

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Vectren)	
Energy Delivery of Ohio, Inc. for Approval)	Case No. 18-0298-GA-AIR
of an Increase in Gas Rates)	

In the Matter of the Application of Vectren)	
Energy Delivery of Ohio, Inc., for Approval)	Case No. 18-0299-GA-ALT
of an Alternative Rate Plan)	

**DIRECT TESTIMONY OF
SCOTT E. ALBERTSON
ON BEHALF OF
VECTREN ENERGY DELIVERY OF OHIO, INC.**

<u> </u>	Management policies, practices, and organization
<u> </u>	Operating income
<u> </u>	Rate base
<u> </u>	Allocations
<u> </u>	Rate of return
<u> X </u>	Rates and tariffs
<u> X </u>	Other (Alternative Rate Plan: Energy Conversion Factor, Straight Fixed Variable for Group 1 General Service Customers, Statutory Compliance)

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**Direct Testimony of
Scott E. Albertson**

I. BACKGROUND AND QUALIFICATIONS

Q1. Please state your name and business address.

A. Scott E. Albertson, One Vectren Square, Evansville, Indiana 47708.

Q2. What position do you hold with Vectren Energy Delivery of Ohio, Inc. (VEDO or the Company)?

A. I am Vice President, Regulatory Affairs and Gas Supply for Vectren Utility Holdings, Inc. (VUHI), the immediate parent company of VEDO. I also hold this same position with two other utility subsidiaries of VUHI – Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of Indiana, Inc. (Vectren North) and Southern Indiana Gas and Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc. (Vectren South).

Q3. Please describe your educational background.

A. I received a Bachelor of Science degree in mechanical engineering from Rose-Hulman Institute of Technology in 1984. I have been a registered professional engineer in Indiana since 1990 (registration number 900464).

Q4. Please describe your professional experience.

A. I have over 30 years' experience in the utility industry. I began my career with Ohio Valley Gas Corporation in a project engineering position. I have worked at VUHI and its predecessor companies since 1987 in a variety of roles including Operations Staff Manager, Assistant Chief Engineer, Director of Engineering Projects, and Director of Engineering. I was named Director, Regulatory Affairs for VUHI in 2004, and was promoted to my current position in 2012.

1 **Q5. What are your present duties and responsibilities as Vice President, Regulatory**
2 **Affairs and Gas Supply for VUHI?**

3 **A.** I am responsible for coordinating regulatory and rate matters of VUHI's regulated
4 utilities in proceedings before the Public Utilities Commission of Ohio (Commission) and
5 the Indiana Utility Regulatory Commission. In addition, I am responsible for overseeing
6 the gas supply and gas transportation functions for VUHI's gas utilities, and for MISO
7 Affairs related to VUHI's Indiana electric utility.

8 **Q6. Have you previously testified before the Commission?**

9 **A.** Yes. I have sponsored testimony in several cases before the Commission, including
10 VEDO's most recent rate case (Case No. 07-1080-GA-AIR) as well as cases pertaining to
11 VEDO's Distribution Replacement Rider (Case Nos. 13-1571-GA-ALT and 10-595-GA-
12 RDR) and purchased gas adjustment clause (Case Nos. 08-220-GA-GCR, 07-220-GA-
13 GCR, 05-220-GA-GCR, and 04-220-GA-GCR).

14
15 **II. SUMMARY**

16 **Q7. What is the purpose and scope of your testimony in this proceeding?**

17 **A.** My testimony will provide support for VEDO's rate design and tariff proposals,
18 including proposals contained in VEDO's Alternative Rate Plan. I will begin by
19 discussing various tariff changes, including support for changes to Miscellaneous
20 Charges and VEDO's proposal to adopt an automatic approval mechanism for updates to
21 the Unaccounted For Gas percentage. I next address two of VEDO's Alternative Rate
22 Plan proposals, namely, the Company's proposal to implement an Energy Conversion
23 Factor (ECF), and to expand straight fixed variable (SFV) rate design to VEDO's
24 smallest General Service Customers. I will then discuss VEDO's general approach to

designing rates in this case. Finally, I will support the Company's compliance with the statutory requirements applicable to the Alternative Rate Plan.

