ("DES") Rate

is also a fixed charge and will be collected through the monthly customer charge from all Delaware Division customers receiving service under the following rate schedules: Residential Service -1 ("RS-1"), Residential Service – 2 ("RS-2"), ERS-1, ERS-2, General Service ("GS"), EGS, Medium Volume Service ("MVS"), EMVS, Large Volume Service ("LVS"), and High Load Factor Service ("HLFS"). The delivery service revenue collected through this rate is intended to support the administration and implementation of the proposed service offerings along with the enhanced customer growth anticipated as a result of the proposed natural gas expansion service offerings.

Q. PLEASE DESCRIBE FURTHER THE COMPONENTS OF THE COMPANY'S PROPOSED "IES" RATES AND "DES" RATE CONTAINED IN THIS APPLICATION.

A. At the time of the Company's last base rate case in 2007, typical residential and small commercial customers using natural gas were experiencing various levels of energy savings compared to alternative energy sources. Over the course of the past few years as natural gas commodity prices have continued to decline and soften, this pricing differential between alternative energy sources and natural gas has expanded resulting in even larger energy savings for those customers using natural gas. Since the cost of natural gas construction and installation in highly developed and existing communities is three times

more expensive than new home construction, the Company's IES Rates would provide a mechanism for new customers to essentially "share" in these larger savings being experienced by customers today and would facilitate economic expansions into these more highly developed and existing communities. Chesapeake proposes to utilize the delivery service revenue collected through the IES rates to accelerate the expansion of natural gas service. By setting aside a portion of these energy savings, the Company can support the economic expansion of the system, the conversion of customers' equipment, and create real savings for the individuals and communities. The primary objective is to increase the total dollar energy savings by expanding the system to serve more customers than could be done otherwise. Chesapeake believes it can establish a more efficient and economical system through the approach of saving a larger number of customers a smaller amount of money than saving only a few customers a larger amount of money. The IES rate would only be applicable to customers in the defined geographic areas as explained earlier in my testimony. The development of the DES rate considered the difference between the amount of delivery service revenue that the Company's rates were designed to collect in its last rate case and the amount of delivery service revenue that is currently being collected today on average from customers. This DES rate would be applicable to all customers, including those customers in Chesapeake's existing distribution areas as well as those to be served in the newly defined

1 geographic expansion areas. The DES rate equates to $15 per year or
2 $1.25 per month to be applied to each customer in the same manner
3 across the system. The Company proposes to collect this additional
4 amount through the monthly customer charge.
5
6 Q. PLEASE PROVIDE A SPECIFIC EXAMPLE OF HOW THE "IES" RATE
7 FOR RESIDENTIAL SERVICE WILL BE UTILIZED TO EXTEND THE
8 DISTRIBUTION SYSTEM FURTHER THAN WOULD OTHERWISE BE
9 POSSIBLE UNDER THE EXISTING TERMS OF THE COMPANY'S
10 NATURAL GAS TARIFF IN THE DEFINED GEOGRAPHIC AREAS IN
11 SOUTHEASTERN SUSSEX COUNTY.
12 A. Under the Company's existing tariff rates for Residential Service (RS-2)
13 and based on a typical residential customer using 50 Mcf of natural gas on
14 an annual basis, Chesapeake can economically spend or invest
15 approximately $2,058 of capital costs per customer without having to
16 charge an upfront Contribution in Aid of Construction ("CIAC") to the
17 customer in order to provide service. After considering the capital
18 construction costs to install the service line and the meter on the
19 customer's property to the outside of the residence, there remains
20 approximately $627 per customer to cover the infrastructure extension of
21 approach and development mains for the existing developments and
22 communities. Under the current terms of our natural gas tariff, this would
23 generally permit a mainline extension into the residential development of

nearly thirty (30) feet per customer without having to charge an upfront CIAC. Under the proposed IES rate to be collected through an increase in the current customer charge, Chesapeake would be able to economically support an additional $1,800 of capital costs per customer which would result in an additional development main extension of nearly eighty-five (85) feet per customer. Under the Company's proposal, Chesapeake would be able to extend its development main approximately three times further than under its current natural gas tariff while still providing the natural gas customer with a significant level of energy savings compared to alternative energy sources.

Q. DOES THE COMPANY PROPOSE TO CHARGE AN "IES" RATE TO LARGER CUSTOMERS IN THE DEFINED GEOGRAPHIC AREAS THAT WOULD QUALIFY FOR THE LVS AND HLFS RATE SCHEDULES?

A. No. The Company does not propose the same approach for the LVS or HLFS classes. There is a significant size differential among customers in these classes and so the same uniform calculations would not apply. The Company currently has a natural gas tariff provision and rate schedule that allows it to charge negotiated contract rates to larger commercial and industrial customers under certain parameters and situations and it plans to continue to utilize this provision on an individual customer basis to provide service to larger customers.

1 Q. PLEASE EXPLAIN HOW THE "IES" AND "DES" RATES WOULD APPLY
2 TO A RESIDENTIAL CUSTOMER USING MORE THAN 240 CCF PER
3 YEAR IN THE DEFINED EXPANSION AREAS.
4 A. As detailed in Attachment JRT-1, Chesapeake's current delivery service
5 rates as established in its last rate case in 2007 are designed to recover
6 $375 annually from an average RS-2 residential customer with an average
7 annual consumption per customer of 70 Mcf per year. Based on current
8 normalized consumption levels being achieved today, average usage per
9 residential customer is approximately 66 Mcf per year resulting in annual
10 margin or delivery service revenue of $360 per customer. However, due
11 in large part to the seasonal nature of a number of homes in the new
12 defined geographic areas, the typical consumption in these expansion
13 areas is even lower. Chesapeake estimates the average usage for a
14 residential customer in southeastern Sussex County to be around 50 Mcf
15 per year. At the time of the last base rate proceeding in 2007, a residential
16 heating customer using 50 Mcf of natural gas per year was experiencing
17 an annual energy savings of approximately $388, or 27%, relative to
18 alternative energy sources, namely propane. Today, this same customer
19 is experiencing an annual energy savings of approximately $1,071, or
20 55%, relative to propane under the Company's rates. Under
21 Chesapeake's proposal, a residential heating customer in the newly
22 defined geographic areas using an average of 50 Mcf per year will
23 continue to experience an annual energy savings in the amount of $432 or

22% after considering the DES rate of $15 per year, an IES rate of $300 per year, and a reasonable level of costs related to the conversion of customer equipment and internal piping. The IES rate of $300 per year would be collected through the monthly customer charge and would represent an additional monthly amount of $25 per customer beyond current residential rates. These rates and amounts are shown on Page 2 of Attachment JRT-2 and are more specifically defined and presented in the natural gas tariff schedules included as part of the application.

Q. PLEASE EXPLAIN HOW THE "IES" AND "DES" RATES WOULD APPLY TO A RESIDENTIAL CUSTOMER USING FEWER THAN 240 CCF PER YEAR IN THE DEFINED EXPANSION AREAS.

A. At the time of the last base rate proceeding in 2007, an average RS-1 customer using 20 Mcf of natural gas per year was experiencing an annual energy savings of approximately $63, or 10%, relative to alternative energy sources, namely propane. Today, an average RS-1 customer is experiencing an annual energy savings of approximately $193, or 31%, relative to propane under Chesapeake's rates. Under Chesapeake's proposal, a RS-1 customer in the defined geographic expansion areas will continue to experience an annual energy savings in the amount of $46 or 8% after considering the DES rate of $15 per year, the IES rate of $96 per year and a reasonable level of costs related to the conversion of customer equipment and internal piping for a customer of

this size. The IES rate of $96 per year would be collected through the monthly customer charge and would represent an additional monthly amount of $8 per customer beyond current residential rates. These rates and amounts are shown on Page 1 of Attachment JRT-2 and are more specifically defined and presented in the natural gas tariff schedules included as part of the application.

Q. PLEASE EXPLAIN HOW THE "IES" AND "DES" RATES WOULD APPLY TO A GENERAL SERVICE COMMERCIAL CUSTOMER IN THE DEFINED GEOGRAPHIC EXPANSION AREAS.

A. At the time of the last base rate proceeding in 2007, an average GS commercial customer using 96 Mcf of natural gas per year was experiencing an annual energy savings of approximately $219, or 10%, relative to other alternative energy sources, namely propane. Today, an average GS commercial customer is experiencing an annual energy savings of approximately $1,240, or 46%, relative to propane. Under Chesapeake's proposal for a GS commercial customer in the defined geographic expansion areas, the customer will continue to experience an annual energy savings of approximately $300 or 11% after considering the DES rate of $15 per year, the IES rate of $480 per year and a reasonable level of costs related to the conversion of customer equipment and internal piping for a customer of this size. The IES rate of $480 per year would be collected through the monthly customer charge and would represent an

1 additional monthly amount of $40 per customer beyond current residential
2 rates. These rates and amounts are shown on Page 3 of Attachment
3 JRT-2 and are more specifically defined and presented in the natural gas
4 tariff schedules included as part of the application.
5
6 Q. PLEASE EXPLAIN HOW THE "IES" AND "DES" RATES WOULD APPLY
7 TO A MEDIUM VOLUME SERVICE COMMERCIAL CUSTOMER IN THE
8 DEFINED GEOGRAPHIC EXPANSION AREAS.
9 A. At the time of the last base rate proceeding in 2007, an average MVS
10 commercial customer using 638 Mcf of natural gas per year was
11 experiencing an annual energy savings of approximately $2,035, or 16%,
12 relative to other alternative energy sources, namely propane. Today, an
13 average MVS commercial customer is experiencing an annual energy
14 savings of approximately $9,893, or 52% under current rates, relative to
15 propane. Under Chesapeake's proposal a MVS commercial customer in
16 the defined expansion areas will continue to experience an annual energy
17 savings of approximately $7,838 or 41% after considering the DES rate of
18 $15 per year, the IES rate of $1,500 per year, and a reasonable level of
19 costs related to the conversion of customer equipment and internal piping
20 for a customer of this size. The IES rate of $1,500 per year would be
21 collected through the monthly customer charge and would represent an
22 additional monthly amount of $125 per customer beyond current
23 residential rates. These rates and amounts are shown on Page 4 of

1 Attachment JRT-2 and are more specifically defined and presented in the
2 natural gas tariff schedules included as part of the application.
3
4 Q. PLEASE DESCRIBE THE PROPOSED OPTIONAL SERVICE OFFERING
5 REFERRED TO AS RATE SCHEDULE "CFS" CONVERSION FINANCE
6 SERVICE IN THIS PROCEEDING.
7 A. Chesapeake is proposing a natural gas tariff rate schedule to assist
8 potential residential and smaller commercial customers with the cost of
9 converting their existing energy equipment and internal fuel piping to be
10 compatible with natural gas. Chesapeake intends to offer this as an
11 optional Conversion Finance Service that customers can choose to elect
12 in which they would receive financing assistance from the Company to
13 assist with the cost of converting to natural gas with a choice of repayment
14 terms. Chesapeake will then include the repayment amount on customer
15 bills, in accordance with the proposed tariff schedule, to recover the cost
16 of the conversion along with a return component. The return component
17 Chesapeake is proposing is its currently authorized and approved rate of
18 return. Through this service, the maximum level of assistance for
19 converting would be $1,500.00 for a residential customer and $3,000.00
20 for a commercial customer, and the repayment options would be either 3,
21 5, or 10 years. In instances where the cost of conversion exceeds the
22 maximum level to be granted by the Company under this service, the
23 customer will be solely responsible for obtaining funds to cover these

1 additional costs. The specific terms and conditions of this proposed
2 optional service offering are more clearly defined in the proposed natural
3 gas tariff sheets included as part of the application.
4
5 Q. WHAT HAPPENS IF A CUSTOMER MOVES OUT OF THE HOME OR
6 BUSINESS PRIOR TO THE END OF THE REPAYMENT TERM?
7 A. Chesapeake's proposal contemplates that the Conversion Finance
8 Service would be tied to the customer, not the dwelling. Therefore, if a
9 customer sells the property, any unpaid balance would be due on their
10 final bill. Otherwise, a potential homebuyer may be discouraged from
11 purchasing a home with natural gas service because of the Conversion
12 Finance Service.
13
14 Q. PLEASE DESCRIBE THE PROPOSED OPTIONAL SERVICE OFFERING
15 REFERRED TO AS RATE SCHEDULE "CMS" CONVERSION
16 MANAGEMENT SERVICE IN THIS PROCEEDING.
17 A. Chesapeake is also proposing an optional service offering referred to as
18 a Conversion Management Service that would facilitate customers being
19 able to convert their homes and businesses to natural gas service from an
20 alternative energy source. Through this optional service offering,
21 Chesapeake would assist potential customers with the process of
22 converting to natural gas primarily by helping the customer with managing
23 and coordinating processes with outside contractors that would be

1 performing the actual conversion of equipment, appliances, and any
2 related internal fuel piping. If a customer selects this optional service
3 offering, Chesapeake will work with contractors in a variety of ways in
4 order to make the process of converting to natural gas as smooth and
5 convenient as possible. Chesapeake is proposing a one-time fee of
6 $100.00 per customer which would be paid by the customer upon
7 completion of the conversion. The specific terms and conditions of this
8 proposed optional service offering are more clearly defined in the
9 proposed natural gas tariff sheets included as part of the application.
10
11 Q. WHAT CUSTOMERS WOULD BE ELIGIBLE TO RECEIVE THE
12 OPTIONAL CONVERSION FINANCE AND CONVERSION
13 MANAGEMENT SERVICES?
14 A. The Conversion Finance Service and the Conversion Management
15 Service would be available to all residential and smaller commercial
16 customers located in Chesapeake's service areas in the State of
17 Delaware. Specifically, customers being served under the following rate
18 schedules would be eligible for these optional service offerings; RS-1,
19 ERS-1, RS-2, ERS-2, GS, EGS, MVS, and EMVS.
20
21 Q. ARE THERE ANY OTHER TARIFF CHANGES THAT THE COMPANY IS
22 PROPOSING?

1 A. Yes. The Company is proposing certain changes to its existing natural
2 gas tariff pages related to service installations and main extensions. The
3 first change Chesapeake is proposing is related to its general service
4 installation and main extension policy. The Company's current natural gas
5 tariff includes language that indicates the Customer is not responsible for
6 the cost of service installations that are less than seventy-five (75) feet in
7 length from the Company's existing distribution main to the Customer's
8 meter location, and also indicates the Customer is not responsible for
9 main extensions of distribution mains of one hundred (100) feet or less per
10 individual customer. The Company is proposing to amend its current tariff
11 to remove this language. The higher cost of construction in existing and
12 already developed communities can make extensions of any length and
13 size not economical. Chesapeake is also proposing changes related to its
14 policy regarding main extensions into existing residential developments.
15 The Company's current natural gas tariff requires that Chesapeake
16 evaluate the economics of conversion projects using a net revenue test.
17 This means that the total estimated capital expenditure for the project
18 cannot be more than six times the estimated amount of net revenue.
19 Additionally, the only customers that can be considered in the analysis are
20 those that have signed an application for service and are able to convert in
21 90 days or three months. Chesapeake believes these parameters will not
22 be sufficient going forward, especially considering the Company may be
23 converting existing communities and developments with a significant

number of customers. Therefore, the Company proposes a change to its natural gas tariff that would allow for the use of the internal rate of return model to evaluate all residential capital projects. Proposed revisions to the above mentioned tariffs are included as attachments to the Application.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

DATED: June 25, 2012

STATE OF DELAWARE)
)
COUNTY OF KENT)

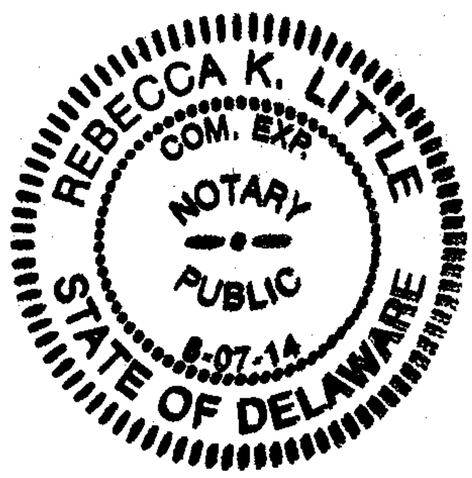
AFFIDAVIT OF JEFFREY R. TIETBOHL

JEFFREY R. TIETBOHL, being first duly sworn according to law, on oath deposes and says that he is the witness whose testimony appears as "Chesapeake Utilities Corporation, Delaware Division, Direct Testimony of Jeffrey R. Tietbohl"; that, if asked the questions which appear in the text of the direct testimony, he would give the answers that are therein set forth; and that he adopts this testimony as his sworn direct testimony in these proceedings.

