

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. 17-1224
EXPANSION SERVICE OFFERINGS)
(FILED DECEMBER 20, 2017))

PUBLIC VERSION

DIRECT TESTIMONY

OF

GLENN A. WATKINS

ON BEHALF OF THE

THE DELAWARE DIVISION OF THE PUBLIC ADVOCATE

MAY 2, 2018

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1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Glenn A. Watkins. My business address is 150 Santa Rosa Road,
4 Richmond, VA 23229.

5 **Q. WHAT IS YOUR PROFESSIONAL AND EDUCATIONAL BACKGROUND?**

6 A. I am a President and Senior Economist with Technical Associates, Inc., which is
7 an economics and financial consulting firm with offices in Richmond, Virginia. Except
8 for a six-month period during 1987 in which I was employed by Old Dominion Electric
9 Cooperative as its forecasting and rate economist, I have been employed by Technical
10 Associates continuously since 1980.

11 During my career at Technical Associates, I have conducted marginal and
12 embedded cost of service, rate design, cost of capital, revenue requirement, and load
13 forecasting studies involving numerous electric, gas, water/wastewater, and telephone
14 utilities, and have provided expert testimony in Alabama, Arizona, Delaware, Georgia,
15 Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, New
16 Jersey, North Carolina, Ohio, Pennsylvania, Vermont, Virginia, South Carolina,
17 Washington, and West Virginia. A more complete description of my education and
18 experience is provided in my Schedule GAW-1.

19 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

20 A. Technical Associates, Inc. has been engaged by the Division of the Public
21 Advocate (“DPA”) to evaluate Chesapeake Utilities Corporation’s (“CUC” or
22 “Company”) application to extend its natural gas expansion service offerings outside of

1 its predefined existing geographical expansion area in Southeastern Sussex County to
2 include all areas within the Company's service area.

3 **Q. HAVE YOU TESTIFIED BEFORE THIS COMMISSION ON PREVIOUS**
4 **OCCASIONS?**

5 A. Yes. I have provided testimony before this Commission on numerous occasions
6 concerning service area expansions, cost allocations, rate design, cost of capital, revenue
7 requirement, and merger-related issues in various natural gas distribution, electric
8 distribution, and water utility proceedings.

9
10 **II. GENERAL POLICY CONSIDERATIONS**

11 **Q. AS AN ENERGY SOURCE, DOES NATURAL GAS HAVE A PRICE**
12 **ADVANTAGE OVER ALTERNATIVE FUELS?**

13 A. Yes. For several years, natural gas has had a significant price advantage over
14 alternative fuel sources for residential energy usage.¹ Although natural gas may be
15 utilized for several residential uses, it is predominantly utilized for space and water
16 heating and cooking. The current and projected price advantage of natural gas over
17 alternative energy sources for residential use will be discussed later in my testimony.

18 **Q. HISTORICALLY, HAS THE AVAILABILITY OF NATURAL GAS TO**
19 **RESIDENTIAL CONSUMERS BEEN CONSTRAINED IN DELAWARE, OR,**
20 **SPECIFICALLY, WITHIN CUC'S SERVICE TERRITORY?**

21 A. Yes. As has been the case in many parts of the country including Delaware, the
22 expansion of natural gas distribution infrastructure to serve new customers has been
23 limited due to the simple fact that, more often than not, the economic costs of expanding

¹ Predominantly, alternative residential energy sources include electricity, fuel oil, and propane.

1 distribution mains has exceeded the perceived benefits realized by natural gas distribution
2 companies (“NGDCs”) as well as by potential new natural gas consumers (at least in the
3 short term). In short, the problems or constraints of expanding natural gas distribution
4 infrastructure to make natural gas more available to consumers have been well known
5 and are rather straightforward. However, finding solutions to these constraints has been
6 much more challenging and typically require regulatory and/or public policy guidance.