I am also responsible for various Standard Filing Requirements schedules including Schedule E-1 (clean copy of the proposed Tariff for Gas Service (Tariff)), Schedule E-2 (clean copy of current tariff), Schedule E-2.1 (scored and redlined copy of current tariff schedules) and Schedule E-3 (narrative rationale for tariff changes), which were either prepared by me or under my direction and supervision.

Schedule E-3 provides cross-references to Schedule E-1 through the use of a Tariff Sheet Identifier. Certain segments of Schedule E-3, and the corresponding sections of the Tariff, are jointly sponsored by other witnesses, as follows:

Witness	Tariff Sheet No.	<u>Schedule E-3</u> Page	Subject Matter
Patrick C. Edwards	20	20	Creditworthiness
	21	23	Supplier Requirements
	21	24	Supplier Requirements
	23	26	Supplier Requirements
Russell A. Feingold	multiple	1	Rate Design
	multiple	2	Rate Design
	13	9	Rate Design
	14	10	Rate Design
	15	11	Rate Design
K. Chase Kelley	70	79	Alternative Rate Plan

1 **III. PROPOSED TARIFF CHANGES**

2 **Q8. Will you be specifically discussing every tariff change proposed in Schedule E-1 in**
3 **your direct testimony?**

4 A. No. As noted, I am sponsoring Schedule E-3, which addresses the tariff revisions
5 contained in Schedule E-1. Given that Schedule E-3 provides explanations of the
6 changes, I will only highlight a few of the proposed revisions in my testimony.

7 **Q9. Please describe the most significant revisions to VEDO's rate schedules.**

8 A. As noted above, VEDO is proposing to implement SFV rate design for its smallest
9 General Service customers. Further, many of the rate schedules reflect VEDO's proposal
10 to incorporate the ECF. I provide a detailed discussion of both proposals later in my
11 testimony. The Company is also proposing to eliminate Rate 341 – Dual Fuel Standard
12 Choice Offer Service. Currently only one customer receives service under Rate 341, and
13 VEDO has begun working with that customer on a plan that would move them to a
14 General Service Rate Schedule.

15 **Q10. Does VEDO propose any changes to its Miscellaneous Charges on Sheet No. 30 of**
16 **the Tariff?**

17 A. Yes. First, the Company has proposed increases to certain Miscellaneous Charges. These
18 include increases to the fees charged to conduct investigations related to a customer's
19 fraudulent or damaging practice, the incremental charge for connecting, reconnecting or
20 disconnecting service outside of normal business hours at the customer's request, and the
21 Trip and Labor charge to conduct investigations of "no gas" or "low pressure" outside of
22 normal business hours. The Trip and Labor charge is only assessed when the source of
23 any problem discovered is not on the Company's system. Charges for all of these work
24 activities have been previously approved by the Commission; the proposed changes are
25 updates to reflect the Company's review of the actual costs associated with performing

1 the work. The analysis supporting the proposed changes to the respective charges is
2 included in Attachment A to my testimony.

3 Second, VEDO has proposed new language to more clearly explain how
4 Unauthorized Gas Usage Charges applicable to Rate 345 and Rate 360 customers, and
5 Pool Operators, are determined.

6 Finally, the Company has clarified the applicability of the Late Payment Charge,
7 and proposed a new Avoided Disconnection Charge.

8 **Q11. What is the basis for the proposed Avoided Disconnection Charge?**

9 A. VEDO's currently effective Miscellaneous Charges include a charge for reconnection of
10 service. The components of that charge include costs to both disconnect and reconnect
11 service; the charge is simply assessed upon reconnection. VEDO also allows customers
12 who are subject to disconnection to make a payment to the Company representative who
13 has been dispatched to the customer's premises to disconnect service—thus allowing the
14 customer to avoid disconnection. The proposed Avoided Disconnection Charge is
15 intended to recover a portion of the cost VEDO incurs to make the trip to the customer's
16 premises. The Company's actual cost related to this activity is greater than the proposed
17 \$15.00 charge; however, VEDO has proposed the charge at this level in order to be
18 consistent with a similar charge that has been approved for another Ohio gas utility. If the
19 Avoided Disconnection Charge is approved, customers who cause that cost to be incurred
20 will bear that level of responsibility. Cost support for this proposed charge is also
21 included in Attachment A.