Jeffrey R. Tietbohl

Jeffrey R. Tietbohl

Then personally appeared this 25th day of June 2012 the above-named Jeffrey R. Tietbohl and acknowledged the foregoing Testimony to be his free act and deed. Before me,



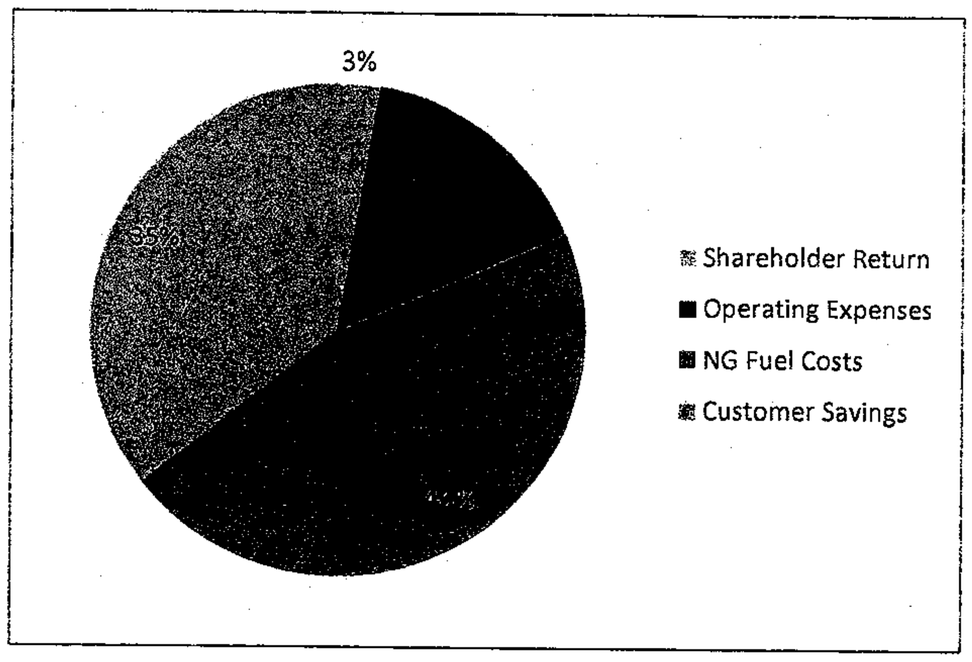
Rebecca K. Little

Notary Public
My Commission Expires: 8-7-2014

Chesapeake Utilities Corporation
Delaware Division
Residential Service (RS-2)
2007 Rate Case and Current Statistics
Illustration of Proposed "DES" Rate

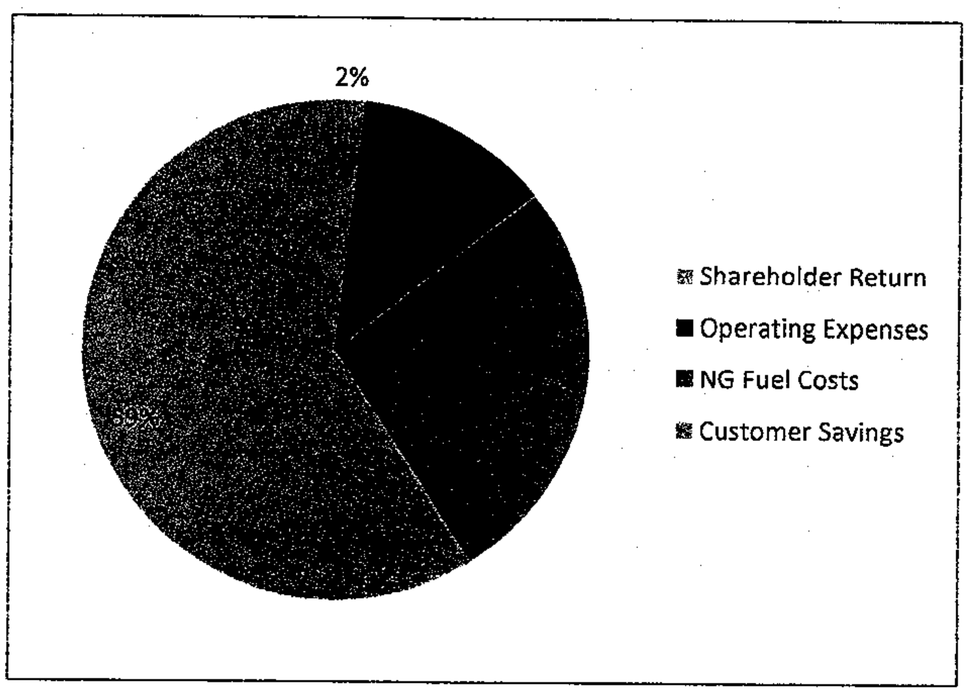
Residental Service (RS-2)
2007 Rate Case:
Annual Consumption - 70 mcf

	Annual Bill
Shareholder Return	$55.48
Operating Expenses	$319.52
NG Fuel Costs	$937.91
Customer Savings	$725.69
Total Service	$2,038.60



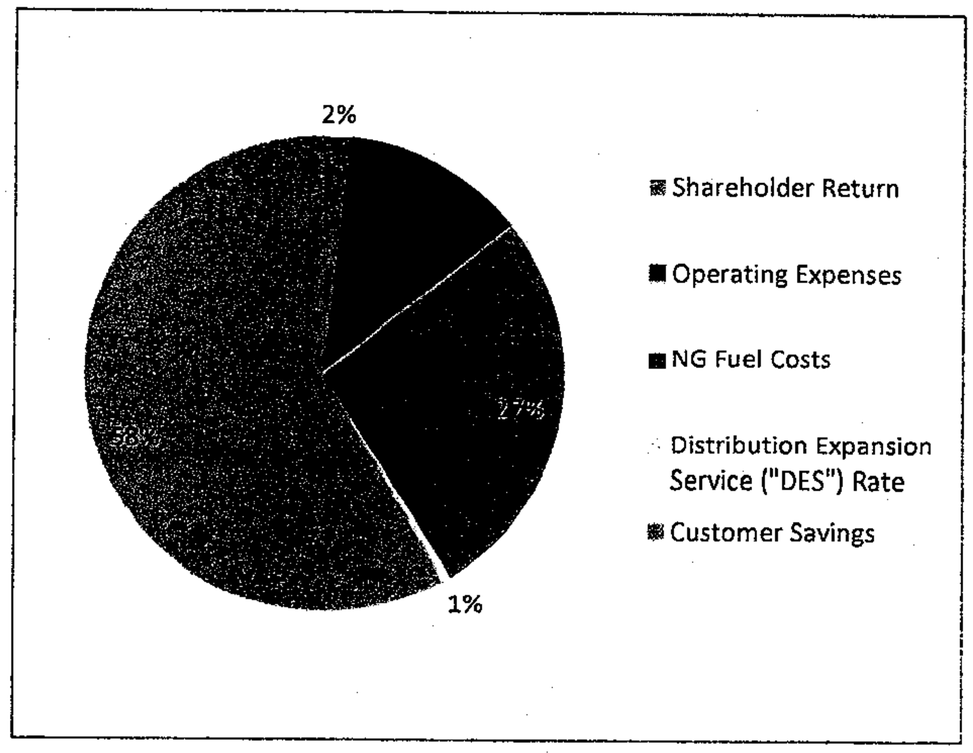
Residental Service (RS-2)
Current Normalized Consumption:
Annual Consumption - 66 mcf

	Annual Bill
Shareholder Return	$46.65
Operating Expenses	$313.47
NG Fuel Costs	$677.82
Customer Savings	$1,491.66
Total Service	$2,529.60



Residental Service (RS-2)
Current Normalized Consumption:
Annual Consumption - 66 mcf

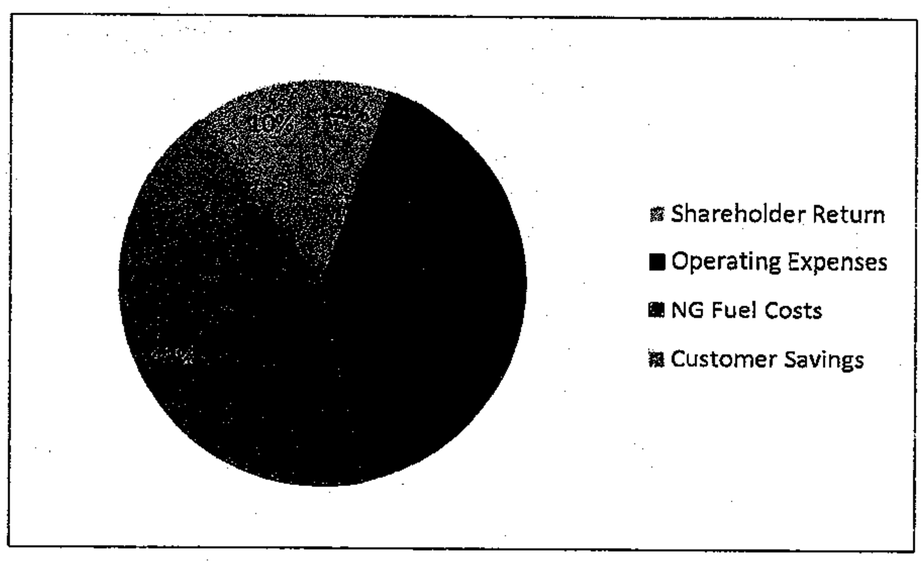
	Annual Bill
Shareholder Return	$46.65
Operating Expenses	$313.47
NG Fuel Costs	$677.82
Distribution Expansion Service ("DES") Rate	$15.00
Customer Savings	$1,476.66
Total Service	$2,529.60



Chesapeake Utilities Corporation
Delaware Division
Proposed Natural Gas Expansion Service Offerings
Residential Service (RS-1)

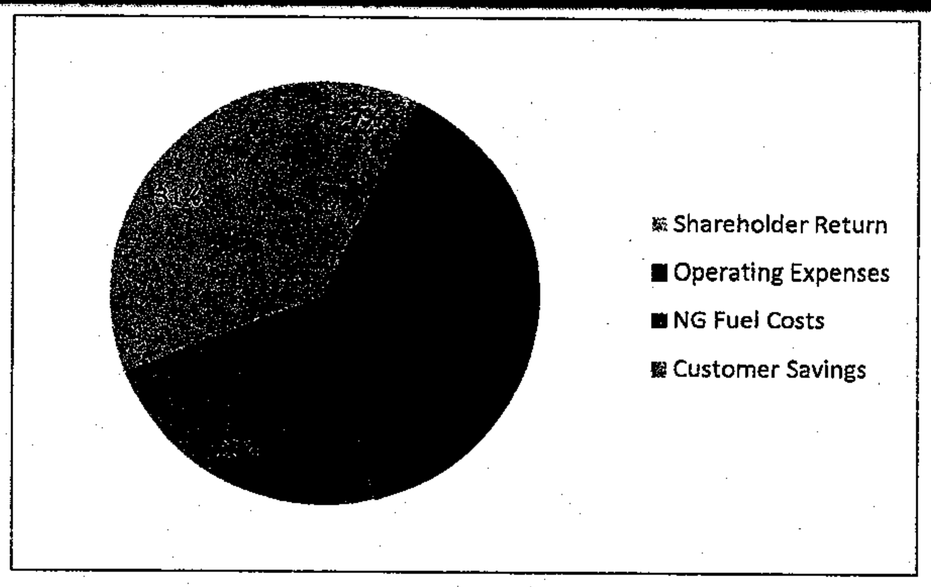
2007 Rate Case (Fuel Prices at that time):
Annual Consumption - 20 Mcf

	Annual Bill
Shareholder Return	($32.93)
Operating Expenses	$250.69
NG Fuel Costs	$262.67
Customer Savings	$62.98
Total Service	$543.41



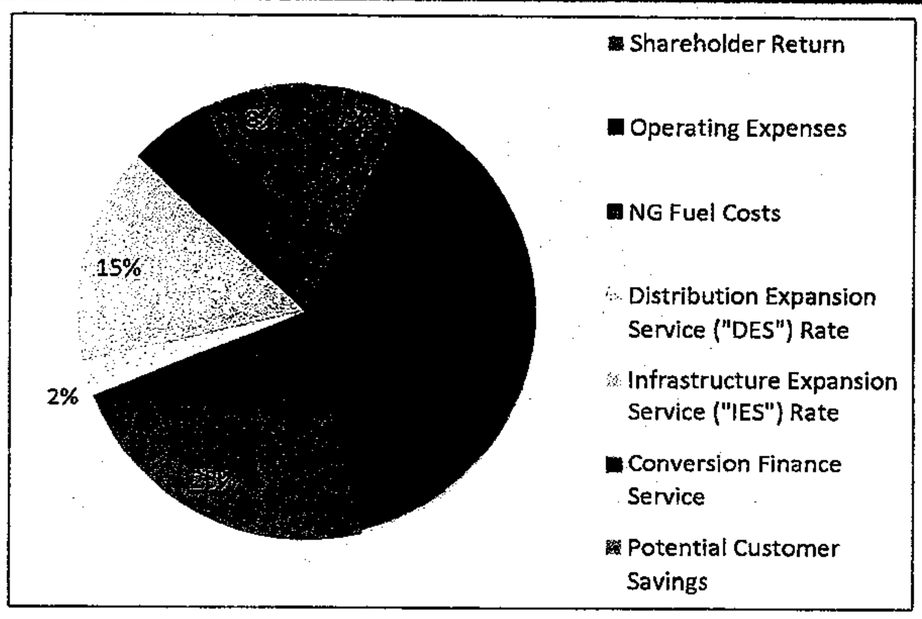
Current Normalized Consumption (Current Fuel Prices):
Annual Consumption - 14 mcf

	Annual Bill
Shareholder Return	($44.35)
Operating Expenses	$242.51
NG Fuel Costs	$142.39
Customer Savings	$193.26
Total Service	$533.81



Proposed Natural Gas Expansion Service Offerings
Annual Consumption - 14 mcf

	Annual Bill	
Shareholder Return	($44.35)	
Operating Expenses	$242.51	
NG Fuel Costs	$142.39	
Distribution Expansion Service ("DES") Rate	$15.00	(1)
Infrastructure Expansion Service ("IES") Rate	$96.00	(2)
Conversion Finance Service	$36.00	(3)
Potential Customer Savings	$46.26	
Total Service	$533.81	



(1) The proposed DES amount is intended to support the administration and implementation of the proposed service offerings along with the enhanced customer growth anticipated as a result of the proposed natural gas expansion service offerings.

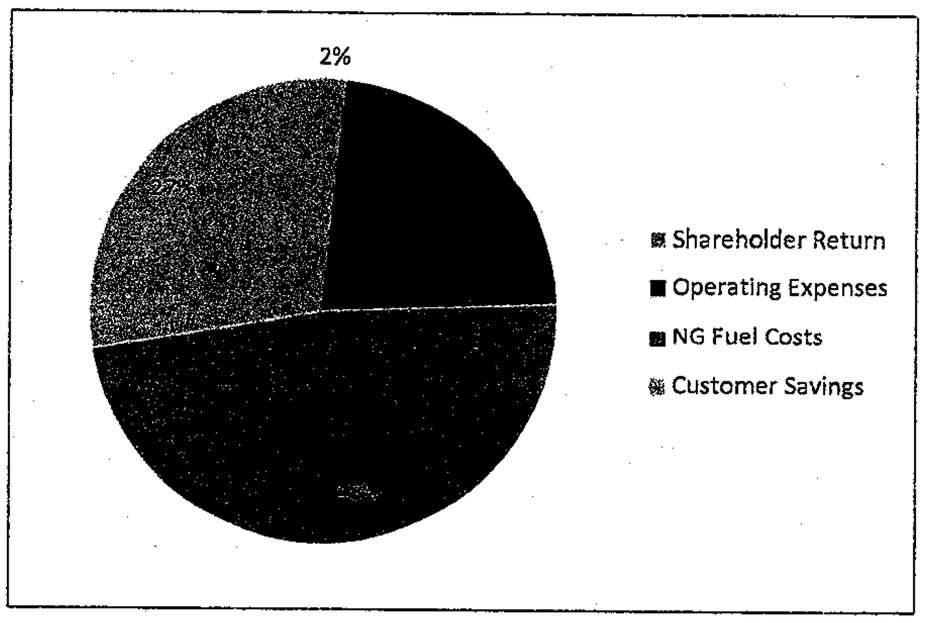
(2) The proposed IES amount is intended to support and facilitate the economic expansion of the regulated distribution system.

(3) The Conversion Finance Service is intended to support and facilitate the conversion of customer-owned piping and equipment to natural gas service. This illustration is based on an estimated amount of $250 in conversion costs amortized over 5 years at Chesapeake's cost of capital.