7 **Q. PLEASE EXPLAIN AND DISCUSS THE FACTORS THAT HAVE**
8 **CONSTRAINED THE EXPANSION OF NATURAL GAS INFRASTRUCTURE IN**
9 **ORDER TO MAKE NATURAL GAS MORE AVAILABLE TO CONSUMERS.**

10 A. While I believe it is safe to say that virtually all policymakers and regulators
11 would agree that from a societal perspective, improvements and expansions of public
12 service infrastructure is a desired objective in general, the economic and societal costs of
13 expanding public service infrastructure must always be considered. In this regard, two
14 primary factors have hampered the expansion of natural gas facilities.

15 First, when the incremental capital costs (revenue requirements) of extending
16 natural gas distribution mains are compared with the expected incremental revenues that
17 will be obtained from adding new customers, a financial shortfall often exists; i.e., the
18 incremental costs of expansion often exceed the incremental revenues obtained from such
19 expansion. Because natural gas distribution mains have an economic life of 50 to 60
20 years, most project feasibility analyses consider the expected service life of each
21 expansion and compare the present value of incremental costs to the present value of
22 expected incremental future revenues. For projects in which the present value of costs
23 has exceeded the present value of expected revenues, the most common practice in the

1 industry has been for NGDCs to require new customers to fund any economic shortfall by
2 making an upfront cash contribution to offset the “uneconomic” portion of the potential
3 expansion project. However, potential new customers are often unwilling or unable to
4 make such required upfront cash contributions to the NGDC. From the perspective of
5 NGDCs, this economic shortfall for projects that will primarily serve residential
6 consumers has been particularly common, and leads to the second factor that has
7 hampered the expansion of natural gas distribution infrastructure: the additional layer of
8 costs that prospective residential customers considering converting to natural gas must
9 bear.

10 When evaluating the desirability of residential energy users converting to gas, it is
11 most important to understand that the overwhelming use of natural gas by residential
12 consumers is for space heating purposes. Although natural gas can be, and is, used for
13 cooking and hot water heating, this usage pales in comparison to the requirements for
14 space heating. As such, in virtually every instance in which natural gas expansion
15 feasibility projects are considered, for the project to be economically viable it is
16 imperative that the vast majority of the potential new customers use natural gas for space
17 heating. Notwithstanding any requirements for upfront deposits to the NGDC, this
18 presents a cost benefit question to existing residences (primarily homeowners): will the
19 annual fuel savings of converting from electric, oil, or propane heat to natural gas heat
20 exceed the equipment cost of converting to natural gas? Residents living in homes heated
21 by electric, propane, or oil may need to replace existing equipment with natural gas

1 furnaces.² Furthermore, notwithstanding that from a purely economic perspective,
2 residential customers may experience substantial long-term savings from converting to
3 natural gas, the reality is that many residential consumers place primary weight on the
4 upfront cash requirements of converting to, and installing, natural gas equipment,
5 regardless of any additional deposit requirements imposed by the NGDC.

6 While the cost of space heating conversions is not an issue for new homes or
7 projects that would serve new developments, the historical reluctance of existing
8 residences to convert to natural gas has been the result of two primary factors: the
9 upfront Contributions In Aid of Construction (“CIAC”) requirement and the costs of
10 converting existing space heating equipment. With regard to new residential
11 developments, a similar problem exists and was exacerbated during the Great Recession
12 that began in 2008. That is, historically NGDCs have required residential developers to
13 make either upfront refundable deposits (advances) until such new homes are built and
14 customers are using natural gas, or to provide non-refundable contributions to pay for the
15 expected economic shortfall of expanding natural gas mains into the new development.
16 Whether real or perceived, these upfront cash contributions to make natural gas available
17 have, at the very least, increased developers’ cash working capital requirements, and at
18 most, reduced their profit margins. As such, some developers are reluctant to install
19 natural gas equipment in areas not currently served by an NGDC distribution main.
20
21

² This is not as significant for most propane heating customers; only minor modifications to their existing equipment may be required. Additionally, some oil furnaces may be converted to operate using natural gas, thereby avoiding furnace replacement costs.