22 **Q12. Is there anything else that you would highlight?**

23 A. Yes, I would note that certain riders are reset to zero as presented in Schedule E-1,
24 namely the Distribution Replacement Rider (DRR) and the Energy Efficiency Funding

1 Rider (EEFR). As explained in Schedule E-3, the resetting to zero reflects the fact that
2 the costs recoverable in those Riders have been included in base rates in this proceeding.
3 These Riders will remain in place and recover incremental costs beyond those captured in
4 proposed base rates. As also noted in Schedule E-3, following the transition to recovery
5 through base rates, there will likely be an over- or under-recovery variance component
6 for each of these mechanisms that will be captured in the Rider rates in place at the time
7 new rates are implemented. Those variances will remain in the respective Riders. The
8 remaining variance not yet collected in the Rider cannot be estimated at this time, so
9 VEDO did not include a proposed rate in Schedule E-1. At the point when base rates are
10 approved in this proceeding, VEDO will update the DRR and EEFR rates to reflect only
11 the remaining variance component, until the next subsequent annual filing of each
12 respective mechanism. The variance component that will remain will be identified in
13 each Rider filing, and these amounts will also be subject to reconciliation as necessary in
14 later updates to the Riders.

15 I would also note that the rate reflected in the Tariff for the Exit Transition Cost
16 Rider (Sheet No. 41) includes a non-zero rate. As explained in Schedule E-3, VEDO is
17 proposing to include in base rates certain costs recoverable in that Rider and has removed
18 references to those costs from the currently-effective tariff sheet. The non-zero rate
19 shown in the Tariff represents the cost components currently in the Rider rate that are to
20 remain in the Rider. At the time new base rates are implemented in this proceeding, that
21 rate will almost certainly not be the same as is shown in the Tariff in Schedule E-1.

1 **Q13. What is VEDO's proposal with respect to updates to its Unaccounted For Gas**
2 **Percentage?**

3 A. As discussed in the Application filed in this proceeding, VEDO is proposing that the
4 Unaccounted For Gas (UFG) Percentage, set forth in updated Sheet No. 54 of the Tariff,
5 be subject to automatic approval. VEDO will continue to update its UFG Percentage
6 periodically, as necessary, via the filing of an application with the Commission. The
7 Company will continue to provide the necessary exhibits and other supporting
8 information as appropriate and requested by Staff. VEDO proposes that after a review
9 period of 45 days, if no action has been taken to approve, suspend, or deny the
10 application, the updated UFG percentage would be deemed approved on the 46th day.

11 **Q14. Why is VEDO proposing automatic approval of updates to the UFG Percentage?**

12 A. The UFG Percentage dictates the necessary supply volumes that Pool Operators, Choice
13 Suppliers, and SCO Suppliers must deliver to the VEDO system on behalf of their
14 respective segments of VEDO's customers. When it becomes apparent that the UFG
15 percentage on the VEDO system has changed, the sooner those changes can be reflected
16 in the Tariff, the sooner that deliveries to the system will be better matched with actual
17 operating conditions. The Commission will certainly retain the right to suspend the
18 automatic approval if it deems that necessary. Typically, however, the information
19 included in the UFG application is very straightforward. VEDO believes that the
20 administrative burden associated with these filings can be minimized under an automatic
21 approval construct.

1
2 **IV. RATE DESIGN – ENERGY CONVERSION FACTOR**

3 **Q15. Is VEDO proposing in this case to modify how costs recovered via volumetric**
4 **charges are billed to its customers?**

5 A. Yes. As shown on Sheet No. 47 of the Tariff, in Schedule E-1, VEDO is proposing to
6 implement an Energy Conversion Factor (ECF) that, when multiplied by a customer's
7 metered usage, modifies volumetric usage to reflect the actual energy consumed by the
8 customer. The ECF effectively adjusts the customer's metered usage such that the basis
9 for billing (referred to as "Billing CCF" in the Tariff) reflects the volume of gas that the
10 customer would have used (all else equal) had the energy (or Btu) content of the gas
11 through the meter not changed since the utility's last rate case. As noted, the ECF
12 proposal is part of the Alternative Rate Plan in Case No. 18-0299-GA-ALT (the Alt Plan
13 Case).

14 **Q16. Can you provide a definition of the term "Btu"?**

15 A. Yes. The Tariff includes the following definition:

16 **British Thermal Unit ("Btu")** - The average amount of heat
17 necessary to increase the temperature of one (1) pound of
18 water by 1° Fahrenheit, in the temperature range of 32° to
19 212° Fahrenheit, at 14.73 pounds per square inch absolute
20 pressure.