Chesapeake Utilities Corporation
Delaware Division
Proposed Natural Gas Expansion Service Offerings
Residential Service (RS-2)

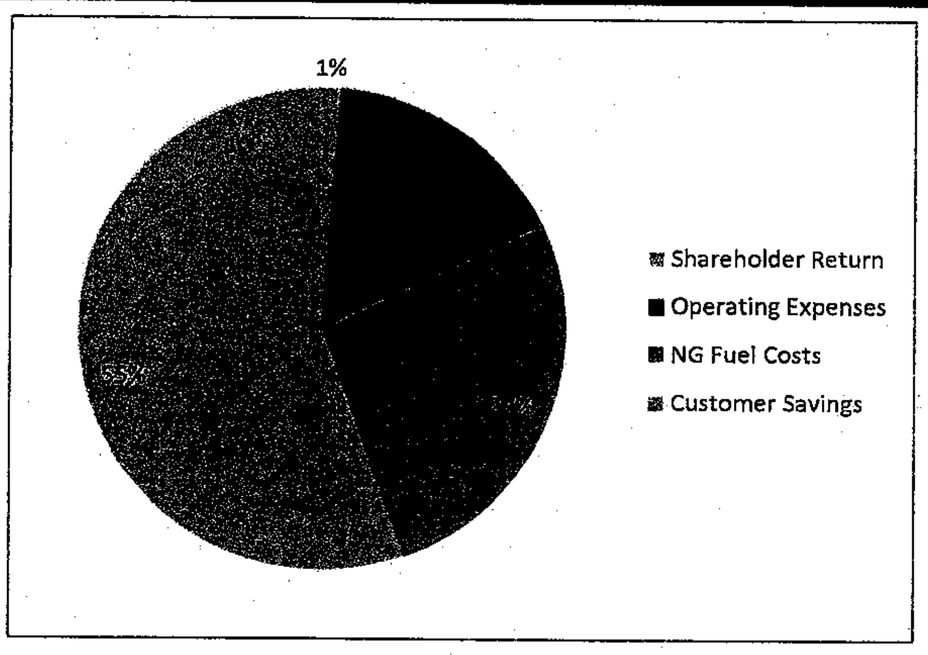
2007 Rate Case (Fuel Prices at that time):
Annual Consumption - 50 Mcf

	Annual Bill
Shareholder Return	$23.47
Operating Expenses	$319.52
NG Fuel Costs	$670.00
Customer Savings	$387.50
Total Service	$1,400.49



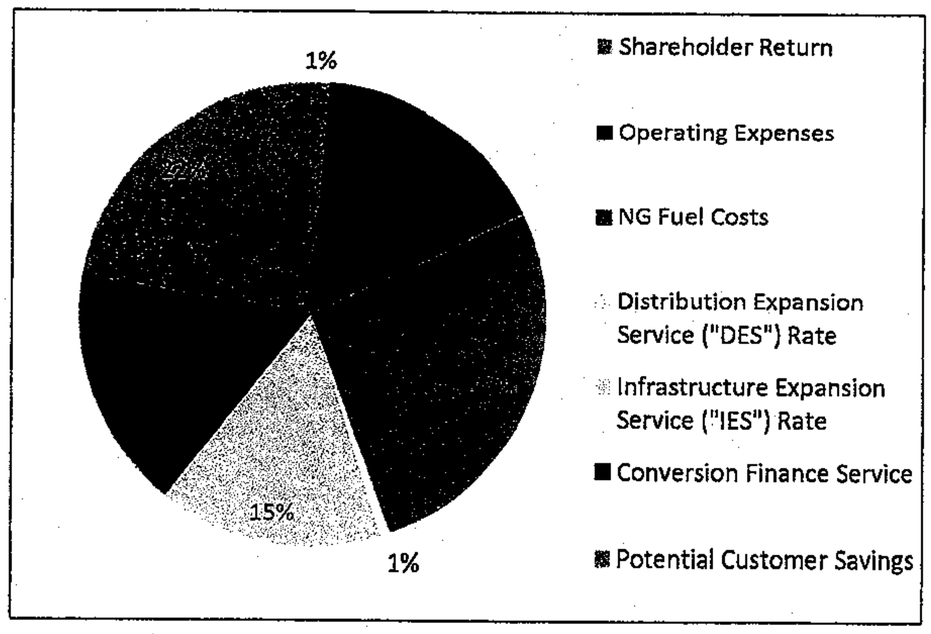
Current Normalized Consumption (Current Fuel Prices):
Annual Consumption - 50 mcf

	Annual Bill
Shareholder Return	$23.47
Operating Expenses	$319.52
NG Fuel Costs	$513.50
Customer Savings	$1,071.31
Total Service	$1,927.80



Proposed Natural Gas Expansion Service Offerings
Annual Consumption - 50 mcf

	Annual Bill	
Shareholder Return	$23.47	
Operating Expenses	$319.52	
NG Fuel Costs	$513.50	
Distribution Expansion Service ("DES") Rate	$15.00	*(1)*
Infrastructure Expansion Service ("IES") Rate	$300.00	*(2)*
Conversion Finance Service	$324.00	*(3)*
Potential Customer Savings	$432.31	
Total Service	$1,927.80	



(1) The proposed DES amount is intended to support the administration and implementation of the proposed service offerings along with the enhanced customer growth anticipated as a result of the proposed natural gas expansion service offerings.

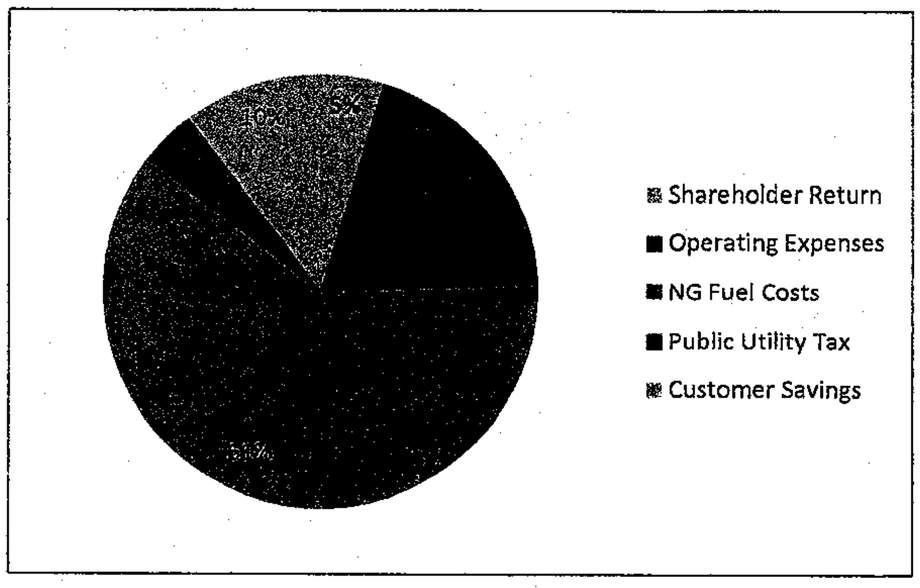
(2) The proposed IES amount is intended to support and facilitate the economic expansion of the regulated distribution system.

(3) The Conversion Finance Service is intended to support and facilitate the conversion of customer-owned piping and equipment to natural gas service. This illustration is based on an estimated amount of $1,250 in conversion costs amortized over 5 years at Chesapeake's cost of capital.

Chesapeake Utilities Corporation
Delaware Division
Proposed Natural Gas Expansion Service Offerings
General Service (GS)

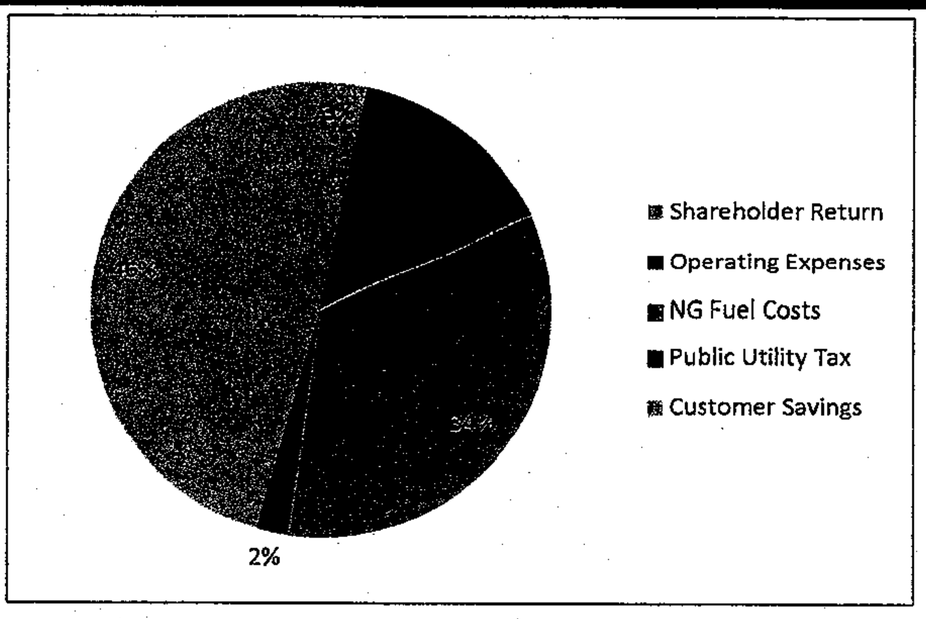
2007 Rate Case (Fuel Prices at that time):
Annual Consumption - 96 Mcf

	Annual Bill
Shareholder Return	$100.15
Operating Expenses	$414.54
NG Fuel Costs	$1,286.40
Public Utility Tax	$90.05
Customer Savings	$219.06
Total Service	$2,110.20



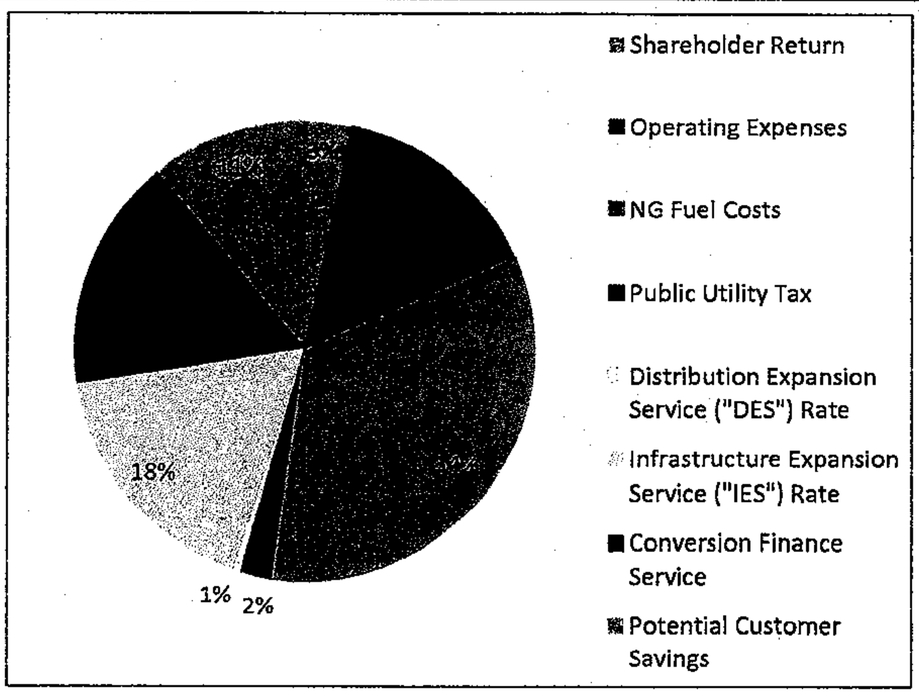
Current Normalized Consumption (Current Fuel Prices):
Annual Consumption - 90 mcf

	Annual Bill
Shareholder Return	$89.09
Operating Expenses	$406.96
NG Fuel Costs	$924.30
Public Utility Tax	$60.37
Customer Savings	$1,239.63
Total Service	$2,720.35



Proposed Natural Gas Expansion Service Offerings
Annual Consumption - 90 mcf

	Annual Bill	
Shareholder Return	$89.09	
Operating Expenses	$406.96	
NG Fuel Costs	$924.30	
Public Utility Tax	$60.37	
Distribution Expansion Service ("DES") Rate	$15.00	*(1)*
Infrastructure Expansion Service ("IES") Rate	$480.00	*(2)*
Conversion Finance Service	$444.00	*(3)*
Potential Customer Savings	$300.63	
Total Service	$2,720.35	



(1) The proposed DES amount is intended to support the administration and implementation of the proposed service offerings along with the enhanced customer growth anticipated as a result of the proposed natural gas expansion service offerings.

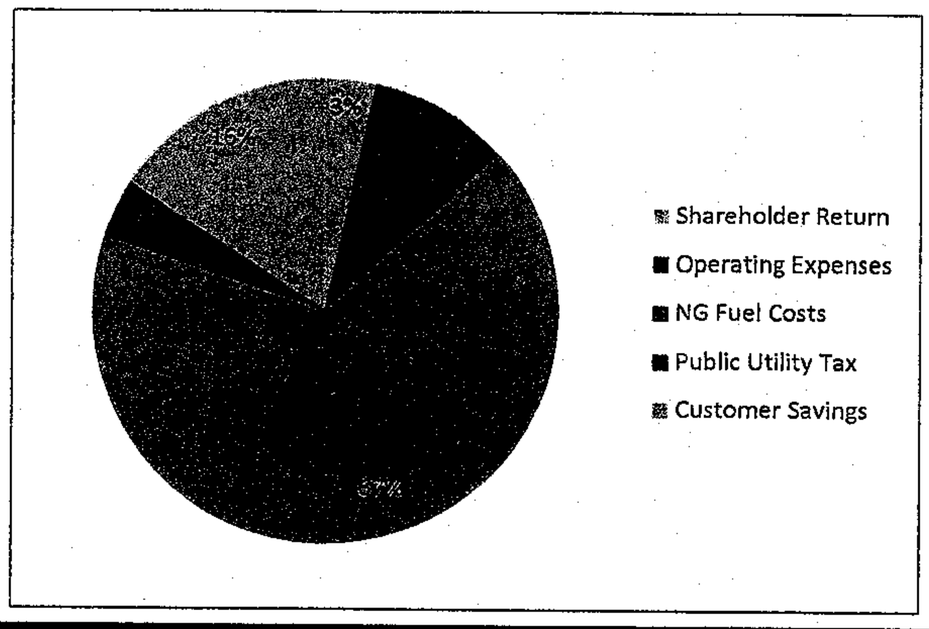
(2) The proposed IES amount is intended to support and facilitate the economic expansion of the regulated distribution system.

(3) The Conversion Finance Service is intended to support and facilitate the conversion of customer-owned piping and equipment to natural gas service. This illustration is based on an estimated amount of $2,500 in conversion costs amortized over 10 years at Chesapeake's cost of capital.

Chesapeake Utilities Corporation
Delaware Division
Proposed Natural Gas Expansion Service Offerings
Medium Volume Service (MVS)

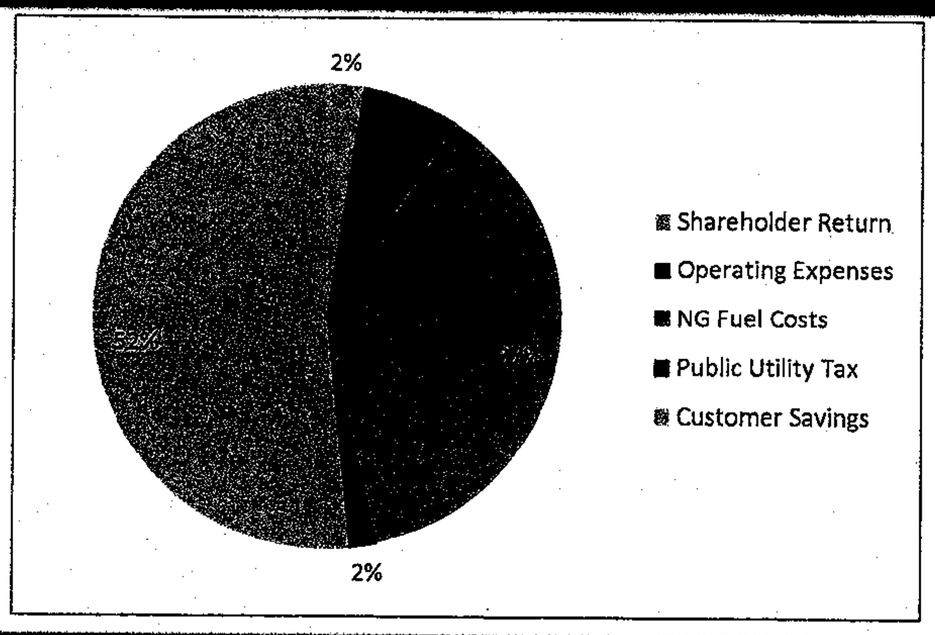
2007 Rate Case (Fuel Prices at that time):
Annual Consumption - 638 Mcf

	Annual Bill
Shareholder Return	$446.72
Operating Expenses	$1,264.21
NG Fuel Costs	$8,546.52
Public Utility Tax	$512.87
Customer Savings	$2,035.27
Total Service	$12,805.59



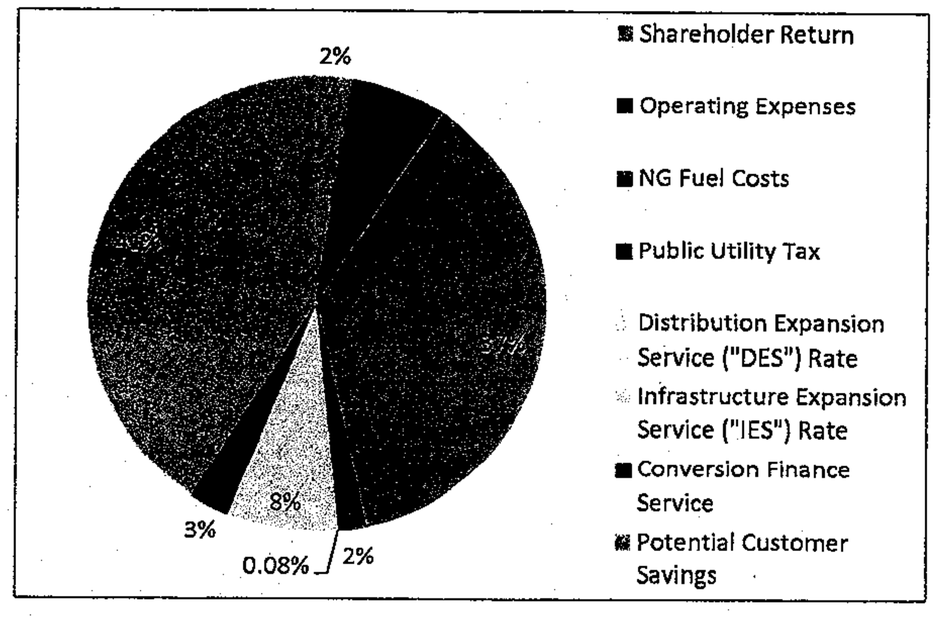
Current Normalized Consumption (Current Fuel Prices):
Annual Consumption - 694 mcf

	Annual Bill
Shareholder Return	$480.18
Operating Expenses	$1,287.09
NG Fuel Costs	$7,124.30
Public Utility Tax	$377.89
Customer Savings	$9,893.01
Total Service	$19,162.47



Proposed Natural Gas Expansion Service Offerings
Annual Consumption - 694 mcf

	Annual Bill	
Shareholder Return	$480.18	
Operating Expenses	$1,287.09	
NG Fuel Costs	$7,124.30	
Public Utility Tax	$377.89	
Distribution Expansion Service ("DES") Rate	$15.00	(1)
Infrastructure Expansion Service ("IES") Rate	$1,500.00	(2)
Conversion Finance Service	$540.00	(3)
Potential Customer Savings	$7,838.01	
Total Service	$19,162.47	



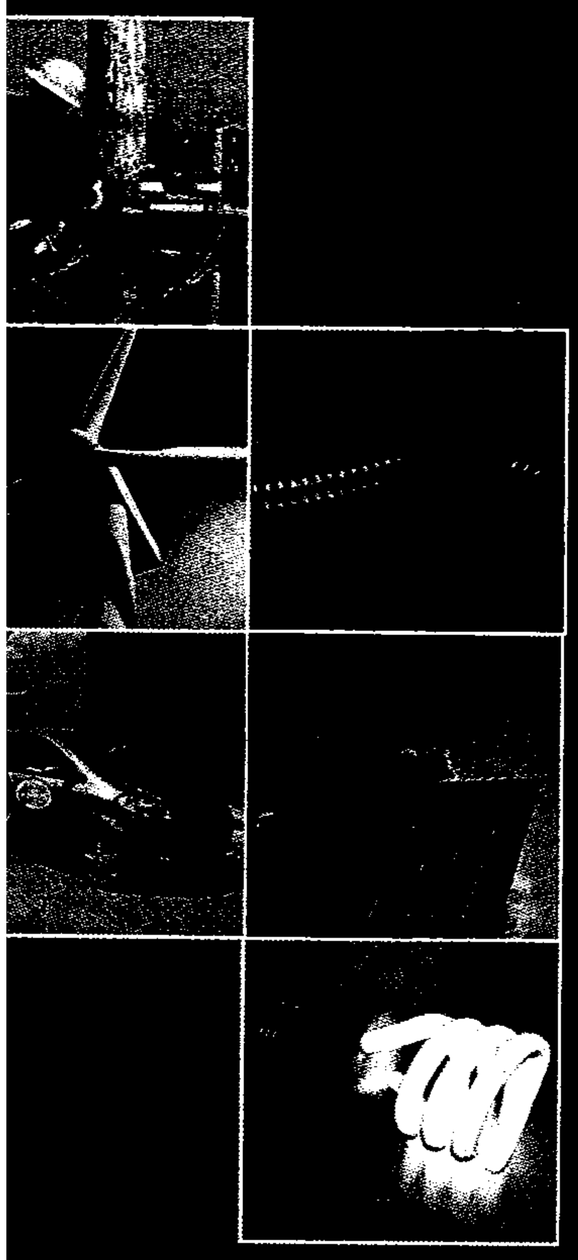
(1) The proposed DES amount is intended to support the administration and implementation of the proposed service offerings along with the enhanced customer growth anticipated as a result of the proposed natural gas expansion service offerings.