1 Q. MR. WATKINS, AS HAS BEEN THE CASE WITH OTHER ENERGY
 2 SOURCES, THE PRICE OF NATURAL GAS HAS HISTORICALLY BEEN
 3 VOLATILE OVER THE YEARS. IS THE CURRENT COST DIFFERENTIAL
 4 BETWEEN NATURAL GAS AND OTHER SOURCES OF ENERGY EXPECTED
 5 TO CONTINUE?

6 A. Yes. As is well known in the industry, there has been a large increase in the
 7 supply of natural gas in the United States, which has driven the price of this commodity
 8 down substantially. All forecasts that I have seen and am aware of predict natural gas
 9 prices to remain at relatively low levels for the next several years. For example, the
 10 United States Department of Energy Information Administration's ("EIA") February
 11 2018 long-term forecast of energy prices provides the current and forecasted national
 12 average residential delivered prices of energy per dekatherm (nominal dollars):³

Residential Delivered Price Per Dth
(Nominal Dollars)⁴

Energy Source	Year		
	2018	2020	2030
Natural Gas	\$10.62	\$11.88	\$16.58
Electricity	\$37.91	\$42.06	\$55.56
Heating Oil	\$19.30	\$24.61	\$37.50
Propane	\$16.74	\$18.59	\$25.71

13
 14
 15
 16
 17
 18
 19 As can be seen above, the current national average price advantage of natural gas over the
 20 next lowest energy source (propane) is almost 60%. Furthermore, although nominal
 21 natural gas prices are projected to increase between 2018, 2020, and 2030, natural gas is

³ Annual Energy Outlook 2018, With Projections to 2050 U.S. Energy Information Administration, February 6, 2018, Table A3.

⁴ Includes commodity, transportation, and distribution costs.

1 expected to remain far less expensive than other alternative energy sources well into the
2 future.

3 **Q. DO YOU HAVE ANY CONCLUDING COMMENTS AND**
4 **RECOMMENDATIONS REGARDING THE GENERAL POLICY OF MAIN**
5 **EXTENSIONS IN ORDER TO MAKE NATURAL GAS MORE AVAILABLE IN**
6 **UNSERVED AREAS WITHIN CUC'S SERVICE AREA?**

7 A. Yes. While the DPA and I support ratemaking methods that promote the
8 expansion of natural gas service to unserved and underserved areas within the Company's
9 service area, any such initiatives or programs should not come at the expense of existing
10 ratepayers. Furthermore, the risks associated with any such programs should be borne by
11 shareholders rather than existing ratepayers.

12
13 **III. CUC'S EXISTING IES SURCHARGE PROGRAM**

14 **Q. DOES CUC CURRENTLY HAVE A PROGRAM IN PLACE TO ENCOURAGE**
15 **THE EXPANSION OF NATURAL GAS AVAILABILITY IN PORTIONS OF ITS**
16 **SERVICE AREA?**

17 A. Yes. In Docket No. 12-292, the Commission authorized an Infrastructure
18 Expansion Service ("IES") rate that is currently limited to a specific predefined
19 geographical area within southeastern Sussex County. In general, this IES rate, or
20 surcharge, allows the Company to collect higher rates from new customers located in this
21 expansion area. The additional IES revenues generated from these new customers then
22 enables the expansions to become economically feasible. In other words, whereas certain
23 expansion projects could not be justified economically under the current (non-IES) rates,

1 they become economically feasible with the additional revenue generated from the IES
2 surcharge. Under the current IES tariff provisions, new potential residential extensions in
3 this geographical area may go forward if a project is deemed economically feasible based
4 upon projections and parameters set forth in a Commission-approved Discounted Cash
5 Flow model referred to as the Internal Rate of Return Model (“IRRM”).⁵

6 **Q. HAS THE CURRENT IES PROGRAM PROVEN TO BE SUCCESSFUL?**

7 A. The current program appears to be successful and beneficial both to CUC
8 shareholders and ratepayers overall, based on two major factors. First, CUC has been
9 able to attract several new large commercial and industrial customers that utilize a
10 significant amount of natural gas and contribute a large amount of delivery revenue
11 annually. Second, the individual expansion projects have required relatively short mains
12 extensions and connected relatively densely populated residential neighborhoods.