21
22 The United States Energy Information Administration provides this discussion regarding
23 the use of Btu and energy content:

24 **Why use British thermal units?**

25 Energy or heat content can be used to compare energy sources or fuels on
26 an equal basis. Fuels can be converted from physical units of measure
27 (such as weight or volume) to a common unit of measurement of the
28 energy or heat content of each fuel. The U.S. Energy Information

Administration (EIA) uses British thermal units as a unit of energy content.

(excerpted from the EIA website at https://www.eia.gov/energyexplained/index.cfm?page=about_Btu, last visited Apr. 11, 2018)

As related to natural gas, and for purposes of VEDO's proposal, Btu is a measure of the amount of energy contained in a unit volume of gas.

Q17. Has VEDO experienced higher Btu levels on its system since its last rate case?

A. Yes. As shown in the table below, the weighted average Btu level on VEDO's system has been materially greater in the last few years than it was at the time of its last rate case. From 2008 through 2013, Btu levels were very stable and ranged from about 1015 to 1021 Btu per cubic foot (cf) of gas. During the three-year period 2015-2017, the weighted average Btu has been about 1070 Btu/cf.

**Vectren Energy Delivery of Ohio, Inc.
Annual Weighted Average Btu**

<u>Year</u>	<u>MCF</u>	<u>DTH</u>	<u>Btu</u>
2008	57,410,854	58,622,946	1021.11
2009	51,740,332	52,764,158	1019.79
2010	54,159,009	55,003,191	1015.59
2011	53,509,483	54,290,414	1014.59
2012	50,037,369	50,895,671	1017.15
2013	56,056,886	57,239,810	1021.10
2014	59,993,032	62,270,379	1037.96
2015	54,861,865	58,770,878	1071.25
2016	54,196,991	58,075,201	1071.56
2017	53,486,357	57,236,912	1070.12
2018*	17,047,291	18,170,431	1065.88

* through February 2018

DTH = Dekatherm

1 **Q18. What circumstances led to these higher Btu levels on VEDO's system?**

2 A. Higher Btu levels on the Company's system are attributable to significant production of
3 natural gas in the Marcellus and Utica shale in western Pennsylvania, and eastern Ohio
4 Shale. Shale production's impact on natural gas prices (both current and projected) has
5 resulted in significant investments in interstate pipelines in order to access this low-priced
6 resource. Investments have included both new pipelines and "flow reversal" projects that
7 allow a pipeline that had been originally designed to move gas from west-to-east or
8 south-to-north (from the traditional supply basins) to deliver gas from these shale regions
9 to Midwest markets (like VEDO). Gas produced in these regions has exhibited a higher
10 and somewhat more volatile Btu than the Company had previously experienced.

11 **Q19. When did higher Btu levels begin to manifest in the gas on VEDO's system?**

12 A. As shown in Attachment B to my testimony, VEDO first observed a "spike" in Btu
13 content in July 2014, and over the next several months (as Btu levels continued to rise)
14 undertook an evaluation of the impact Btu levels were having on its fixed cost recovery.
15 The upward movement in Btu content beginning in 2014 is reflected in the table above as
16 well.

17 **Q20. What impact has the increase in Btu levels had on VEDO?**

18 A. The primary impact has been a reduction of VEDO's recovery of fixed costs. VEDO
19 estimates that from 2014 onward, the financial impact of the higher Btu content ranged
20 from \$1 million to \$1.5 million per year.

21 **Q21. Why do changes in natural gas Btu levels have an impact on volumetric cost**
22 **recovery?**

23 A. When rates are determined in a rate case, the billing determinants (CCF volumes) are a
24 function of, and are based on, the assumed weighted average Btu on the utility's system

1 during the test year. If this Btu level changes, it directly affects the level of fixed cost
2 recovery. That is because gas appliances and other end use equipment require energy,
3 rather than volumes of gas, to operate; as the amount of energy in a given unit volume of
4 gas changes (*i.e.*, decreases or increases), the end use equipment will require greater or
5 lesser volumes. Absent an adjustment, the portion of a gas utility's costs that are
6 recovered volumetrically will inversely vary with the Btu content of the gas.