(2) The proposed IES amount is intended to support and facilitate the economic expansion of the regulated distribution system.

(3) The Conversion Finance Service is intended to support and facilitate the conversion of customer-owned piping and equipment to natural gas service. This illustration is based on an estimated amount of $3,000 in conversion costs amortized over 10 years at Chesapeake's cost of capital.

June

2011



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count toward energy efficiency, creating new, stricter regulations and new pricing structures designed to incentivize energy efficiency, and establishing higher levels of funding to supplement existing programs.

The affected energy providers anticipate that they will be able to achieve the electricity peak reduction targets. As described in Section 5.3.1, reducing peak electric load creates savings for all electric customers.

1.3 Accountability Conflict

The Workgroup has identified that the EERS and SEU statutes, as currently written, have several conflicting directives. The Workgroup recommends that the Legislature make the necessary changes to the legislation to clarify the accountability structure.

Titles 26 and Titles 29 of the Delaware Code provide for conflicting responsibility for implementing EERS requirements. Title 26, Chapter 15 requires each affected energy provider to achieve the savings specified in the statute.[1]For the cooperative and municipals, Section 1505(b) states that each individual affected energy provider may determine how best to fund activities necessary to achieve the energy savings goals within its service territory and implement programs as it sees fit.

However, Delaware Title 29, Chapter 80, Subchapter II, Section 8059(b) and (c) creates the Sustainable Energy Utility (SEU) and charges the SEU with designing and implementing energy efficiency programs in the state. The Statue directs funding to the SEU to accomplish the energy savings goals under Section 1505(f) and (j).Title 26, Chapter 15, Section 1505(g) goes a step further and prohibits the Public Service Commission from approving any regulated utility cost recovery for programs designed to achieve energy efficiency savings.

The conflicting directives in the statute make it unclear who would be accountable for EERS performance results and how the State could develop enforcement mechanisms. Holding regulated affected energy providers responsible for outcomes without any ability to design and administer efficiency programs may create unintended issues.

1.4 Equivalency

The electric kilowatt-hour, as a measure of consumption, can be related to the natural gas decatherm by virtue of the British Thermal Unit (BTU) heat content measure. One kilowatt-hour ("KWh") of electricity is the equivalent of 3,412 British Thermal Units ("BTUs") of energy. One decatherm of gas is equivalent to 1,000,000 BTUs of energy. Therefore, the Workgroup recommends that efficiency units and credits be redefined to a common BTU scale to enable meaningful cost comparisons and possible trading of electric and gas efficiency credits.

In contrast, 1 kilowatt of electric demand response is a single average measure of demand over a one hour period and has no heat-energy value relationship with efficiency savings. There is no practical way to establish a joint equivalency among all three measures. However, there is the potential for measure overlap where electric energy efficiency programs provide peak reductions and where peak demand reduction programs sometimes contribute toward energy

[1] Title 26, Chapter 15, Section 1502 (a)

electricity, propane, and fuel oil on an MMBtu basis. The full-fuel-cycle energy requirement for an average home using natural gas is approximately 27% less than for a similar home using electricity, 11% less than the similar fuel oil home, and 3% less than the similar propane home. The full-fuel-cycle energy analysis indicates that natural gas is the most efficient energy source taking into consideration the idea that electricity is the most efficient when only considering the energy requirements on site at the home.

Given the benefits of natural gas and the potential energy savings on a full-fuel-cycle basis, the Workgroup supports the expansion of gas service in all areas of the state and recommends inclusion of fuel switching and gas fired combined heat and power systems (CHP) toward energy efficiency savings.

1.8 Eligible Programs

Traditional energy efficiency programs have been limited to replacing or improving equipment performance, changing consumer behavior or both. Reducing energy consumption by converting to cleaner fuels or installing CHP, each of which save significant energy, has not always been counted as efficiency. Section 1504(a)(3)(a) provides the Secretary with the discretion to determine by regulation the types of energy efficiency and energy conservation measures that can be counted toward the savings targets. The Workgroup recommends a broad use of that discretion to include fuel switching, peak-shaving renewable energy systems, CHP, transmission and distribution upgrades, higher efficiency generation technologies, and building energy standards.

supplemented by additional savings from the State's Weatherization Assistance Program. Electricity peak load reductions will be achieved through electric utility demand response programs.

Energy efficiency resources can provide the least expensive approach to meet the growing energy demands of the State and have been helping to reduce Delaware's energy costs since the early 1980s. Early programs were developed and implemented by utilities prior to restructuring. The creation of Delaware's Sustainable Energy Utility provided the opportunity to implement new statewide energy savings programs for Delaware consumers in an approach that targets all sectors and all fuels.

Title 26, Chapter 15, specifically established electric and gas energy efficiency saving goals for each affected energy provider in the State, created a diverse Workgroup to review key issues and charged the Workgroup with completing a study to determine the feasibility and impact of pursuing EERS goals for the affected energy providers in Delaware.

Title 26, Chapter 15, Section§ 1502(a)(1) and (2) defined the EERS savings goals as follows:

> "(a) It is the goal of this chapter that each affected energy provider shall achieve a minimum percentage of energy savings as follows:
>
> > (1) For each affected electric energy provider, energy savings that is equivalent to 2% of the provider's 2007 electricity consumption, and coincident peak demand reduction that is equivalent to 2% of the provider's 2007 peak demand by 2011, with both of the foregoing increasing from 2% to 15% by 2015;
> >
> > (2) For each affected natural gas distribution company, energy savings that is equivalent to 1% of the company's 2007 natural gas consumption by 2011, increasing to 10% by 2015."

Title 26, Chapter 15, Section 1502(c)(2) charges the Workgroup to address, at a minimum, the following key issues:

- The appropriateness of the EERS savings percentages for 2011 and 2015 or recommending alternative percentages if warranted
- The impact of implementation and compliance on carbon dioxide and other greenhouse gas emissions
- The potential for unintended consequences resulting from the goals
- Any EERS type goals and programs for natural gas utilities in nearby states and results
- The results of any ongoing natural gas efficiency and conservation programs implemented and administered through the SEU (Sustainable Energy Utility) or any individual gas utility
- The impact of implementation and compliance on customer rates
- The efficiency of the natural gas system relative to other energy alternatives
- The level of energy efficiency charge, if any, needed to fund the measures to meet EERS compliance
- The step load increases or decreases caused by the connection of large new energy consumers

states to determine the appropriateness and feasibility of the EERS statute requirements. Major effort was devoted to understanding the intent of the EERS Statute and examining alternative approaches to establishing the 15% electric and 10% gas savings targets. The Workgroup held additional discussions around the various issues identified for review in the legislation and provided information for this report.

As the Workgroup began a more in-depth review of certain issues, it became apparent, that outcomes in certain areas were dependent on potential changes in others. For example, determining the appropriate savings targets contemplated by the statute produced three different approaches which could have been the intent of the statute. In addition, the achievement of aggressive savings targets would be dependent on program costs, participation rates and the expansion of programs, which would depend on the availability of funding resources. Hence, the determination of the appropriateness of savings targets became dependent on the costs to provide new and expanded programs. Similarly, identifying any unintended consequences depended on the types of new and expanded programs that would be implemented. The interrelated nature of the issues required the Workgroup to make certain assumptions as it worked through each of the issues requested for review.

A single major charge for the Workgroup was to support and confirm "the energy savings percentages identified for 2011 and 2015 or recommending alternative energy savings percentages if warranted."[4] Within that context, the Workgroup was required to address a series of key issues related to energy efficiency and the proposed standards. This report represents the Workgroup's determinations and provides guidance to the Secretary for formulating policy changes and necessary regulations.

[4] Title 26, Chapter 15, Section 1502(c)(2)(a)

regulated energy providers no authority or cost recovery ability to achieve expected performance.[6] A second, but no less important concern related to energy efficiency, is the need to ensure that there is no duplication in energy efficiency programs or related funding without additional customer benefit.

Delaware's Weatherization Assistance Program (WAP) reduces the energy costs for low-income households (below 200% of the poverty line) by increasing the energy efficiency of their homes. In addition, the program makes people's homes healthier, safer, and more comfortable. The Federal Department of Energy (DOE) estimates that the average household saves $437 per year on their energy costs after receiving weatherization services. WAP provides an opportunity to significantly reduce the fuel assistance needed by low-income households, who spend over 14% of their total annual income on energy costs alone. Weatherization is a highly cost-effective investment: for every $1 invested in the program, WAP returns an estimated $2.5 to the household and society.[7] Delaware's program is funded by a variety of state funds (utility surcharge and Regional Greenhouse Gas Initiative funds) and federal funds (DOE WAP annual grants and 10% of the Federal Department of Health and Human Services (HHS) Low Income Home Energy Assistance Program (LIHEAP) annual grant).

3.2 Delaware's Current Electric and Gas Energy Efficiency Programs

The Delaware Sustainable Energy Utility (SEU) is responsible for administering energy efficiency programs for all fuels within the State of Delaware. Currently, the SEU offers rebates and financing options for a variety of energy efficiency investments for the residential, commercial, industrial, and institutional sectors. SEU Programs are funded by 65% of the Regional Greenhouse Gas Initiative (RGGI) auction revenues and $20 Million from Delaware's State Energy Program American Recovery and Reinvestment Act Grant (SEP ARRA 2009-2012). Both funding sources are overseen by DNREC. Additional revenue streams will come from Green Energy Savings Bonds, which are comprised of tax exempt and taxable bonds leveraged from public sector funds and private sector-based capital.[8]

The currently offered SEU programs are as follows:

3.2.1 Residential Lighting Upstream Rebate Program Summary

The program provides mark downs for compact fluorescent light bulbs (CFLs) at the point of sale to encourage Delaware residents to replace their inefficient light bulbs with energy efficient CFLs. The mark down program includes coupons for smaller retail stores that do not have sophisticated point-of-sale systems.

While this program seeks to capture savings from the market for CFLs in the residential sector, it is also provides an important opportunity to promote other SEU programs to consumers. The opportunity arises from the fact that this program is implemented within retail stores, and specifically targets consumers who choose an energy efficient product. A broader

[6] Title 26, Chapter 15, Section 1505(g)

[7] For more information, see DOE's website: http://www.waptac.org/WAP-Basics.aspx

[8] Center for Energy and Environmental Policy, "Delaware's Energy Efficiency Potential and Program Scenarios to Meet Its Energy Efficiency Resource Standard," Draft Report, November 2010; p 44

affordable. Many of the recommendations will provide enough energy bill savings to cover the cost of the improvement over the life of the financing.

This program is modeled after the proposed Federal Home Star program. The program has two potential paths: a Standard Path and a Performance Path, both requiring an energy audit. The Standard Path has a list of prescriptive incentives for specific energy efficiency measures using a "deemed savings" approach. Measures include installed insulations, air sealing, doors, windows, energy efficient water heaters, etc. The Performance Path measures are supported by home energy modeling and incentives are based on the projected savings as calculated by the home energy modeling. Renewable energy measures are eligible for financing only.

Estimated energy savings are expected to roughly 60,000 MMBTU from fuels per year and approximately 2,600 MWh per year for the program. Participation will depend on incentives, financing rates, marketing and other factors. Based on experience with similar programs in New York, New Jersey and Pennsylvania, participation is likely to start at 200 to 300 homes per year, and increase over time. However participation in the first four months of the program has exceeded approximately 500 homes, although for focused HVAC retrofits.

The implementation contractor ICF International was selected based on their experience in currently operating Home Performance with ENERGY STAR programs. The implementation is well into the second phase as outlined above. HPwES programs are driven heavily by trade allies – the auditors, residential and renovations contractors who will perform the work. The implementation contractor will be used to perform trade ally network development, application processing, mentoring and quality assurance of BPI-certified auditors and accredited contractors, post installation inspections, and reporting.

3.2.4 Non-Residential Energy Efficiency and Renewables Program Summary

This program provides a combination of incentives and low interest loans for qualifying energy efficiency and renewable energy measures. Incentives are available for prescriptive and custom measures. SEU financing in amounts from $10,000 to $250,000 are available for terms of up to 10 years to qualified borrowers. Financing will be leveraged with local institutions where possible. Incentives and financing are generally paid to the customer, although direct payment to the installation contractor may be allowed with permission from the customer.

The Commercial and Industrial Energy Efficiency and Renewable Energy Program targets facilities and projects in the following initial market segments:

- Non-profit, 501(c)(3) organizations
- Municipal, School, University, and Hospital (MUSH) projects that are not large enough to fit into the SEU's performance contracting program
- Non-residential private sector commercial and industrial sector businesses
- Multi-family rental housing with four or more units in the same building

Owner-occupied housing units are not eligible for this program.

For applicants seeking financing, regardless of whether the proposed measures are prescriptive or custom, an energy audit will be required. Selected measures must provide enough energy bill savings to exceed the cost of the improvements over the life of the loan. An audit is

energy efficiency measures and will issue a letter offering financing. Applicants must be selected for Low Income Housing Tax Credits in order to be eligible for SEU financing.

In most cases, the SEU's financing will be tied to DSHA's underwriting criteria. Since tax credits may be issued with or without DSHA financing, under certain circumstances, the SEU may develop its own underwriting criteria or utilize the underwriting criteria of other project lenders.

3.2.6 Performance Contracting

This program provides financing through tax-exempt bonds and other tax-exempt sources for energy efficiency upgrades at municipal, university, school and hospital (MUSH) facilities. Work will be accomplished under performance contracts with pre-qualified energy services companies (ESCOs).

Performance contracting projects start with an investment grade audit performed by an ESCO. The audit forms the scope of work in a Guaranteed Energy Savings Agreement (GESA). Once work is completed, energy savings are used to repay the financing. The aggregated project savings must provide enough energy bill savings to exceed the cost of the improvements over the life of the financing.

Estimated savings per participant vary widely and there are no specific projections. Savings will be generated by measures that will reduce both electricity and fuel consumption. Water, waste water and other savings may also be included. However, one indicator is the expected level of investment. In the first year of the program, an investment of at least $30,000,000 is expected under performance contracts in public facilities. Electricity savings from this level of investment are expected to be between 15,000 and 20,000 MWh/year; fuel savings are expected to be between 150,000 and 200,000 MMBTU/year. These savings assume approximately half of the savings will come from electricity and an approximate average pay back of 7 years.

The SEU currently has 11 pre-qualified ESCOs, and investment grade audits are under way in various state agencies, municipalities and school districts across the state.

ARRA funding is not used for this program. Project funding is provided only through bonds and other private sources. The funding will vary directly with the level of investment activity, although at least $25 to $30 million per year of energy efficiency investment through this program is targeted.

3.2.7 Green Financing and Other Innovative Programs

A key feature of Delaware's SEU framework is green financing. Financing programs offer public and private sector participants with the opportunity to invest in efficiency by removing the upfront capital needs. The investment costs are paid through a shared savings model where participants pay back the loan over time through their energy cost savings. Additionally, Green Energy Savings Bonds (GESB) from guaranteed energy savings agreements enable investment in comprehensive projects at lower interest rates that in turn are anticipated to yield higher savings per participant. The aggregation of guaranteed energy savings in a comprehensive SEU framework can potentially lower the cost of administration and financing opportunities.

- Large commercial controlled load programs primarily for poultry operations.

In 2007, the Cooperative had programs in place that reduced their peak demand by over 32 megawatts. In 2008 that rose to over 35 megawatts and in 2009 over 50 megawatts. The Cooperative continues to look for potential new program offerings and anticipates achieving the 2015 savings targets and reducing its peak demand by 52 megawatts.

3.3.3 Delaware Municipal Electric Corporation

The Delaware Municipal Electric Corporation, which manages energy supply for the nine municipal electric companies, encourages and promotes energy efficiency through load control, customer education, training programs and platforms such as:

- Energy Depot, a web based program, offering free online tools and resources designed to help consumers conserve energy and manage their home electric use
- Energy Audits
- CFL Campaigns

DEMEC is currently working with consultants to improve customer demand side management participation for all the municipal utilities. DEMEC plans to have a load control pilot program up and running by Spring of 2011.