13 **Q. BEFORE WE DISCUSS THE SPECIFICS OF CUC’S PROPOSAL IN THIS**
14 **CASE, PLEASE BRIEFLY EXPLAIN THE METHODOLOGY, INPUTS, AND**
15 **ASSUMPTIONS UTILIZED IN THE COMMISSION-APPROVED IRRM.**

16 A. As mentioned earlier, the IRRM is a Discounted Cash Flow model in which future
17 net cash flows are discounted to a present value basis in order to evaluate the feasibility
18 of a particular project. That is, while most, if not all, of the capital investment required
19 for an expansion project is incurred in the first year or two, these are reflected as cash
20 outflows. Because distribution mains and services have a very long expected life, the
21 IRRM projects future cash inflows (revenues net of variable expenses and taxes) annually

⁵ For commercial and industrial applications, the Company may utilize a six times revenue test in lieu of the IRRM.

1 for 57 years. These cash inflows are then discounted at the cost of capital to a present
2 value basis.⁶

3 The results of the IRRM are critically dependent on certain input assumptions and
4 projections. These input assumptions include: the expected installed capital cost of the
5 expansion mains, service lines, and meters; the projected customer penetration rate (i.e.,
6 the number of customers that will actually take service from CUC in the project
7 expansion area); and the projected average natural gas usage per customer. While CUC
8 should be able to reasonably project the capital investment required for any potential
9 expansion project, the level of customer participation, and to a lesser extent, the average
10 usage per customer, are uncertain. The level of customer participation can and will vary,
11 not only in absolute terms but also in the timing in which customers actually begin taking
12 service from CUC. To illustrate, consider two examples.

13 The first example is for expansion to a new (undeveloped) residential subdivision.
14 Assumptions are made as to how quickly the developer and builder will build and sell
15 homes within the new subdivision. Because the IRRM measures revenues annually over
16 time, if the actual buildout is slower than expected, the revenues contributed to this
17 expansion project will not be sufficient to justify the project. The second example is for
18 expansion to an existing residential neighborhood or subdivision. Assumptions are made
19 as to how many homes will convert to natural gas as well as how quickly they will
20 convert to natural gas. In addition, because existing homes already have a space heating
21 source other than natural gas, assumptions must be made as to how many customers will

⁶ For those not familiar with present value analyses or discounting, a cash inflow (outflow) received in the future is not worth the same as a cash inflow (outflow) received today; thus, it is “discounted.” The algebraic formula for a present value factor in a given year is $1/[(1+r)^i]$, where r is equal to the discount rate and i is equal to the year into the future.

1 convert to natural gas for all heating and cooking needs as well as those for only cooking
2 or only for water heating. Unlike the example for a new development wherein the builder
3 will install natural gas space heating equipment in all homes, there is considerable
4 uncertainty as to how many customers will convert to natural gas as well as how long it
5 will take the existing homeowners to make the conversion to natural gas. Each of the
6 assumptions embedded in the IRRM creates such uncertainty that if the participation or
7 timing of natural gas conversions are lower or slower than anticipated, CUC may not
8 actually achieve the required level of revenues to justify the project.

9 It should also be noted that for commercial/industrial projects, CUC typically
10 utilizes a standard of six times annual revenues for evaluating project feasibility. The
11 same risks as those discussed above are also true under the six times revenue test.

12
13 **IV. CUC'S PROPOSALS IN THIS APPLICATION**

14 **Q. PLEASE EXPLAIN THE COMPANY'S PROPOSALS IN THIS CASE.**

15 A. The Company is requesting that it be allowed to apply its currently-approved IES
16 surcharge as needed throughout its service area. Specifically, CUC is requesting that
17 potential projects be evaluated both with and without the IES surcharge. If a project is
18 deemed to be economically feasible without the IES surcharge, the project may go
19 forward (this is the current status quo). However, CUC will also evaluate a project with
20 the IES surcharge anywhere in its service area; if the additional revenue contributed from
21 the IES surcharge then economically justifies the feasibility of a project, that project may
22 go forward with those customers paying the IES surcharge. In summary, the Company is

1 seeking authority to utilize the IES surcharge anywhere in its service area on an as-
2 needed basis.