7 **Q22. Can VEDO control the Btu content of the gas its customers use?**

8 A. No. There is no practicable way to control the Btu content of the gas on VEDO's system.
9 This is true for VEDO, and it is also true for suppliers and customers. The Btu content of
10 the gas supply on the pipelines serving the VEDO system are subject to Btu changes due
11 to activity in the production zones, and the gas flowing at any given time on the interstate
12 pipeline system to VEDO's interconnections with those pipelines is (physically) not
13 necessarily the same supply that suppliers secured on behalf of its customers. Simply put,
14 the Btu content of the gas flowing to VEDO's customers "is what it is." When Btu levels
15 are higher than test year levels, VEDO's volumetric cost recovery (under the current CCF
16 basis) is lessened because customers' end use equipment requires relatively lesser
17 volumes to operate. Conversely, when the Btu levels are lower than in the test year, the
18 end use equipment requires relatively greater volumes and (again, under the current CCF
19 billing basis) the Company's volumetric cost recovery increases.

20 **Q23. Has the Company made the Commission aware of these issues previously?**

21 A. Yes. In Case No. 15-1238-GA-AAM (the Deferral Case), VEDO requested Commission
22 approval to change its accounting methods by establishing a regulatory asset and to defer,
23 for accounting and financial reporting purposes, the impact on its revenues of higher Btu
24 gas.

1 **Q24. Did the Commission approve VEDO's request in that proceeding?**

2 A. No. In its Finding and Order in that case, the Commission denied the Company's
3 application and found that "the issues raised by this deferral application are best
4 addressed in the context of a base rate proceeding . . . where [VEDO] will have the
5 opportunity to revise its rate design." (15-1238 Order at 7.)

6 **Q25. In its Application in the Deferral Case, VEDO stated that at the time of its next rate**
7 **case, "the method of billing non-residential customers may be changed (from a CCF**
8 **basis to a therm basis, an approach used in most states), which will eliminate the**
9 **impact of Btu volatility on fixed-cost recovery and balance the interests of both**
10 **VEDO and its customers." (Appl. at 6.) How does VEDO's proposal in this case**
11 **differ from a "therm billing" approach?**

12 A. As will be discussed later in my testimony, implementation of the proposed ECF has the
13 same financial impact as would therm billing. In other words, the amount of a customer's
14 bill would be identical under either approach. VEDO has proposed the ECF in order to
15 preserve the per CCF rates to which its customers are accustomed, in an effort to simplify
16 customers' understanding of the billing change.

17 **Q26. As noted above, the Application in the Deferral Case refers to the potential method**
18 **of billing "non-residential" customers. Please explain what VEDO meant to convey**
19 **in that statement.**

20 A. The reference to "non-residential" customers in that Application reflects the fact that SFV
21 rate design has been applicable to the Company's residential customers for a number of
22 years; because residential customers pay no volumetric base rate charges, Btu changes
23 have no impact on the base rate portion of the customer's bill. In this proceeding, as will
24 be discussed later in my testimony, VEDO is proposing to expand the applicability of
25 SFV rate design to another group of customers.

Q27. Please describe the proposed Energy Conversion Factor.

A. The ECF is an adjustment applied each month to customer usage to reflect changes in the Btu content of the gas on VEDO's system. Mathematically, the ECF is the ratio of (1) the actual Btu on VEDO's system at the time of billing (updated monthly as described below), to (2) the weighted average Btu on VEDO's system during the test year (1070 per CCF). Applying the ECF to a customer's metered usage modifies that usage to reflect the actual energy consumed by the customer.

Q28. How will the ECF change the presentation of customers' bills?

A. As shown in Attachment C to my testimony, VEDO's current and proposed bills reflect the following information (new or modified billing information is shown in *italics*):