DEMEC is currently designing community-wide energy efficiency programs such as LED street lighting conversions in all communities.

3.4 Electric Efficiency Programs in Other States

State energy efficiency and conservation goals and their related benefits have caused states and their utilities to consider efficiency programs and to set aggressive goals to help achieve the economic, environmental and societal benefits. Nearby states, including New Jersey, Pennsylvania, Maryland and Virginia, have established energy efficiency goals, although by different mechanisms. Table 1 shows the approaches that several states have taken to promote energy savings.

Table1: Energy Efficiency Targets in Other States

State Jurisdiction	Energy Efficiency Goals	Comment
New Jersey	Executive Order 54, June 2007 authorized, but did not require, the BPU to adopt an EEPS. Permitted savings targets up to 20% by 2020.	Target is relative to projected 2020 consumption and not yet implemented.
Pennsylvania	PA Act 129, October, 2008, 1% of 2009-2010 retail sales by May 2011 and 3% by May 2013. Peak Demand reduction of 4.5% by May 2013	Applicable to each distribution company with over 100,000 customers. PSC sets targets beyond 2013. Penalties not less than $1 million and not more than $20 million. Companies need 8%

through the Investor Owned Utilities (IOUs), have reported recent performance below expectations, but utility efforts were only recently started (early 2010) and program rollout has been slower than anticipated. Maryland's utilities will file revised program proposals with the Maryland Commission this fall seeking to accelerate energy reductions. Pennsylvania has relatively lower savings targets, but helps to demonstrate how the relationship between savings targets and compliance payments can have significant impact on achievement of savings targets. Similarly, performance incentives can also have significant impact on achieving targets within a specific timeframe, as seen in Vermont and California. According to the American Council for an Energy Efficient Economy, twenty-four states, double the number from 2006, have long-term energy efficiency targets and are promoting new energy efficiency programs. Those twenty-four states deliver over half the retail electricity produced in the U.S. and under current policies should save nearly 6% of total retail sales by 2020.[11]

3.4.1 Efficiency Vermont

In terms of energy efficiency achievement, Efficiency Vermont stands out as a premier example of what can be accomplished with programs effectively designed to help consumers save energy and lower costs. Efficiency Vermont was the first ratepayer-funded electric energy efficiency utility providing energy efficiency services statewide. Efficiency Vermont is operated as a private nonprofit organization under contract to the Vermont Public Service Board. It works directly with business operators, homeowners and renters to reduce energy costs while also working with retailers, architects, builders and contractors to provide energy efficient products and services. Started in 2000, Efficiency Vermont has saved participating businesses and homeowners more than 660 million kilowatt-hours of energy.[12]

Efficiency Vermont has specific energy (kWh) and peak demand (kW) savings targets. In its contract for 2009-2011, energy savings goals are 360,000 MWh savings, 51.2 total summer peak MW savings, and 54 total winter peak MW savings. The projected MWh savings amount to 5.6% of 2008 sales.[13]

According to the 2009 Annual Report, Efficiency Vermont and its customers have created 660,000 MWh of electric savings or approximately 11% of its 2007 retail sales. The cost for these savings has been estimated at around $0.035 per kWh, considerably less than Vermont's $0.125 average residential energy charge. These efforts have been funded by a percent of sales energy efficiency charge that currently provides approximately $35 million annually. The benefit charge structure approved for 2011 by the Vermont Public Service Board is variable by customer class, kilowatt-hour sales, and demand charges.[14] Residential customers pay $0.00918/kWh; Commercial customers pay $0.00808/kWh; and Industrial customers pay$0.00665/kWh.[15] A typical 800 kWh residential customer will see an approximate $7.34 per month charge on their bill, versus the maximum average residential charge of $0.58 per month permitted by Delaware's EERS statute.

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[11] American Council for an Energy-Efficient Economy, "Spotlight on State and Communities," August 18, 2010.
[12] Efficiency Vermont, http://www.efficiencyvermont.com/pages/Common/AboutUs/
[13] ACEEE State Energy Efficiency Database. http://www.aceee.org/sector/state-policy/vermont#Energy%20Efficiency%20Resource%20Standards
[14] Vermont Public Service Board, http://psb.vermont.gov/utilityindustries/eeu/generalinfo/currentEECrates
[15] http://psb.vermont.gov/utilityindustries/eeu/generalinfo/currentEECrates

Table 2: Benchmarked Natural Gas DSM Programs

Utility/Agency	State
Northeast	
Berkshire Gas	VT
Connecticut Energy Efficiency Fund (CEEF)	CT
National Grid	MA
Northern Utilities	NH
NSTAR	MA
Unitil	ME
Vermont Gas	VT

Utility/Agency	State
Midwest	
Black Hills Energy (formerly Aquila)	IA
CenterPoint Energy	MN
Interstate Power & Light	IA
Interstate Power & Light	MN
MidAmerican Energy	IA
Wisconsin Focus on Energy	WI
Xcel Energy	MN

The median result for natural gas DSM spending, savings, costs, and energy costs over all customer sectors was reviewed for organizations based on calendar year 2007 results. The cost to achieve commercial first year savings (annual savings/first year cost), is approximately $18/Mcf for commercial programs and approximately double for residential programs at $39/Mcf, which generally highlights that more cost-effective opportunities for natural gas savings exist primarily in the commercial sector. For the Investor Owned Utilities (IOUs) and agencies reviewed, the scatter plot in Figure 1 below illustrates where each organization falls relative to median natural gas savings and median costs.

weatherization, EnergyStar® appliances and some commercial retrofit programs. New Jersey's Clean Energy Program boasts of 489,724 decatherms savings in 2008, but savings are the result of similar weatherization and appliance programs as well as promotions for CHP installations. Outside of the normal energy efficiency programs, there were no gas specific programs that the Workgroup could identify in nearby states.

3.6 Electric Efficiency Provides Demand Response

Energy efficiency is defined by statute as, "a decrease in consumption of electric energy or natural gas or a decrease in consumption of electric energy or natural gas on a per unit of production basis or equivalent energy efficiency measures that do not cause a reduction in the quality or level of service provided to the energy customer achieved through measures or programs that target consumer behavior, or replace or improve the performance of equipment, processes, or devices. ...."[18] Since the efficiency reduction in energy use sometimes takes place during peak energy use hours, the efficiency may contribute to reducing peak demand during those times. The Center for Energy and Environmental Policy reviewed various sources of information, including a 2009 report from the Energy Information Administration and provided the following data on demand reduction resulting from utility-administered energy efficiency programs.

Table 3: Estimated Demand Reductions from Energy Efficiency

Utility	Demand Savings Ratio (MW per GWh)
Pacific Gas & Electric Co	0.16
Southern California Edison Co	0.2
Connecticut Power & Light Co	0.16
United Illuminating Co	0.16
Long Island Power Authority	0.15
PacifiCorp	0.19
Northern States Power Co	0.3
City of Seattle	0.12
Austin Energy	0.37
MidAmerican Energy Co	0.21
Interstate Power and Light Co	0.25
Nevada Power Co	0.26
Sierra Pacific Power Co	0.3
Mean	0.22

[19]

[18] Title 26, Chapter 15, Subchapter 1501 (18)

[19] Adapted from "Delaware's Energy Efficiency Potential and Program Scenarios to Meet its Energy Efficiency Resource Standards", Dr. Lado Kurdgelashvili, January 12, 2011, Slide 26. Sources: ASES 2007, ACEEE 2007, ACEEE 2008, ACEEE 2009, ACEEE 2010a

4.0 Delaware's Energy Efficiency Resource Standards Savings Targets

Title 26, Chapter 15 of the Delaware Code, also known as "The Energy Efficiency Resource Standards Act," established electric and gas energy savings goals for each affected energy provider in the State, created a diverse Workgroup to review key issues, and charged the Workgroup to complete a study to determine the feasibility and impact of pursuing EERS goals for the affected energy providers in Delaware. This chapter of the report identifies the savings targets required by the statute.

4.1 Target Definition

The statute specifically requires that each affected energy provider[21] shall achieve a minimum percentage of energy savings according to the following requirements.

> (1)"For each affected electric energy provider, energy savings that is equivalent to 2% of the provider's 2007 electricity consumption, and coincident peak demand reduction that is equivalent to 2% of the provider's 2007 peak demand by 2011, with both of the foregoing increasing from 2% to 15% by 2015."[22]
>
> (2)"For each affected natural gas distribution company, energy savings that is equivalent to 1% of the company's 2007 natural gas consumption by 2011, increasing to 10% by 2015."[23]

The Workgroup identified three different ways to interpret the statute requirements:

1. Targeted electricity consumption and peak demand savings would be 15% of the 2007 actual consumption and peak demand (10% for natural gas consumption).
2. Targeted electricity consumption and peak demand savings would be 15% of the projected 2015 electric consumption and peak demand (10% for natural gas consumption).
3. Targeted electricity consumption and peak demand savings would be those savings that are necessary to hold electricity consumption and peak demand 15% below the actual 2007 consumption and peak demand. (10% for natural gas consumption).

Each of these proposed approaches resulted in different savings targets and both two and three would be heavily dependent on the expected energy growth patterns through 2015. In addition, the statute permits adjustments "to account for changes in weather, population

[21] Affected Energy Providers include electric distribution companies, rural electric cooperatives, municipal electric companies and natural gas distribution companies serving Delaware customers. Del. C. Title 29, Chapter 15, §1501(2).

[22] Ibid, §1502(1).

[23] Ibid.§1502(2)

18,014,795 Mcf (thousand cubic feet).[26] Using these consumption and peak demand numbers as a baseline, the statute's percent savings goals could be established. The percentage goals could be allocated to each company based on their individual 2007 performance.

4.1.2 Baseline Adjustments

The Statute provides that the Secretary, with the cooperation of the affected energy providers, may make adjustments to the 2007 base year to account for weather, population or previously enacted programs.[27] The Workgroup generally agreed that base year 2007 adjustments were not needed to calculate the expected savings targets.

4.2 Electric Energy Efficiency Savings Targets

Reducing energy consumption to meet targeted savings will require added emphasis on existing and new energy efficiency programs. Based on actual 2007 electric consumption, the affected energy providers would have the following savings targets.

Table 4: Electricity Efficiency Resource Standards Targets

ELECTRICITY EFFICIENCY RESOURCE STANDARDS TARGETS			
ELECTRIC SERVICE PROVIDER	2007 CONSUMPTION MEGAWATT-HOURS	2011 - TWO PERCENT GOAL REDUCTION MEGAWATT-HOURS	2015 -FIFTEEN PERCENT GOAL REDUCTION MEGAWATT-HOURS
Delmarva Power & Light Co.	8,860,357	177,207	1,329,054
Delaware Electric Cooperative	1,162,644	23,253	174,397
Delaware Municipal Electric Corporation	1,845,809	36,916	276,871
TOTAL	11,868,810	237,376	1,780,322

The Delaware Municipal Electric Corporation includes the Town of Clayton, City of Dover, Lewes, Middletown, Milford, New Castle, Newark, Seaford and Smyrna.

4.3 Natural Gas Energy Efficiency Targets

Natural gas energy efficiency programs have historically concentrated on weatherization and appliance efficiency upgrades; however, programs that encourage switching from electric, propane or fuel oil to natural gas offer significant efficiency and environmental benefits. To

[25] Delmarva Power, Delaware Electric Cooperative, Chesapeake Utilities data as provided by the Utilities, Municipal data provided from the Energy Information Administration, EIA data,

[26] Ibid, Utilities and EIA data.

[27] Title 26, Chapter 15, Section 1504(a)(3)

For the smaller municipal electric companies, managing peak demand is a function guided by the Delaware Municipal Electric Corporation (DEMEC). DEMEC is a joint action agency and an electric utility that represents and serves the utilities of nine Delaware cities and towns: Newark, New Castle, Middletown, Clayton, Smyrna, Dover, Milford, Seaford and Lewes. Collectively they serve over 100,000 residents and businesses in their respective communities. To avoid placing an undue hardship on the individual municipal utilities and in an effort to allow the municipal utilities to benefit from some of the same economies of scale which Delmarva Power and Light and the Delaware Electric Cooperative currently enjoy, DEMEC, not the individual municipal utilities, should be considered a single aggregated municipal utility for purposes of reducing peak demand. With DEMEC as the designated aggregate utility, the municipals can work more efficiently toward supporting the state goal while minimizing the costs to the ratepayers. The Workgroup agreed that DEMEC should be the affected energy provider for its members.

4.5 EERS Target Summary

The statute specifies the need to "create quantitative annual reduction targets in EERUs, which are consistent with the percentage reduction goals of the EERS."[28] EERUs or Energy Efficiency Resource Units are defined in the statute as "1 kilowatt-hour of electricity demand reduction relating to demand side management programs, 1 kilowatt of electricity demand response, or 1 decatherm of reduced natural gas consumption, or an equivalent energy efficiency measure."[29] Based on the definitions in the statute, the 15%/10% savings goals can also be described in energy efficiency resource units and would be consistent with the statutorily defined savings targets.

Table 7: EERS Targets Expressed in Energy Efficiency Resource Units

Energy Efficiency Resource Units (EERUs)			
	Electric Consumption	**Peak Demand Reduction**	**Natural Gas Consumption**
2011 Energy Target	237,376 MWh	52MW	253,659 Mcf
2011 EERU Target	237,376,000 EERUs	52,000 EERUs	260,254 EERUs*
2015 Energy Target	1,780,322 MWh	392 MW	2,536,587 Mcf
2015 EERU Target	1,780,322,000 EERUs	392,000 EERUs	2,604,289 EERUs*

* 1 Mcf = 1.02669 Decatherms @ 1,026 BTU per cubic foot

Creating quantitative reduction targets for 2011 and 2015, based on definition, complies only partially with the statute requirements. The statute requests "annual" reduction targets, but

[28] Title 29, Chapter 15, §1502(c)(3)

[29] Title 29, Chapter 15, §1501(13)

5.0 Estimating the Costs, Benefits, and Available Funding for the EERS Targets

5.1 Estimates of the Necessary Investments to Meet the EERS Targets

5.1.1 Cost estimates

The implementation investments necessary to achieve the EERS targets remain uncertain. Estimated implementation costs are highly dependent upon assumptions and market design. There are two useful definitions of cost that are used to estimate the cost of energy efficiency programs. One is the total upfront investment necessary to achieve a given efficiency reduction ("total spending"). Another commonly used definition in the energy utility industry is the "levelized cost of energy," which is the level of annual payment necessary to recover the total investment and interest payments over the life of a measure. The American Council for an Energy-Efficient Economy (ACEEE) terms this "Cost of Saved Energy" (Friedrich et al. 2009[30]). The levelized cost of energy enables the direct cost comparison of energy efficiency with other energy sources. It is important to determine the total spending needed for efficiency programs to see what upfront funding is needed, but equally important to compare the cost effectiveness of energy efficiency with other traditional sources.

Two recent ACEEE reports analyze and compare energy efficiency programs studies of 14 states (Friedrich et al. 2009[31]; Kushler et al. 2009[32]). ACEEE gathered data on electric energy efficiency program costs from 14 states — California, Connecticut, Iowa, Massachusetts, Minnesota, Nevada, New Mexico, New Jersey, New York, Oregon, Rhode Island, Texas, Vermont, and Wisconsin. ACEEE also gathered data on natural gas energy efficiency program costs from 6 states — California, Connecticut, Iowa, New Jersey, Oregon, and Wisconsin.

The experiences in the 14 states were used to estimate the levelized cost of energy for efficiency programs. Electric energy efficiency has a levelized cost of 1.6¢ to 3.3¢ per kWh, with an average cost of 2.5¢ per kWh. For comparison, Delaware retail electricity customers paid in 2009 on average 14¢ per kWh for residential, 12¢ for commercial, and 9¢ for industrial.[33] Natural gas efficiency has a levelized cost of $2.77 to $5.65 per Mcf with an average of $3.80 per Mcf. For comparison, Delaware retail natural gas customers paid in 2009 on average $18 per

[30] Friedrich, K. *et al.* Saving Energy Cost-Effectively: A National Review of the Cost of Energy Saved Through Utility-Sector Energy Efficiency Programs. American Council for an Energy-Efficient Economy (ACEEE) Report U092. September 2009.

[31] Friedrich et al. 2009

[32] Kushler, M. *et al.* Meeting Aggressive New State Goals for Utility-Sector Energy Efficiency: Examining Key Factors Associated with High Savings. American Council for an Energy-Efficient Economy (ACEEE) Report # U091. March 2009.