3 **Q. UNDER THE COMPANY'S PROPOSAL, HOW LONG WOULD CUSTOMERS**
4 **BE SUBJECT TO THE IES SURCHARGE?**

5 A. According to the testimony of Company witness Shane Breakie, the IES
6 surcharge would remain in effect indefinitely until such time as the "IES rates are
7 changed by the Commission."

8 **Q. IS THE COMPANY'S PROPOSAL ACCEPTABLE AND IN THE PUBLIC**
9 **INTEREST?**

10 A. Not as proposed. While the DPA and I support the expansion of natural gas
11 availability within the State of Delaware, the Company's application as proposed places
12 too much risk on existing ratepayers. Furthermore, there is no mechanism for eventually
13 aligning expansion customers' rates with all other customers' natural gas distribution
14 rates.

15 **Q. PLEASE EXPLAIN THE RISKS IMPOSED UPON EXISTING RATEPAYERS**
16 **UNDER THE COMPANY'S PROPOSAL.**

17 A. As discussed earlier, there are critical and uncertain assumptions relating to the
18 participation, timing, and natural gas usage of new customers embedded into the IRRM
19 formula. Although CUC is eager to grow its business in Delaware by extending mains to
20 unserved areas, the risks of these expansion projects would fall on existing ratepayers. If
21 the participation and utilization assumptions fall short of the projections, there will not be
22 enough revenue generated to cover the incremental cost associated with these projects.
23 However, under CUC's proposal, the capital investment would be included in the

1 Company's rate base. All existing ratepayers would be required to fund the shortfall,
2 thereby subsidizing expansions with no financial consequences to shareholders. Indeed,
3 it is my opinion that because ratepayers will cover the shortfall, CUC has an incentive to
4 be overly optimistic in its projections regarding new customer participation rates and
5 utilization of natural gas.
6

7 **V. DPA'S RECOMMENDED MODIFICATIONS TO CUC'S PROPOSALS**

8 **Q. ARE THERE MODIFICATIONS TO CUC'S PROPOSAL THAT WOULD**
9 **ENABLE THE COMPANY TO EXPAND ITS BUSINESS AND ALSO REDUCE**
10 **THE RISK OF SUCH EXPANSIONS TO EXISTING RATEPAYERS?**

11 A. Yes. Should the Commission support the concept of expanding the IES surcharge
12 program to include the entire CUC service area, the following modifications to the
13 Company's proposal are recommended:

- 14 (1) the IES program may not include the acquisition of existing distribution
15 systems currently supplied with propane;
16
17 (2) CUC should be subject to an annual capital spending limit of \$2.5 million
18 for expansion projects (in the aggregate), after which prior Commission
19 approval shall be required;
20
21 (3) for existing residential developments and neighborhoods, an \$800
22 refundable deposit (for up to five years) per customer should be required
23 before a project proceeds;
24
25 (4) for new residential developments and neighborhoods, a developer/builder
26 customer advance of \$3,700 should be required for each lot;
27
28 (5) for all expansion projects, if actual annual revenues are less than assumed
29 revenue levels utilized in the project feasibility analysis, then for
30 ratemaking purposes, revenues will be imputed to equal the level of
31 revenues contained in the project feasibility study (IRRM or six times
32 revenue test);
33

- 1 (6) customers will receive an allowance of 100 feet of mains extensions at no
2 charge to the customer;
3
4 (7) for all projects that require mains extensions greater than 100 feet times
5 the number of customers, the IES surcharge will apply;
6
7 (8) the IES surcharge will be limited to 10 years (120 months) from the time
8 service is initiated;
9
10 (9) the IES surcharge will be redesigned from the current fixed monthly
11 charge structure to a volumetric usage structure; and
12
13 (10) the IRRM will include only truly variable expenses.
14