CURRENT BILL	PROPOSED BILL
The Service Period, from [date] to [date]	The Service Period, from [date] to [date]
Beginning and Ending meter readings corresponding to the Service Period	Beginning and Ending meter readings corresponding to the Service Period
CCF used, which is the difference between the Ending and Beginning meter readings	<i>Metered CCF</i> , which is the difference between the Ending and Beginning meter readings
"Multiplier"	<i>Pressure Factor</i> *
	<i>Energy Conversion Factor</i> : the ratio of the actual Btu on VEDO's system at the time of billing to the weighted average Btu on VEDO's system during the test year (1070 per CCF)
	<i>"Billing CCF"</i> , which is calculated as the Metered CCF times the Energy Conversion Factor times the Pressure Factor
* As noted on page 2 of the bill, the "Multiplier" is used currently to calculate consumption on meters where the delivery pressure (to the meter) is greater than VEDO's standard delivery pressure; a Multiplier (or <i>Pressure Factor</i>) of 1.000 indicates a standard delivery pressure system. VEDO proposes in this proceeding to rename this field as "Pressure Factor." Only the name will change, and this will have no effect on how VEDO actually applies the multiplier.	

1 In addition to the information shown in Attachment C,¹ a permanent bill message
2 (described later in my testimony) will explain how the Energy Conversion Factor is
3 determined. Volumetric charges applicable to all Rate Schedules will be applied to
4 Billing CCF to calculate the customer's bill.

5 **Q29. Please provide an example illustrating the calculation described above.**

6 A. The following illustration is further detailed in Attachment C. To illustrate the application
7 of the ECF, I will compare two bills for a given month of service, with and without the
8 ECF, assuming the following facts:

- 9 • The customer is receiving service under Rate 321, General Service – Group 2.
- 10 • The (unadjusted) Metered CCF for that month is 640.
- 11 • As of the billing date, the average Btu on VEDO's system is 1060 Btu per cf, a slight
12 drop from the test year level of 1070 Btu per cf.
- 13 • The ECF is 0.9907 (1060 divided by 1070).
- 14 • When the Metered CCF is multiplied by the ECF (and by the Pressure Factor), the
15 resulting Billing CCF is 634.048.

16 **Q30. Assuming these facts, how would the customer's bill be calculated with and without**
17 **the ECF?**

18 A. The following table shows how the two bills would be calculated:

¹ Along with current and proposed bill presentations reflecting the ECF, Attachment C includes one sample bill for each customer class (Residential, General Service and Industrial). As shown, the presentation of the Residential customer bill will be the same as the General Service customer bill. As noted previously, since SFV applies to Residential customers, Btu changes (and therefore the ECF) will have no impact on the base rate portion of those customers' bills. However, and as explained later in my testimony, the ECF does influence how volumetric Riders are billed to all customers.

With ECF		Without ECF	
Billing CCF	634.048	Metered CCF	640.000
<i>times</i> Vol. Rate	\$0.14308 per CCF	<i>times</i> Vol. Rate	\$0.14308 per CCF
<i>plus</i> Cust. Charge	\$75.00	<i>plus</i> Cust. Charge	\$75.00
Total Bill	\$165.72	Total Bill	\$166.57

In this illustration, the customer's bill is higher absent the application of the ECF.

Q31. Please explain the ramifications of the difference between the two illustrative bill amounts shown above.

A. In the illustrative example, the actual Btu has dropped below the test year Btu. All else being equal, the customer's end use equipment would have consumed more CCF simply because the amount of energy in the same volume (CCF) of gas is lower than in the test year. Absent the ECF, the customer simply pays more for the same amount of energy. The customer does not benefit from the ECF adjustment that recognizes that the additional CCF usage resulted from circumstances beyond his control—namely the lower Btu level in the gas consumed. While the incremental, higher bill amount is relatively small in the illustration, it can become more significant as actual system Btu levels move farther away from the test year level. And even relatively small departures from test year Btu levels can materially impact cost recovery when reflected over several thousand customers. Moreover, the impact on cost recovery from VEDO's larger transportation customers of even minor Btu volatility can become material, given those customers' usage is much greater than that of General Service customers.

In summary, the application of the ECF restores the Company's recovery of its fixed costs to what would have occurred absent changes in Btu levels on its system.

1 **Q32. In your example, the actual Btu level was lower than the test year level. If the actual**
2 **Btu level *exceeds* the test year level, will the ECF be greater than 1.000?**

3 A. Yes; the ECF is symmetrical, which allows the billing adjustment to balance the interests
4 of both the Company and its customers. For example, an actual Btu level of 1075 Btu per
5 cf yields an ECF of 1.0047. In that instance the Billing CCF would be greater than the
6 Metered CCF, reflecting the fact that the customer's end use equipment required lesser
7 volumes to satisfy its requirements.