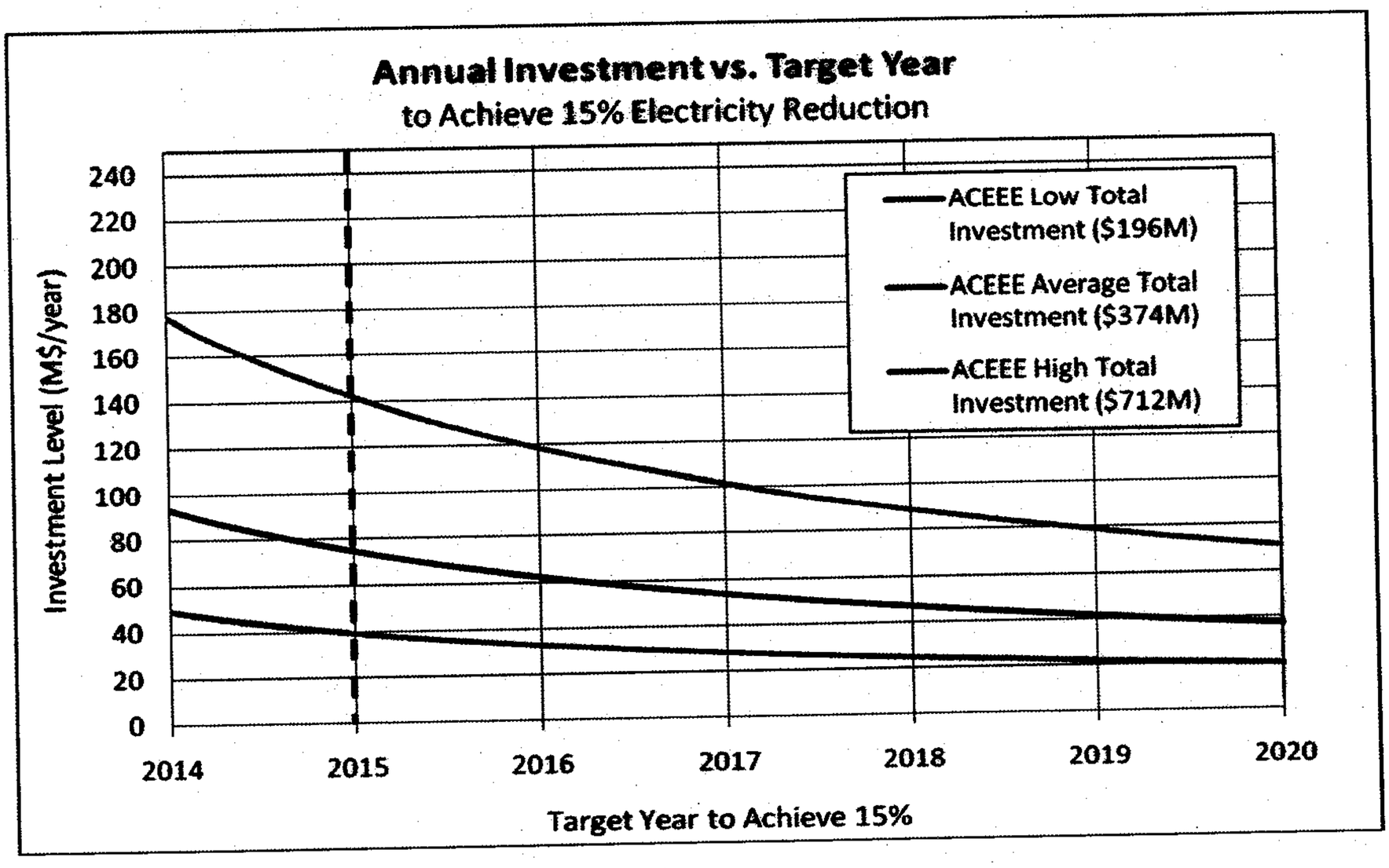
[33] U.S. Energy Information Administration (2010).Average Retail Price for Consumers by Sector and State.http://www.eia.gov/cneaf/electricity/esr/table4.html Averages are for data from the year 2009.

High Cost Estimate	$137M	$27M	$14M	$14M

Electricity & Natural Gas	**15%/10% EERS Targets (both)**	**Annual EERS Cost (both, 5yr period)**	**Annual EERS Cost (both, 10yr period)**
Low ACEEE Estimate	$284M	$57M	$28M
Average ACEEE Estimate	$481M	$96M	$48M
High ACEEE Estimate	$849M	$170M	$85M

Figure 3 below helps illustrate the tradeoff between implementation costs and time. The figure demonstrates how annual investment varies based on the number of years available to achieve the 15% electricity target.

Figure 3: Annual Investment versus Target Year Achievement



In summary, the total cost of achieving both the 15% electric and 10% natural gas EERS targets is estimated to be in the range of $284-849 Million with an average estimate of $481M. An analysis performed by Dr. Lado Kurdgelashvili from the University of Delaware estimated costs of $337-362 Million, which is within the range observed by the ACEEE analysis of past state experience. To achieve the EERS targets by 2015, the estimated annual investments are $57-170 Million per year, with an average of $96 Million. To achieve the EERS targets by 2020, the estimated annual investments are $28-85 Million per year, with an average of $48 Million.

5.2 Estimates of the available funds to meet the EERS targets

There are several funding sources available for investing in energy efficiency in Delaware.

5.2.1 Regional Greenhouse Gas Initiative (RGGI)

Delaware is a participant in the Regional Greenhouse Gas Initiative (RGGI) and thus quarterly receives revenue from the carbon dioxide allowance auction. To date, Delaware has received $19 Million from the ten RGGI allowance auctions. By statute, the RGGI funds are distributed as follows: 65% to the Sustainable Energy Utility (SEU), 15% to the low-income consumers through the Weatherization Assistance Program and the Low Income Home Energy Assistance Program, 10% to DNREC, and 10% to Greenhouse Gas Reduction Projects.[39] Therefore, the total SEU allocation to date is about $12 Million. The auctions have raised $7-10 Million annually ($4.5-$6.5 Million annually to the SEU). There is concern that the auctions may continue to decrease in revenue in the future, but it is uncertain.

5.2.2 Federal Funding

Delaware received two large energy grants from the U.S. Department of Energy (USDOE) under the American Recovery and Reinvestment Act of 2009 (ARRA), which must be spent over the time period of 2009-2012. The ARRA State Energy Program grant is $24.2 Million, of which $19 Million is currently sub-granted to the SEU, and $2 Million is supplementing the State's Green Energy Program. The ARRA Energy Efficiency and Conservation Block Grant (EECBG) is about $9.6 Million, which is spent on a combination of over 40 small municipal government projects across the state, as well as on some state facilities. The ten largest local governments in Delaware received individual direct grants from USDOE that total $ 6.32 million. Neither is likely to be appropriated at such levels in the near future.

5.2.3 Energy Efficiency Charge

Section 1505 of the Energy Conservation and Efficiency Act of 2009, provides that the Secretary may impose an energy efficiency charge. The statute requires that the rate of this charge be the same for all rate classes. Further, the statute limits the monthly impact of these charges on residential customers. For electricity, the per kilowatt-hour charge may not exceed a level that would result in an average monthly charge in excess $0.58 per residential customer, and for natural gas a level that would result in an average monthly charge of more than $0.41 per residential customer. The charge would apply to all distribution customers of the affected energy suppliers; thus, it would apply to kWh supplied by third party suppliers and delivered by the affected utilities. As set forth in Table 10 below, these maximum rates would generate approximately $9 million or $45 Million over the 5 year compliance period, based on 2007 sales. Appendix B outlines the assumptions used in calculating the approximate revenue from the maximum efficiency charge. This estimate assumes a flat per kWh and per therm efficiency charge applied to all customer classes on a statewide basis uniformly across all energy providers. Workgroup members emphasize the need for ratepayer education if any efficiency charge is implemented.

[39] Delaware Code, Title 7, Chapter 60, Subchapter II-A, Section 6046

costs, generating savings for customers and further reducing demand pressure for building new generating facilities.

5.3.2 Direct benefits to ratepayers from efficiency investments

The reason one uses levelized cost of energy is to provide an "apples to apples" comparison of the full costs of different energy sources. Doing so ensures that the ratepayers receive the necessary energy services at the lowest cost. It is thus misleading to only look at the "total upfront cost" of efficiency, and important to compare the levelized cost of efficiency to the levelized costs of other energy sources (which are all much more expensive). A simple calculation can show the importance of levelized cost analysis. If the upfront cost of EERS is compared to the savings to the ratepayer from the lower levelized cost, then one sees the following benefit in electricity alone (see Table 11). Table 11 is a simple calculation that investigates the implications of 15% electric efficiency and 10% natural gas efficiency (these numbers represent a rough ballpark estimate). Table 11 subtracts the levelized cost of electric energy efficiency from an average wholesale cost of electricity of 7¢ per kWh to obtain the savings from efficiency (it can be repeated for any value of wholesale electricity). The savings from efficiency are estimated per year for the 15% EERS target value. The same analysis is repeated for 10% natural gas efficiency, using an average wholesale cost of $10 per Mcf.

Table 11: Ratepayer Cost Savings Estimates

Comparing levelized cost of electricity	Low ACEEE Estimate	Average ACEEE Estimate	High ACEEE Estimate
	1.6¢ per kWh	2.5¢ per kWh	3.3 ¢ per kWh
Savings in 1 year	$96 M	$80 M	$66 M
Savings over 5 years	$481 M	$401 M	$330 M
Savings over 10 years	$961 M	$801 M	$659 M
Savings over 20 years	$1.7 Billion	$1.2 Billion	$1.3 Billion
Total Upfront Efficiency Investment	$196 M	$374 M	$712 M
Comparing levelized cost of natural gas	**Low ACEEE Estimate**	**Average ACEEE Estimate**	**High ACEEE Estimate**
	$2.77 per Mcf	$3.80 per Mcf	5.65 per Mcf
Savings in 1 year	$18 M	$16 M	$11 M
Savings over 5 years	$92 M	$79 M	$55 M
Savings over 10 years	$183 M	$157 M	$110 M
Savings over 20 years	$367 M	$315 M	$221 M
Total Upfront Efficiency Investment	$88 M	$107 M	$137 M

What this table shows is that the electricity EERS target has a net benefit to ratepayers within 2-11 years and has a net savings over 20 years of $1.3-1.7 Billion. Similarly, the natural gas EERS target has a net benefit to ratepayers within 5-12 years and has a net savings over 20 years of $221-367 Million.

with a standard deviation of $83 per ton of carbon. The Stern Review found a higher social cost of carbon of $300 per ton of carbon. Reaching the EERS 15% and 10% targets results in annual savings of 1.2 million tons of carbon dioxide, which results in societal benefits of $16 Million (assuming $50/tC) to $100 Million (assuming $300/tC).

A rough approximation of the savings resulting from emissions reductions from sulfur dioxide (SO2) and nitrous oxides (NOx) is one life saved per ton reduced or approximately $5.8 million dollars saved per ton.[44] Reaching the EERS 15% and 10% targets results in annual savings of 5,500 tons of SO2 and 1,600 tons of NOx, which results in societal benefits of $42 Billion (including 7,000 lives saved) per year.

5.4 Economic Impacts of EERS

The economic impacts of the EERS are complicated. There are several important direct positive impacts on the economy. Section 5.3.3 discussed the estimated job creation that would result from the investments in energy efficiency. Moreover, the industries, businesses, and residents that participate in the efficiency programs will significantly save on their energy bills and those savings will result in increased income and profit to be invested and to stimulate the Delaware economy.

However, the potential for increased energy costs from a new energy efficiency charge could have negative impacts on Delaware's economy, particularly given that the State of Delaware has some of the higher electricity rates in the nation.[45,46] These impacts could be felt in the residential sector and in the commercial and industrial sectors in the form of added energy charges that may affect consumer spending or incrementally increase the cost of some goods and services in some sectors. Participants in efficiency programs will benefit from reduced energy bills and all customers should benefit from either reduced or stable rates as utilities pass on the capacity savings to their customers.

The Workgroup did not analyze the impact of implementation and compliance specific to large users, such as major farm, commercial, and industrial customers. The impacts on these users will likely depend on the participation rates in the various efficiency programs, as well as the implementation of combined heat and power and fuel switching. Large users also are often prime candidates for efficiency savings, and could be a primary target for future incentive and financing programs.

Intergovernmental Panel on Climate Change [M.L. Parry et al. Eds."]. Cambridge University Press, Cambridge, U.K., and New York, N.Y., U.S.A.. pp. 745–777.

[44]EPA Report to Congress: The Benefits and Costs of the Clean Air Act 1990 to 2010, http://www.epa.gov/air/sect812/1990-2010/fullrept.pdf; http://www.catf.us/resources/publications/files/The_Toll_from_Coal.pdf

[45] http://www.eia.doe.gov/cneaf/electricity/epm/table5_6_b.html

[46] For the year 2010, Delaware had the 14th highest average retail price of electricity for residential and commercial end use sectors. Delaware has the 8th highest average retail price of electricity for industrial end use customers.

direct load control programs. Both programs have excellent benefit/cost ratios exceeding six to one.[49]

6.2 Accountability Conflict

The Workgroup has identified that the EERS statute, as currently written, has several conflicting directives. The Workgroup recommends that the Legislature make the necessary changes to the legislation to clarify the accountability structure.

6.2.1 Utility versus SEU Responsibility

Titles 26 and Titles 29 of the Delaware Code provide for conflicting responsibility for implementing EERS requirements. Title 26, Chapter 15 requires each affected energy provider to achieve the savings specified in the statute.[50] For the cooperative and municipal utilities, Section 1505(b) states that each individual affected energy provider may determine how best to fund activities necessary to achieve the energy savings goals within its service territory and implement programs as it sees fit.

However, Delaware Title 29, Chapter 80, Subchapter II, Section 8059(b) and (c) creates the Sustainable Energy Utility (SEU) and charges the SEU with designing and implementing energy efficiency programs in the state.

> "(c)(1) This section creates the "Sustainable Energy Utility" ("SEU"). The SEU program through the contractor administrator shall design and deliver comprehensive end-user energy efficiency and customer-sited renewable energy services to Delaware's households and businesses. The SEU shall be unaffiliated with any of the State's electric or gas utilities, public or private, and it will operate through the contract administrators under contract to the Delaware Energy Office ("Energy Office" or "DEO") under the direction of the State Energy Coordinator. The SEU shall be known by a trade name to be determined by the Delaware Energy Office."

The statue directs funding to the SEU to accomplish the energy savings goals under Section 1505(f) and (j). Title 26, Chapter 15, Section 1505(g) goes a step further and prohibits the PSC from approving any regulated utility cost recovery for programs designed to achieve energy efficiency savings.

The conflicting directives in the statute make it unclear who would be accountable for EERS performance results and how the State could develop enforcement mechanisms. Holding regulated affected energy providers responsible for outcomes without any ability to design and administer efficiency programs may create unintended issues.

6.2.2 Energy Efficiency Implementation and Funding

Section 1502 of Title 26 assigns responsibility for achieving the savings targets to Delaware's electric and gas utilities. The utilities must submit a report to the State Energy Coordinator demonstrating that the savings achieved by the affected utility, the SEU and

[49] Delmarva IRP, 2010. http://depsc.delaware.gov/documents/Public%20IRP%20Filing.pdf
[50] Title 26, Chapter 15, Section 1502 (a)

asks the Workgroup to "create quantitative annual reduction targets in EERUs, which are consistent with the State's energy savings objectives."

Within the statute definition for EERU there is no equivalency between the measures. The conflict comes when Section 1501 (13) defines the EERU as "1 kilowatt-hour of electricity demand reduction relating to demand side management programs, 1 kilowatt of electric demand response, or 1 decatherm of reduced natural gas consumption, or an equivalent energy efficiency measure." The electric kilowatt-hour, as a measure of consumption, can be related to the natural gas decatherm by virtue of the British Thermal Unit (BTU) heat content measure. One kilowatt-hour ("kWh") of electricity or 1 EERU is the equivalent of 3,412 British Thermal Units ("BTUs") of energy. One decatherm of gas is also 1 EERU, but equivalent to 1,000,000 BTUs of energy.[53] There is no clear correlation between the two measures as the gas measure is over 293.1 times larger than the electric measure on a BTU basis. Therefore, the Workgroup recommends that efficiency units (be they EERUs or Energy Efficiency Credits—EECs) be redefined to a common BTU scale to enable meaningful cost comparisons and possible trading of electric and gas efficiency.

In contrast, 1 kilowatt of electric demand response is a single average measure of demand over a one-hour period and has no heat-energy value relationship with efficiency savings. There is no practical way to establish a joint equivalency among all three measures. However, there is the potential for measure overlap where electric energy efficiency programs provide peak reductions and where peak demand reduction programs sometimes contribute toward energy efficiency. The Workgroup recommends that demand reduction credits are not traded or viewed as equivalent to any metric of efficiency credits. However, when both demand reduction and base energy efficiency savings can be achieved from the same measure or program, then the Workgroup recommends that the program be awarded credits for both the demand reduction and efficiency savings.

[53]To further complicate the issue, many natural gas utilities measure and bill on a cubic foot volumetric basis as opposed to a decatherm heat content basis. In particular, Delaware's affected energy providers bill typical customers on a Ccf or 100 cubic foot basis. Setting natural gas savings targets in decatherms requires an estimate of nominal heat content by volume which can change depending on the source of the gas.

With respect to demand reduction savings targets, the utilities have continued to move forward with various programs all designed to lower peak demand use. Delmarva, the Delaware Electric Cooperative, and the municipal utilities have all been particularly attentive to their peak demand and the ability of lower peak demands to significantly reduce energy costs. Given the programs that are currently in play and the potential for the utilities to extend participation rates with new programs, the Workgroup supports and confirms the statute's peak demand energy savings percentages.

It is also important to note that much of the peak reduction can be achieved just by implementing energy efficiency programs and taking advantage of a spillover effect of many efficiency reductions also causing peak reductions.[55]

7.2 Opportunities to Meet the Efficiency Challenge

The Workgroup identified several opportunities that could be used to move toward the statute's 15% electric consumption and demand goal and the 10% gas consumption goal. Energy efficiency and reduced consumption are the most difficult goals to achieve given the legislated timeframe, as they require certain levels of investment and high voluntary participation levels. While some peak demand reduction programs need little customer involvement, reducing energy consumption requires a consumer commitment to financially invest in energy efficiency and to change their behavior and attitudes toward the consumption of energy. To move toward the statute savings targets, Delaware may want to consider some of the following options.

Please note: These are options that the Workgroup identified, but does not necessarily endorse. The Workgroup offers these options for consideration by the policymakers in the State. All of these programs would require extensive analysis, evaluation, education, and stakeholder outreach.

7.2.1 Increase Funding to Energy Efficiency

1. **Seek additional revenue and leveraging sources for improved and sustainable EE programs**

Chapters 5 and 6 outline the significant resource gap of insufficient funding available to meet the legislated EERS targets. Three opportunities for funding from energy surcharges to be considered are: 1) implement the maximum Energy Efficiency Charge permitted in the EERS statute; 2) increase the Energy Efficiency Charge to a level that adequately supports annual program funding needs; and 3) increase the number of energy efficiency investments under the Green Energy Fund.