15 **Q. PLEASE EXPLAIN THE BASIS FOR YOUR RECOMMENDED**
16 **MODIFICATION THAT THE IES PROGRAM MAY NOT INCLUDE THE**
17 **ACQUISITION OF EXISTING DISTRIBUTION SYSTEMS CURRENTLY**
18 **SUPPLIED WITH PROPANE.**

19 A. There are several residential neighborhoods within the Company's service area
20 that are served with unregulated propane distribution systems. There is currently an open
21 docket (Docket No. 16-0161) concerning the potential for CUC to acquire some of these
22 propane distribution systems. While there are numerous questions and issues concerning
23 whether CUC should be able to acquire these propane distribution systems, a major
24 question concerns whether CUC shall be entitled to recover acquisition premiums over
25 book value. As a result, I recommend that until the Commission issues a decision in
26 Docket No. 16-0161, conversions of existing propane distribution systems to natural gas
27 not be included within the IES surcharge program.

28 **Q. PLEASE EXPLAIN YOUR RECOMMENDED ANNUAL CAPITAL SPENDING**
29 **LIMIT OF \$2.5 MILLION FOR EXPANSION PROJECTS.**

1 A. In order to mitigate the risk to ratepayers, I recommend that a \$2.5 million cap be
2 placed on total annual capital expenditures associated with expansion projects. I
3 determined this spending cap based on the actual three-year average of CUC's capital
4 expenditures within the existing IES expansion area.⁷

5 **Q. PLEASE EXPLAIN THE BASIS FOR YOUR RECOMMENDATION TO**
6 **REQUIRE AN \$800 REFUNDABLE DEPOSIT FOR EXPANSIONS TO SERVE**
7 **EXISTING RESIDENTIAL NEIGHBORHOODS.**

8 A. According to the Company's proposal, customer applications will be required
9 before an expansion project begins. While this requirement is a step in the right
10 direction, a simple "application" does not provide any assurances that the customer will
11 actually take service from (and contribute revenues to) CUC. Potential new customers
12 should have some "skin in the game" that extends beyond a non-binding application, and
13 a sufficiently large refundable deposit shows the Company that a customer is committed,
14 not just interested. As discussed previously, conversion costs may discourage a customer
15 from converting their home heating system to natural gas; thus, the required \$800
16 refundable deposit, providing the customer up to five years to convert its home heating
17 system to natural gas, appropriately balances the interests of potential new customers and
18 existing ratepayers.

19 **Q. PLEASE EXPLAIN YOUR RECOMMENDATION THAT A \$3,700 CUSTOMER**
20 **ADVANCE PER LOT BE REQUIRED FOR NEW RESIDENTIAL**
21 **DEVELOPMENTS.**

⁷ Calculated per CUC's response to DPA-1.7, the 2014 to 2016 average annual capital spending was \$2.295 million. I rounded this amount up to \$2.5 million.

1 A. It is widely known that the success and buildout of new residential developments
2 is subject to general economic conditions and the overall housing market for new home
3 sales. Furthermore, even with a favorable economic climate, it often takes several years
4 until a new residential development is fully built out. In order to protect existing
5 ratepayers, developers/builders should be required to make a \$3,700 refundable customer
6 advance for each lot in the development area. I have determined this \$3,700 customer
7 advance by evaluating the capital costs associated with mains and services within the
8 Hunters Ridge subdivision divided by the number of customers.⁸

9 **Q. PLEASE EXPLAIN YOUR RECOMMENDATION THAT IF THE ACTUAL**
10 **REALIZED REVENUES ARE LESS THAN THE ASSUMED REVENUES USED**
11 **FOR PROJECT FEASIBILITY STUDIES, REVENUES WILL BE IMPUTED**
12 **BASED ON THE ASSUMED LEVEL OF REVENUES FOR RATEMAKING**
13 **PURPOSES.**