8 **Q33. Will "Billing CCF" be the basis for charges associated with VEDO's Riders?**

9 A. Yes, any volumetric (per CCF) Rider rates will be applied to the customer's Billing CCF.
10 All Riders will continue to be reconciled, with over- or under-recoveries reflected in a
11 subsequent Rider filing.

12 **Q34. Will the ECF impact commodity cost rates?**

13 A. The derivation of the Standard Choice Offer (SCO) price will change slightly if the ECF
14 is approved. Currently, the New York Mercantile Exchange (NYMEX) settlement price
15 for the applicable month is converted from a per-Dth price to a per-Mcf price by
16 multiplying the settlement price by a standard Btu level established prior to the annual
17 SCO auction for the 12-month auction period. Because the ECF will reflect the Btu
18 applicable to the billing month, the NYMEX price will instead be multiplied by the test
19 year Btu (in this case, 1.070 Dth per Mcf). The test year Btu will remain constant in the
20 SCO price calculation until VEDO's next rate case. Moreover, the application of the ECF
21 would be expected to produce commodity revenues that more closely track the volume of
22 commodity supplied, which, all else equal, would tend to reduce true-ups included in the
23 annual updates to the Exit Transition Cost Rider.

1 **Q35. How often will the ECF be updated?**

2 A. The ECF, as well as Sheet No. 47 in the Tariff, will be updated monthly as VEDO
3 obtains the applicable Btu information from the pipelines interconnected to its system.
4 VEDO proposes that the monthly updates to the ECF be effective as of the first calendar
5 day of the month following their submission. The calculation is very straightforward, but
6 the Company is willing to provide to Staff whatever supporting information it may
7 require to substantiate the ECF in effect at any particular time.

8 **Q36. How does therm billing differ from the use of the ECF?**

9 A. The processes are not entirely dissimilar, but there are differences. First, it is important to
10 understand that in a therm billing environment, a customer's CCF usage is multiplied by
11 a "therm conversion factor" that reflects the actual Btu per cf at the time of billing. Said
12 differently, the "Metered CCF" is multiplied by the therm conversion factor, resulting in
13 the total therms the customer used. In that way—the need to first measure CCF usage,
14 and then adjust it to reflect updated energy content—therm billing and the ECF are quite
15 similar.

16 In order to arrive at "per therm" rates that are consistent with the "per CCF" rates
17 proposed in this proceeding, VEDO would have performed one of two calculations. In
18 this case, the therm conversion factor would be 1.070, reflecting the test year Btu level of
19 1070. The Company would have either (1) multiplied the CCF billing determinants by
20 1.070 to arrive at the equivalent therm usage in the test year, then designed its volumetric
21 rates based on each rate schedule's therm usage, or (2) divided each "per CCF" rate by
22 1.070. Both processes would have produced the same fixed charges and per therm rates.

Q37. You mentioned previously that the customer’s bill is the same under the proposed ECF as it would have been had VEDO proposed therm billing. Can you explain?

A. Yes. For the purpose of this explanation, I will assume that the second method just discussed is used to derive “per therm” rates; that is, VEDO’s per CCF rates are divided by 1.070, the therm conversion factor.

Considering only the volumetric portion of a customer’s bill, I will first restate the proposed volumetric charge applicable to Rate 320, Group 2 as a per therm rate:

\$0.14308 per CCF, divided by 1.070 (the test year therm conversion factor),
equals \$0.13372 per therm

Next, using the same CCF usage as in our previous example, I will calculate the “volumetric” portion of the bill:

640 Metered CCF times 1.060 (the updated, monthly therm conversion factor)
equals 678.40 therms

Finally, applying the per therm rate to the therms consumed, I obtain the total bill amount:

678.40 therms times \$0.13372 per therm
equals \$90.72

For the volumetric, base rate portion of the bill, this is the same amount as calculated in the previous example showing the application of the ECF. The difference in the calculation methodology boils down to which value is adjusted for the base rate Btu

1 level. Under therm billing, the per CCF rate is divided by 1.070², and using the ECF, the
2 actual Btu level is divided by 1.070. Stated more simply, the ECF makes the adjustment
3 at the time of billing rather than at the time base rates are set, with the resulting customer
4 bill being the same in either instance. And with the ECF, customers will continue to be
5 billed per CCF rates, to which they are accustomed.