The Energy Efficiency charge could be implemented at the maximum allowed funding levels. Some utilities are contributing to energy efficiency and demand side management efforts by virtue of tariff riders or other mechanisms. The Workgroup could examine these numbers and determine if an increase in the energy efficiency charge should be implemented for future programs. Increasing this surcharge beyond the statute's limits or identifying additional and supplemental funding sources will likely be necessary to move towards the statute's 10%/15%

[55] Spillover refers to the peak demand reductions that can be generated by energy efficiency programs, Section 3.6 of this report.

Education of customers about both the direct and indirect benefits of energy efficiency is essential to garnering customer support for energy savings initiatives. Energy customers can benefit from increased education on how to read and understand their energy bills, including having a better understanding of what they are charged for. For example, additional charges added to customer bills to fund energy efficiency efforts should be displayed on the customer's bill with an explanatory footnote, rather than rolled into the overall rate or added without explanation. Additionally, separate bill inserts could be required on not less than an annual basis providing customers with information describing the energy efficiency options implemented and their benefits and costs. A collaborative process between the utilities (including the SEU), the Public Advocate, the Public Service Commission, and other appropriate parties to develop such customer education programs should be considered. Customer education programs should provide customers with information on the energy efficiency options available to them, how to apply for such energy efficiency options, and any other pertinent information.

5. Make all EE programs customer inclusive unless opted out

One of the key challenges to achieving the EERS targets is sufficient participation rates in the efficiency programs. Switching voluntary programs to opt-out instead of opt-in increases participation. Another way to increase program participation is to cross-market those programs with other programs that customers are eager to adopt. As Delaware utilities begin to offer such dynamic pricing and programs, it may be appropriate to include efficiency program participation with customer opt-out provisions at the same time as those other changes. All of those programs will require extensive consumer education and outreach. Utilities and the SEU could work together to help secure additional program participants, more energy efficiency and environmental savings.

Examples of mandatory energy efficiency and renewable energy programs: Marin County, CA's Community Choice Aggregation under AB 117, and Duke Energy's Energy Efficiency Program Opt In/Opt Out Provision[56].

6. Consider utility provided EE programs with cost recovery and rate-of-return performance-based incentives

Chapters 5 and 6 outline the significant resource gap of insufficient funding available to meet the legislated EERS targets. Even with the addition of the energy efficiency charge and revolving funds from green financing programs, the state likely will not be able to reach the target goals in the given timeframe. As Delaware strives to be both a leader and innovator in efficiency policy, it must maximize available funding and resources to do so. One possible option to increase available funding for efficiency investments is for Delaware energy utilities to partner with the SEU in funding and providing energy efficiency programs that are complementary to SEU programs or in addition to SEU programs. To acquire sources of capital

[56] Under Duke Energy's Energy Efficiency Plan, industrial customers may elect to opt out of and be exempt from the costs associated with the "conservation" and/or "demand-side management" components of the energy efficiency rider. However, in doing so, the customer will forego the opportunity to take advantage of energy efficiency incentives. For more information visit: http://www.duke-energy.com/north-carolina-large-business/energy-efficiency/nclb-ee-opt-out-provision.asp

7.2.3 Broaden the Scope of Energy Efficiency

1. **Include efficiency credit for efficiency gains from CHP, transmission & distribution and other atypical sources.**

Expand suite of programs to include more energy savings opportunities, such as Combined Heat and Power (CHP), transmission and distribution upgrades, higher efficiency generation technologies, building standards, etc. Develop programs to target specific customers or audiences that do not normally participate in programs, such as rental properties and state hospitals that have split incentives.

2. **Provide and include EE credits for oil and propane fuel use reductions**

Many larger customers are switching their fuels on process heat boilers from propane or oil to natural gas where available. This can result in both cost and environmental savings. A program to credit customers for conversions to cleaner fuels can help achieve State goals. Under a broad interpretation, a program designed to get consumers to drive more fuel efficient vehicles could also be considered.

3. **Establish a fuel switching program and promote gas distribution expansion with incentives or shared savings**

Gas used as a direct fuel in many appliances is a more efficient use of energy resources than using it to create electrical energy in the generation process, transmitting it over wires and transforming it for household use. The efficiency improvement is almost 3 fold for direct use. Promoting programs which help expand gas distribution systems for more direct fuel use creates energy efficiency by eliminating the equivalent electrical losses. Utility tariffs that provide for a shared savings could help pay for expansions and help meet State energy and environmental goals.

4. **Establish incentives or promotional efforts to encourage CHP installations**

Combined Heat and Power (CHP) systems are systems that generate useful thermal energy and electricity or mechanical power in a single, integrated system. CHP systems are much more efficient than separate generation of thermal energy and electricity because heat that is normally wasted in conventional power generation is recovered to meet existing thermal demands.

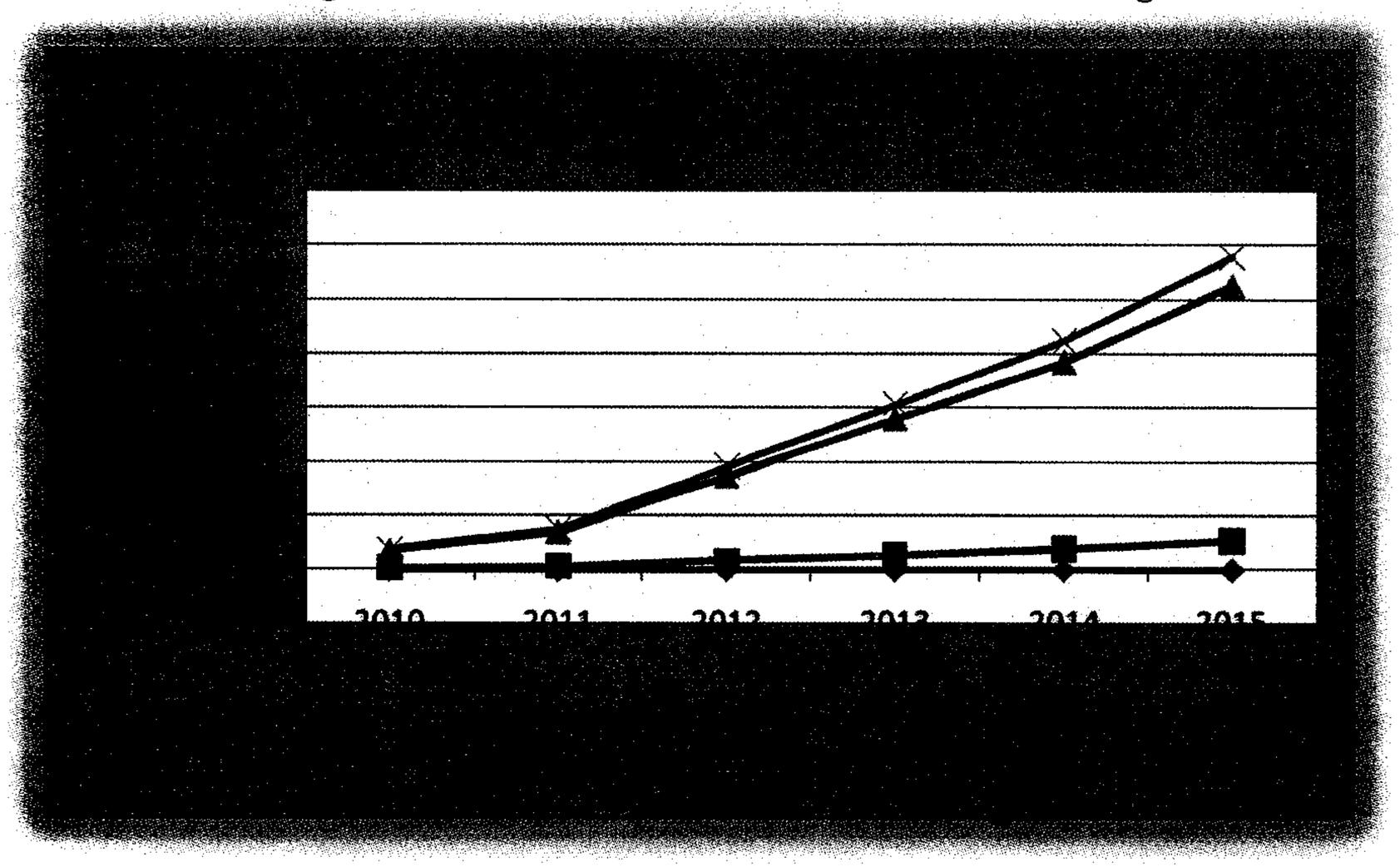
State program examples: Loan programs are run in New Jersey, Connecticut, and the Green Bank of Kentucky. Grants programs are offered in Massachusetts and Ohio. Tax credits and exemptions are available in Arizona and Oregon. Rebates are available in New York and a bond program is offered in New Mexico.[57]

5. **Include renewable generation and clean distributed generation (displacing electric energy use) as potential peak demand reductions**

[57] http://www.aceee.org/sector/state-policy/toolkit/chp/financial-incentives

customers for renewable and clean distributed generation systems. The sources of fuel that qualify for net metering are consistent with renewable generation and clean distributed generation resources and include: solar, wind, hydro, a fuel cell, or gas from the anaerobic digestion of organic material. There are measures that could be included in legislation that would result in increased options for the development of energy generated from net metering. The two legislative initiatives that could increase the renewable generation and clean distributed generation resources from net metering are as follows: 1) allow all customers of utilities regulated by the PSC to pursue from the Delaware Energy Office or their own regulatory authority a case-by-case exception from the net metering capacity limits as currently allowed for farm customers pursuant to Title 26, section 1014(d)(1)b; and 2) allow new (or incremental) natural-gas-fired CHP capacity to be eligible for net metering for utilities regulated by the PSC. It also should be noted that to the extent a utility regulated by the PSC had distribution delivery service rates that were decoupled from energy consumption charges, there would be no impact on profitability as the same level of revenues from distribution delivery service charges would be achieved regardless of increases in net metering.

Figure 4: EERS Carbon Dioxide Emissions Savings



In summary, achievement of the 15% electric consumption savings target would save Delaware 4,480 tons of NOx, 15,427 tons of SO2 and 2.9 million tons of CO_2 over the five (5) year period. Achievement of 2015 10% natural gas savings targets results in 3 tons of SO2 savings, 318 tons of NOx savings and 404 thousand tons of CO_2 savings.

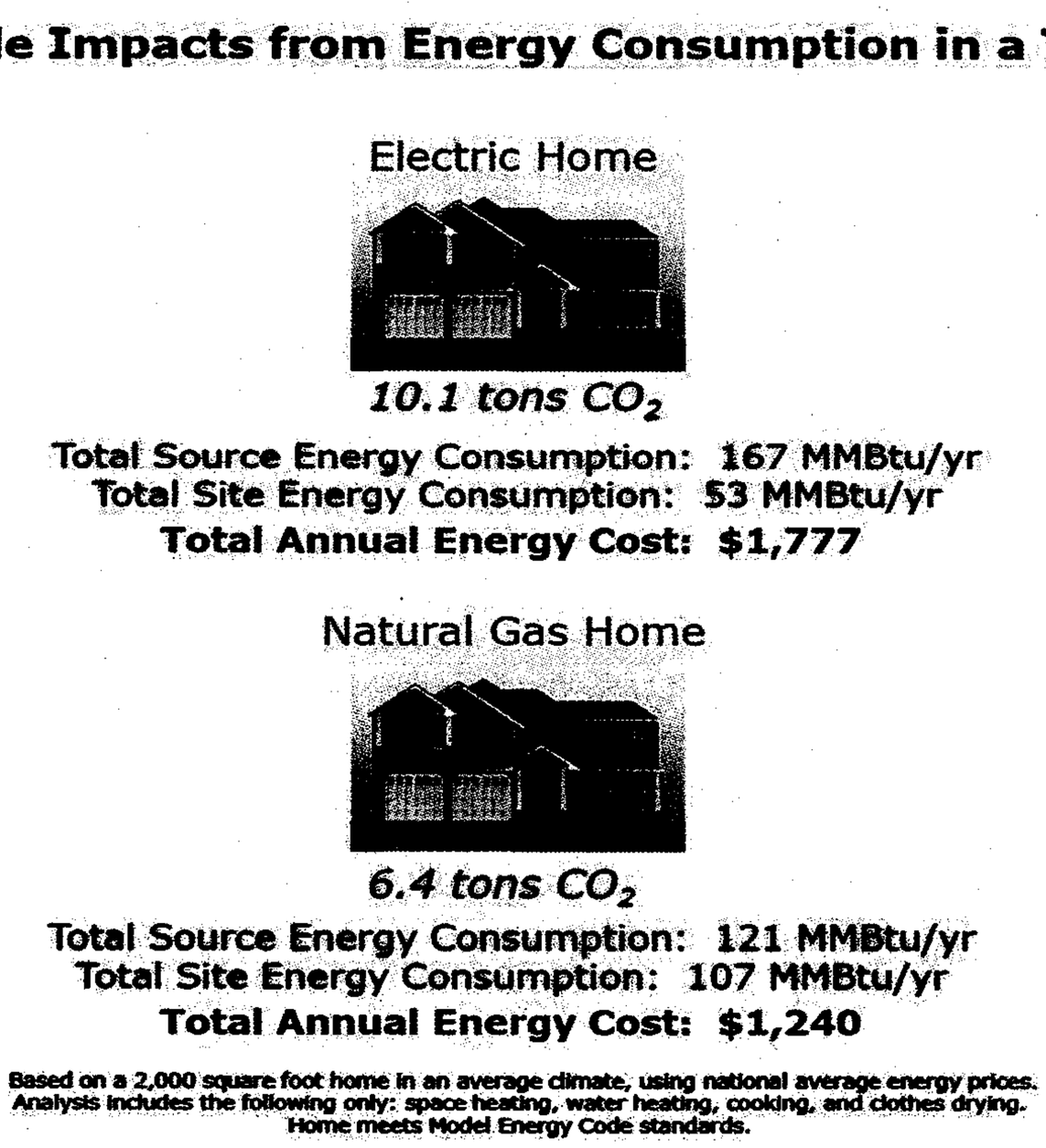
8.2 Electric and Gas Full Cycle Efficiency

The legislation directed the Workgroup to consider the efficiency of the natural gas system relative to other energy alternatives on a full-fuel-cycle measurement basis (from source to point-of-use). Significant amounts of energy can be used or lost along the complete energy delivery path, that is, in the extraction, processing, transportation, conversion, and distribution of energy. The more efficient the complete energy delivery path becomes, the less overall energy production that is required. In addition, the efficiency of end-use equipment affects the total energy requirement. In order to obtain a comprehensive assessment of the total impact of end-use energy applications on energy resources, the full-fuel-cycle, that is the efficiency of the energy path in conjunction with that of the end-use devices, must be examined.

As can be seen in Table 12, below, the natural gas delivery system is the most efficient energy system for delivering raw energy to the home compared to fuel oil, propane, and electric delivery systems.

The legislation also directed the Workgroup to address the impact of energy use reductions on carbon dioxide and other greenhouse gas emissions. On a full-fuel-cycle analysis, the direct use of natural gas in new homes improves the environmental footprint of the home compared to the use of electricity, fuel oil, and propane as noted in Table 12 and in Figure 5 below. Natural gas offers a 37% reduction in carbon emissions over electricity and a 16% reduction over fuel oil use.

Figure 5: Full-Fuel-Cycle Impacts from Energy Consumption in a Typical Home[59]



The following table (Table 13) shows by fuel type the carbon dioxide emissions per MMBtu equivalent. As shown, natural gas emits approximately 16% less carbon than propane and approximately 27% less carbon than fuel oil. Carbon emissions for electricity are generally a function of the fuel mix of the generating plants (i.e. coal, natural gas, oil, nuclear, hydro, renewable). More than half of the power generated in the PJM comes from coal-fired generating plants.

[59] American Gas Association's Energy Analysis, "A Comparison of Energy Use, Operating Costs, and Carbon Dioxide Emissions of Home Appliances" (EA 2009-3, Dated October 20, 2009)

response programs. Delaware is currently participating with the Northeast Energy Efficiency Partnership to develop protocols for measuring and confirming efficiency savings. DNREC anticipates using those protocols to initiate an EM&V process for oversight of SEU and utility efficiency programs.

Since compliance with the EERS statute falls principally on the SEU and the affected energy providers for efficiency programs, it's anticipated that each party will conduct their own EM&V process to confirm their efficiency savings. As part of the regulations, the Secretary may want to require each affected energy provider to submit an annual independent EM&V validation report, confirming the process and result for the reporting year. As an alternative or in addition, the Secretary may want to provide a statewide EM&V oversight which evaluates all parties' programs, identifies appropriate protocols or any deficiencies and confirms measured and reported energy efficiency savings by affected energy provider.

8.5 Step Load Increases or Decreases

The legislation directs the Workgroup to examine the impact on the achievability of the targets in relation to the step load increases or decreases caused by the connection of large, new energy consumers, such as data centers.

The Workgroup agreed that annual reporting would continue to reflect major uncontrollable changes such as weather and population to ensure accurate comparisons to targets. Step load increases or decreases are merely an extension of that concept and could be accounted for in the reporting process.

8.6 Enforcement Mechanisms

While the legislation directs the Workgroup to provide recommendations to the Secretary as to whether or not enforcement mechanisms should be adopted to ensure compliance with the EERS, the Workgroup believes at this early stage in the process it is premature to discuss enforcement mechanisms and suggests revisiting the subject as need arises.

Where there have been regulation compliance mechanisms, they have most often addressed performance issues with some type of compliance penalty (typically referred to as the "stick"). Penalties or "sticks" that are already available for failure to perform include negative press announcements and further regulatory or potential legislative actions. All too often, the beneficial nature of the requirement and the need to achieve the targets loses the "carrot" portion related to superior performance. While the Workgroup recommends deferring the consideration of a compliance mechanism, it would be helpful to make sure that any compliance mechanism recognize the positive value of performance in the regulations and provide an approach that can also reward those affected energy providers that exceed targeted savings. Effective regulation should consider both upside and downside performance risk when attempting to impose compliance behaviors.