14 A. Without this provision, CUC has an incentive to be overly optimistic regarding
15 the timing, number of customers, and ultimate annual distribution revenue collected from
16 customers within an expansion project. Furthermore, since this will serve to grow its
17 business, CUC should be responsible (at risk) for any shortfall in the revenues collected
18 as a result of the IES surcharge program (expansion projects). The imputation of
19 revenues due to lower than expected participation and utilization rates will not be
20 conducted on a project-by-project basis, but rather will be determined annually in the
21 aggregate for all residential IES surcharge customer expansions.

22

⁸ Per CUC's response to PSC-1.19(a).

1 **Q. PLEASE EXPLAIN YOUR RECOMMENDATIONS FOR AN ALLOWANCE OF**
2 **100 FEET OF MAINS EXTENSIONS AT NO CHARGE TO THE CUSTOMER**
3 **AND THAT ALL PROJECTS EXCEEDING 100 FEET PER CUSTOMER WILL**
4 **BE SUBJECT TO THE IES SURCHARGE.**

5 A. First, it should be noted that this allowance was in place prior to the approval of
6 the current IES expansion program; it was removed from the Company’s tariff in the
7 settlement reached in Docket No. 12-292. Because the new IES surcharge program will
8 apply throughout CUC’s service area, there should be a provision to allow for very short
9 mains extensions (less than 100 feet per customer) in areas that CUC currently serves
10 where a residence or lot is located in a cul-de-sac within an existing neighborhood that
11 already receives natural gas, or is located on the opposite side of the street from the
12 existing main, thereby requiring a very short main extension. Under these such
13 conditions, the new customer in this already served (legacy) area would not be subject to
14 the IES surcharge. However, these minor extensions would also be subject to the IRRM
15 (without IES surcharge revenue) being economically viable. Therefore, under my
16 recommendation, minor expansions within the areas currently served by CUC would
17 provide for an allowance of 100 feet of mains extensions per customer at no charge and
18 these new customers would not be subject to the IES surcharge. In this way, minor
19 projects within the currently served areas and that are economically viable without an IES
20 surcharge will not be overly burdensome from a recordkeeping perspective.

21 To be clear, for expansion projects that will be subject to the IES surcharge, if a
22 new customer within that expansion project connects several years down the road and the
23 main extension is less than 100 feet, this new customer would still be subject to the IES

1 surcharge since the new customer is part of an expansion project subject to the IES
2 surcharge.

3 **Q. PLEASE EXPLAIN YOUR RECOMMENDATION THAT THE IES**
4 **SURCHARGE SHOULD BE LIMITED TO 10 YEARS FROM THE TIME**
5 **SERVICE IS INITIATED.**

6 A. Under the Company's proposal, a customer's IES surcharge remains in effect
7 indefinitely. In my opinion, it is better ratemaking policy to have a definite time limit for
8 this type of surcharge. Furthermore, a defined time limit will provide potential new
9 customers with better information as to how long they will be required to pay the higher
10 IES rates. Therefore, I recommend that the IES surcharge be limited to 120 months after
11 service is initiated as a result of new customers added within an expansion project. In
12 developing the assumed level of revenues within the IRRM for project feasibility
13 analyses, the Company's revenue modeling should also incorporate a 10-year time
14 horizon for IES surcharge revenues. In this regard, it should be noted that while this
15 somewhat stricter requirement for project expansions due to the loss of additional
16 revenues in Years 11 through 57, the reality is that because these future revenues are
17 discounted, they will not have as much impact as the higher IES revenues collected in the
18 first 10 years.

19 **Q. HOW WILL CUSTOMERS CURRENTLY PAYING AN IES SURCHARGE**
20 **WITHIN THE EXISTING EXPANSION AREA BE IMPACTED UNDER YOUR**
21 **RECOMMENDATION?**

22 A. Under the current IES program, there is no sunset provision for the IES surcharge.
23 Given the evidence provided in discovery, these projects have been successful. Thus, I

1 recommend that the IES surcharge for customers currently participating in the IES
2 program be maintained for 10 more years after the Final Order in this case.

3 **Q. PLEASE EXPLAIN YOUR RECOMMENDATION CONCERNING THE**
4 **REDESIGN OF THE IES SURCHARGE FROM A FIXED MONTHLY**
5 **SURCHARGE TO A VOLUMETRIC USAGE SURCHARGE.**

6 A. First, it must be remembered that under the current IES surcharge program,
7 residential customers are subject to two different IES surcharges. For those residential
8 customers utilizing 240 CCF or less per year, the monthly IES surcharge is \$3.00. For
9 those residential customers utilizing more than 240 CCF per year, the monthly surcharge
10 is \$18.25. While it is not known how these surcharges were developed, a volumetric
11 surcharge provides a better price signal to customers and will allow more residential
12 developments with larger homes or whose residence use more natural gas to become
13 economically feasible than would otherwise be with a fixed monthly surcharge. Under
14 my recommendation, there will be a single volumetric IES surcharge of \$0.4662 per CCF
15 (regardless of annual usage).

16 **Q. HOW DID YOU DEVELOP YOUR RECOMMENDED IES SURCHARGE OF**
17 **\$0.4662 PER CCF?**

18 A. In response to DPA-1.7, the Company provided the annual volumes and number
19 of customers participating in the existing IES program. During 2017, the 2,235
20 residential customers participating in the IES program utilized 737,236 MCF. This
21 response also provided a separation between the current surcharges imposed for RS-1
22 (less than 240 CCF annually) and RS-2 (greater than 240 CCF annually). As a result, I

1 was able to calculate the effective volumetric rate associated with the current IES
2 surcharge as shown below:

3
4 **CHESAPEAKE UTILITIES, CORPORATION**
5 **Determination of Volumetric IES Rate**
6 **(2017)**

	<u>RS-1</u>	<u>RS-2</u>	<u>Total</u>
			<u>RS</u>
7 MCF	51,511	685,775	737,286
8 Customers	420	1,815	2,235
9 Avg. MCF			330
Current IES Rate	\$3.00	\$18.25	
Wgtd. Avg. IES Rate	\$0.56	\$14.82	\$15.38
10 Volumetric IES Rate per CCF			\$0.4662

11
12 **Q. PLEASE EXPLAIN YOUR RECOMMENDATION THAT THE IRRM SHOULD**
13 **ONLY INCLUDE TRULY VARIABLE EXPENSES.**

14 A. In reviewing the Company's IRRM, I observed a provision for what appears to be
15 a very high level of "variable" O&M expenses per customer. On March 1, 2018, CUC
16 provided to Staff the updated variable cost analyses utilized in its IRRM. In reviewing
17 the specifics of these variable costs, I observed that several of the O&M costs are not
18 variable costs, but rather are fully allocated costs. For example, the variable residential
19 O&M costs included in the IRRM are \$█ per customer per year. Of this amount,
20 \$█ is related to an allocation of administrative & general expenses. Virtually all
21 A&G expenses are fixed in nature and will not vary to any degree with the addition of a
22 few new customers. Similarly, there is a provision for approximately \$█ per customer
23 per year for supervision of customer accounting expenses and \$█ per customer per

1 year for supervision of distribution O&M expenses. These supervision costs are also
2 largely fixed in nature and do not vary with the number of customers. As a result, I
3 recommend that the variable costs utilized for IRRM purposes not include these allocated
4 fixed costs, and that the IRRM model use an annual variable residential cost per customer
5 of \$ [REDACTED] (\$ [REDACTED] minus \$ [REDACTED] minus \$ [REDACTED] minus \$ [REDACTED] - rounded). This expense reduction
6 of \$ [REDACTED] per customer per year within the IRRM will have a positive impact on the
7 feasibility of future expansion projects.

8 **Q. DOES THIS COMPLETE YOUR TESTIMONY?**

9 A. Yes.