8.7 General Unintended Consequences

There could be consequences for the rate of implementation of renewable energy, for fuel switching, and on the most cost effective way to achieve energy efficiency. Assuming an equitable application of any energy efficiency charges, the Workgroup did not see an impact on other suppliers (that is, other than Delaware electric utilities) of electricity. There may also be

providers such as electric utilities, fuel oil and propane companies, but provide significant benefits to the State of Delaware and consumers.

In Summary, there may be some general unintended consequences with implementing the EERS statute and any regulations that may be promulgated should ensure fairness and equity among all parties, while not losing focus on other complementary clean energy programs.

8.8 Natural Gas Unintended Consequences

Over the past two to three years, Chesapeake Utilities Corporation has converted several medium to large sized commercial and industrial customers in Sussex County, Delaware to natural gas that has lowered energy costs for these customers as well as their carbon footprint. These conversions to natural gas have displaced several million gallons of propane and fuel oil in the State; thus enabling customers and the State of Delaware to improve their environmental footprint, save millions of dollars in energy costs and create jobs.

The following Table 14 demonstrates the annual gallons of propane and fuel oil that have been displaced in Sussex County, Delaware as a result of conversions to natural gas. The table also shows the natural gas equivalents resulting from these conversions.

Table 14: Delaware Natural Gas Conversion Displacements of Propane and Fuel Oil

Fuel Source	Annual Gallons Displaced	Annual Energy Savings	Annual Avoided Tons CO_2	Natural Gas Equivalent (MMBtu)
No. 2 Fuel Oil	1,202,481	$967,989	2,907	161,493
No. 4 Fuel Oil	622,225	$444,557	1,707	85,369
No. 6 Fuel Oil	3,586,733	$1,726,489	11,434	519,718
Propane	2,824,783	$2,113,525	2,846	258,750
Total	8,236,222	$5,252,560	*18,894	1,025,330

* Equivalent to approximately 3,246 cars being taken off the road

The establishment of defined energy savings targets for the affected energy providers under this legislation has the potential of leading to unintended consequences for energy consumers and the State of Delaware in terms of the real potential for increased energy costs, increased environmental emissions in terms of carbon dioxide, and overall increased energy usage.

9.0 Conclusions and Findings

Delaware's directive to reach15%/10% energy savings in five years is an aggressive state target that requires significant programs and funding sources to achieve. Given the current and prospective funding levels, the Workgroup finds that Delaware is unlikely to achieve the legislated efficiency targets without some modification to the funding for efficiency investments, size of the efficiency targets, and/or the timeframe to accomplish the targets.

Equally important, the Workgroup has identified that the EERS statute, as currently written, has several conflicting directives including, most notably, in implementation and accountability. The Workgroup recommends that the Legislature make the necessary changes to the legislation to clarify the structure.

The Workgroup discussed the types of programs and initiatives that would need to be considered to achieve the existing legislated targets. The Workgroup identified potential policy changes, including:

- Establishing alternative and/or higher levels of funding to supplement existing programs;
- Creating new stricter regulations and new pricing structures designed to incentivize energy efficiency;
- Broadening program offerings and delivery mechanisms; and
- Increasing the energy savings that could count toward energy efficiency

The Workgroup would like to express its appreciation to the Secretary for the opportunity to work on the implementation of this very important statute and offers its assistance in the drafting of any regulations the Secretary feels would be appropriate.

9.1 Summary of Findings

1. Targets

The Workgroup agreed to the following interpretation of the statute's targets: "Targeted electricity consumption and peak demand savings would be 15% of the 2007 actual consumption and peak demand (10% for natural gas consumption)."

2. EERS Feasibility

The Workgroup finds that Delaware is unlikely to achieve the legislated efficiency targets given the current and prospective funding levels and the high participation rates that would be necessary to meet such a short timeline. Modifications are required in some or all of the following: 1) funding for efficiency investments; 2) efficiency targets; and/or 3) the timeframe to accomplish the targets.

If fully implemented, the efficiency charge is estimated to produce approximately $9 million dollars annually or approximately $45 million over the next five years. Conversely the estimated cost to meet the legislative objectives is $284-849 million (with an average estimate of $481 million) over the next five years.

8. Eligible Programs

The Workgroup recommends a broad use of that discretion to include fuel switching, peak-shaving renewable energy systems, combined heat and power systems (CHP), transmission and distribution system upgrades, higher efficiency generation technologies, and building energy standards.

9. Evaluation, Measurement and Verification (EM&V)

Since compliance with the EERS statute falls principally on the SEU and the affected energy providers for efficiency programs, it's anticipated that each party will conduct their own EM&V process to confirm their efficiency savings. As part of the regulations, the Secretary may want to require each affected energy provider to submit an annual independent EM&V validation report, confirming the process and result for the reporting year. As an alternative or in addition, the Secretary may want to provide a Statewide EM&V oversight which evaluates all parties' programs, identifies appropriate protocols or any deficiencies and confirms measured and reported energy efficiency savings by affected energy provider. The EM&V reporting responsibilities will be developed in conjunction with any legislative changes.

10. Step load Increases or Decreases

Annual reporting by affected energy providers should be adjusted to reflect weather, population, significant customer load increases or decreases and other uncontrollable impacts.

11. Enforcement Mechanisms

The Workgroup believes at this early stage in the process it is premature to discuss enforcement mechanisms and suggests revisiting the subject as need arises.

12. General Unintended Consequences

There may be some general unintended consequences with implementing the EERS statute and any regulations that may be promulgated should ensure fairness and equity among all parties, while not losing focus on other complementary clean energy programs.

13. Natural Gas Unintended Consequences

The imposition of an energy efficiency charge for natural gas customers or other barriers that are not equally applied to other unregulated carbon based fuel alternatives may negatively impact regulated natural gas utilities driving up consumer costs and limiting environmental benefit. Regulation should work to minimize such impacts, as well as other policies that impair cost-effective infrastructure expansion to the extent possible.

(5) "Combined heat and power" means a system that uses the same energy source both for the generation of electrical or mechanical power and the production of steam or another form of useful thermal energy.
(6) "Combined heat and power system savings" means the electric output, and the electricity saved due to the mechanical output, of a combined heat and power system, adjusted to reflect any increase in fuel consumption by that system as compared to the fuel that would have been required to produce an equivalent useful thermal energy output in a separate thermal-only system, as determined in accordance with regulations promulgated by the Secretary.
(7) "DEC" has the same definition set forth in § 1001 of this title.
(8) "Demand-side management" has the same definition set forth in § 1001 of this title.
(9) "DEO" means the State Energy Office established in § 8053 of Title 29.
(10) "DNREC" has the same definition set forth in § 352 of this title.
(11) "DP&L" has the same definition set forth in § 1001 of this title.
(12) "EERS" means Energy Efficiency Resource Standards.
(13) "EERU" or "Energy Efficiency Resource Unit" means 1 kilowatt-hour of electricity demand reduction relating to demand side management programs, 1 kilowatt of electricity demand response, or 1 decatherm of reduced natural gas consumption, or an equivalent energy efficiency measure.
(14) "Electric distribution company" has the same definition set forth in § 1001 of this title.
(15) "Electricity consumption" and "electricity consumed" means, for any affected electric energy provider, the sum of retail electricity deliveries to all energy customers within the electric distribution system.
(16) "Electricity demand response" means a reduction in the use of electricity by electricity energy customers in response to power grid needs, economic signals from a competitive wholesale market or special retail rates.
(17) "Energy customer" means a natural person or public or private entity that receives electric distribution service from an affected energy provider.
(18) "Energy efficiency" means either a decrease in consumption of electric energy or natural gas or a decrease in consumption of electric energy or natural gas on a per unit of production basis or equivalent energy efficiency measures that do not cause a reduction in the quality or level of service provided to the energy customer achieved through measures or programs that target consumer behavior, or replace or improve the performance of equipment, processes, or devices. Energy efficiency can also mean the reduction in transmission and distribution losses associated with the design and operation of the electrical system.
(19) "Energy efficiency charge" has the meaning given in § 1505 of this title.
(20) "Energy savings" means:

a. Reduction in electricity consumption;
b. Reduction in natural gas consumption;
c. Electricity coincident peak demand response capability; or
d. Equivalent energy efficiency measures, in Delaware from a base year of 2007, calculated on a calendar year basis.

(21) "Equivalent energy efficiency measure" means reductions in the use of fossil fuel other than natural gas or use of other sources of energy not derived from fossil fuel

(1) The Workgroup shall be composed of 11 members. It shall be chaired by the State Energy Coordinator and include 1 representative of each of DP&L, DEC, and Chesapeake Utilities, 1 representative appointed by the municipal electric companies, 1 representative of each of the Public Service Commission, the Public Advocate, and the SEU, and shall also include the Weatherization Assistance Program Manager and 2 members of the public with experience representing, respectively, low- and moderate-income families and environmental concerns.

(2) The Workgroup shall complete a study and submit its findings to the Secretary no later than December 31, 2010, to determine the feasibility and impact of pursuing EERS goals for the affected energy providers in Delaware. Such a study at minimum must address:

a. Supporting and confirming the energy savings percentages identified for 2011 and 2015 or recommending alternative energy savings percentages if warranted.

b. The impact of implementation and compliance on carbon dioxide and other greenhouse gas emissions;

c. The issue of "unintended consequences" of establishing goals for the affected energy providers, especially, for instance, where beneficial fuel switching might otherwise be penalized or compliance with the goal negatively impacts the ability of gas utilities to compete with higher carbon fuel alternatives;

d. Consideration of any EERS type goals and programs established for natural gas distribution utilities in nearby states and the measurable results of any ongoing programs in those states;

e. The evaluation of the results of any ongoing natural gas energy efficiency and conservation programs implemented and administered through the SEU or any individual natural gas distribution utility;

f. The impact of implementation and compliance on customer rates for affected energy providers;

g. The efficiency of the natural gas system relative to other energy alternatives on full-fuel-cycle measurement basis (from source to point-of-use);

h. The level of an energy efficiency charge, if any, needed to fund energy efficiency measures to meet compliance of the EERS pursuant to § 1505 of this title;

i. The step load increases or decreases caused by the connection of large, new energy consumers, such as data centers;

j. The impact of implementation and compliance on major farm, commercial, and industrial customers;

k. The appropriate level of equivalency for electricity demand response and energy efficiency measures in achieving compliance with the energy savings goals of this section;

l. The appropriate scope of equivalent energy efficiency measures; and

m. Whether the Secretary, by regulation, should permit trading of EERUs among affected energy providers;

n. Enforcement mechanism or mechanisms to be adopted by the Secretary which will ensure compliance with the EERS.

(3) The Workgroup shall create quantitative annual reduction targets in EERUs, which are consistent with the State's energy savings objectives.

Superior Court pursuant to the provisions of the Administrative Procedures Act, Chapter 101 of Title 29. The Environmental Appeals Board shall not have jurisdiction over any such appeal.
(c) Regulations promulgated by the Secretary shall not differ significantly among affected natural gas distribution companies or among affected electric energy providers.
(d) All regulations promulgated under this chapter shall be adopted under the Administrative Procedures Act [Chapter 101 of Title 29].
(e) Any costs incurred by the Secretary and DEO in developing and implementing the programs under this chapter shall be funded through a charge placed by the Public Service Commission on entities under its jurisdiction that have an obligation to comply with the provisions of this chapter and through compliance payments submitted by entities not regulated by the Public Service Commission. Any remaining funds shall be distributed as authorized in § 1505 of this title.
(f) If an energy efficiency charge greater than zero is established pursuant to § 1505 of this title, then subsection (e) of this section will no longer apply.

§ 1505. Energy efficiency charge.
(a) There is hereby established the Sustainable Energy Trust Fund.
(b) Each individual affected energy provider may determine how best to fund activities necessary to achieve the energy savings goals within its service territory and implement programs as it sees fit. Should an affected energy provider determine that a charge is unnecessary, a plan shall be submitted that demonstrates how the goals will be achieved. Should an affected energy provider determine that an energy efficiency charge is necessary to achieve the goals, it may make such a recommendation in the Workgroup study that is consistent with this section.
(c) Based upon the recommendation or recommendations of the Workgroup, the Secretary may implement a charge to be collected from each energy customer by its affected energy provider ("energy efficiency charge"), which may not vary by customer class and is consistent with this section.
(d) Any energy efficiency charge for energy customers of affected electric energy providers shall be imposed on a per kilowatt-hour basis and may not exceed a level that would result in an average charge in excess of $0.58 per month per residential electric customer.
(e) Any energy efficiency charge for energy customers of affected natural gas energy providers shall be imposed on a therm basis and may not exceed a level that would result in an average charge in excess of $0.41 per month per residential natural gas customer.
(f) Each affected energy provider shall remit any energy efficiency charges collected pursuant to this chapter to the DEO to be deposited in the Sustainable Energy Trust Fund on a monthly basis. Funds shall be deposited in the Sustainable Energy Trust Fund by the DEO in separate accounts for each affected energy provider and shall, to the extent feasible, and except as otherwise provided in paragraph (j)(3) of this section below, be earmarked for use on behalf of energy customers of the affected energy provider from which they are collected in collaboration with the affected energy providers. Funds deposited in the Sustainable Energy Trust Fund shall not be funds of the State, shall not be available to meet the general obligations of the government, and shall not be included in the financial reports of the State. The DEO shall submit to the General Assembly and the Governor by May 30 of each year a written accounting of monies received from the fund during the previous year and how those moneys were used or disbursed during that year.
(g) Costs associated with achieving the energy savings goals are not recoverable through Public Service Commission proceedings.

Appendix B. Energy Efficiency Charge Estimation

Funding that Would be Generated by EERS Limits

Electricity

Limit per residential customer per month = $0.58

	2007 MWH Sales Residential	Total	Source
Delmarva	2,969,021	8,855,916	Bob Howatt
DEC	930,154	1,162,642	Bob Howatt
DEMEC	618,823	1,845,809	Total residential from EIA Database
Total	4,517,998	11,864,367	Total for DE from Bob Howatt. Residential included DEMEC proration

Avg DE residential kWh consumption

Annual	11,500	Lado 6/10/10 presentation
Monthly	958	By calculation

Calculation of maximum rate

958 kWh x Rate = $0.58 per average residential customer per month

Rate = $0.58/958 kWh = $0.000605

Note: current Green Energy Fund rate for Delmarva customers is $0.000356/kWh

Revenue generated by $0.000605/kWh

Total sales, kWh	11,864,367,000
Rate/kWh	$0.000605
Revenue	**$7,180,521**

Natural Gas

Limit per residential customer per month per therm: $0.41

	2007 MCF Sales Residential	Total		Source
Delmarva	7,909,416	20,713,658		By difference and prorated
Chesapeake	2,090,460	4,652,207		Bob Howatt
Total	9,999,876	25,365,865		Bob Howatt and prorated
Convert to therms: 1 mcf =		10.27	therms	
Total therms	102,698,727	260,507,434		

Appendix C. Energy Efficiency and Peak Demand Emission Savings

EMISSIONS IMPACT CALCULATIONS

Electric Consumption (Megawatt-Hours)

YEAR	2007	2015	Totals thru 2015
BAU Consumption	11,868,810	12,852,220	75,229,589
15% of 2007	11,868,810	11,071,899	70,244,689
Annual Percent Targets		0.15	
Electric Consumption Savings	0	1,780,322	4,984,900

Delmarva Power 2009 Baseline

6.2 lbs per Megawatt-Hour	SO2	5,519	15,453
1.8 lbs per Megawatt-Hour	NOx	1,602	4,486
1,179 lbs per Megawatt-Hour	CO2	1,049,500	2,938,599

Natural Gas Consumption (Mcf)

YEAR	2007	2015	Totals thru 2015
BAU Consumption	25,365,865	27,467,597	160,779,690
15% of 2007	25,365,865	24,931,011	154,057,736
Annual Percent Targets		0.100	
Gas Consumption Savings	0	2,536,587	6,721,954

Natural Gas http://www.naturalgas.org/environment/naturalgas.asp

1 Mcf<= 1,027,000 BTUs

1 lbs per Billion BTU	SO2	1.3025	3
92 lbs per Billion BTU	Nox	119.8334	318
117,000 lbs per Billion BTU	CO2	152397	403852

Appendix D. EERS Target Equivalency Based on Market Value

Assuming a desire to create equivalency among all three (3) commodities (electric consumption reductions, electric demand reductions and gas consumption reductions), there are methods that could be used. One method might be to look at the market value of the resource on an average basis. As an example, based on PJM's 2010/2011 Base Residual Auction, 1 kilowatt of instantaneous peak demand reduction could have theoretically reduced the auction clearing price by $0.833 per MW-Day and save Delaware consumers approximately $794,470 per year. Based on 2010 costs, the consumption reduction of 1 kilowatt-hour of energy is worth approximately $0.10. The consumption reduction of 1 decatherm, or 9.747Ccf would be valued at approximately $9.75[61]. Assuming a 1 MWh = 1 Tradable Option = $100 equivalency creates the following value table.

EE Options Table	Electric Consumption	Electric Demand	Nat. Gas Consumption
2011 Target	237,376 MWh	52 MWs	253,659 Mcf
$ Target Value	$23,737,600	$41,312,418	$2,537,371
2011 Options	237,376	413,124	25,374
Option per Savings	1 MWh =1 Option	1 MW = 7,945 Options	1 Mcf = 0.1 Options
2015 Target	1,780,322 MWh	392 MW	2,536,587 Mcf
$ Target Value	$178,032,200	$311,432,077	25,373,677
2015 Options	1,780,322	3,114,321	253,737

The deficiency in this approach is the reliance on nominal or average values which actually change annually or more frequently. The analysis could be enhanced to reflect 10 year average values or individual utility values, particularly if the Workgroup contemplated any recommendation for trading of EERUs.

Since the actual value/cost of energy efficiency or peak demand savings is only known by the utility owner, trading could still occur and be facilitated by an organized market, but trade values would likely vary by utility, commodity and timeframe.

[61] One decatherm value is based on a retail market rate of $1.00 per Ccf @9.747 Ccf per decatherm or $9.75 per decatherm.