6 **Q38. Is therm billing commonplace in the gas industry?**

7 A. Yes. As shown in Attachment D to my testimony, VEDO has undertaken a review of the
8 tariffs of 125 gas utilities throughout the United States. As shown, therm billing is in
9 place for about 65 percent of those utilities. Moreover, VEDO's research indicates that
10 therm billing is in use in 41 of 50 jurisdictions.

11 **Q39. Does the Company have any experience with therm billing?**

12 A. Yes. Vectren's two Indiana gas utilities both use therm billing, and have done so since at
13 least the mid-1980s.

14 **Q40. Given the Company's understanding and experience in Indiana, why did VEDO not**
15 **propose therm billing in this proceeding?**

16 A. VEDO's primary objective is to remove the risk Btu volatility has on both customers and
17 the Company. Given that the proposed ECF produces the same financial result as does
18 therm billing, it seemed reasonable to make a proposal that did not require its customers
19 to develop an understanding of "therm billing," per se. Customers are accustomed to rates
20 stated on a per CCF basis, and that will continue under the Company's proposal.

21 **Q41. Will VEDO engage in any customer education activities related to the ECF?**

22 A. Yes. VEDO will explain the ECF using a variety of customer education and
23 communication vehicles. Upon approval in this proceeding of the ECF and new base

² 1.070 reflects the relationship between the test year Btu of 1070 per cubic foot and a Btu level of 1000 per cubic foot, which is the basis of therm billing (*i.e.*, 1070 divided by 1000).

1 rates, VEDO plans to provide a bill insert for all customers that includes a guide
2 explaining the information presented on the bill. The Company is willing to work with
3 Staff on the content of the insert. The Company also intends to include the guide in an e-
4 newsletter to all registered vectren.com customers following Commission approval, and
5 make the guide available online and in conjunction with paperless bills.

6 **Q42. Will the ECF be explained on the customer's bill?**

7 A. Yes. As shown in Attachment C to my testimony, VEDO proposes to include on page 2
8 of the customer's bill the following definition:

9 Energy Conversion Factor (ECF) – The ECF adjusts metered usage for the
10 energy content of the gas used. Energy content can vary monthly. The
11 ECF is the ratio of the current energy content to the energy content at the
12 time Vectren's base rates were established.

13
14 **Q43. Does VEDO propose changes to any of the term definitions reflected on its current**
15 **bills?**

16 A. Yes. Also reflected on page 2 of the customer's bill, VEDO proposes the following
17 revisions (new language is shown in italics) related to other proposals in this proceeding:

- 18 • Under Commercial Rate Codes, delete COM 341; VEDO is proposing to eliminate
- 19 Rate 341 (Dual Fuel Standard Choice Offer Service)
- 20 • Under Miscellaneous Charges – change returned check charges to returned *payment*
- 21 charges
- 22 • As previously noted, change Multiplier to *Pressure Factor*
- 23 • Other minor clerical changes

24
25 These changes are also included in Attachment C to my testimony.
26

27 **Q44. If the Commission does not approve the proposed ECF, does that impact the rates**
28 **VEDO has proposed in this proceeding?**

29 A. No. Absent Commission approval of the ECF, the per CCF rates approved in this
30 proceeding will be applied to the customer's Metered CCF, as is currently the case. The
31 approved per CCF rates can be applied in either instance. Because the ECF adjusts usage,

not the rates, VEDO's proposed rates remain accurate (in and of themselves) regardless of whether the ECF is approved.

Q45. Is therm billing, or the implementation of the ECF, akin to decoupling?

A. No. Under decoupling, the Company would expect to be made whole for its recovery of fixed costs regardless of customer usage. With the ECF, the actual usage (whether greater or lesser than the level assumed in the rate case) is adjusted to reflect the energy content of the gas consumed by the customer. A customer who invests in energy efficiency expects to use less Ccf, and likewise the Billing Ccf (after the ECF is applied) will reflect that lower level of usage—allowing the customer to benefit from the energy efficiency investment.

V. RATE DESIGN – STRAIGHT FIXED VARIABLE FOR SMALL GENERAL SERVICE CUSTOMERS

Q46. What is the Company's proposed rate design for its smallest General Service Customers?

A. VEDO proposes to implement straight fixed variable (SFV) rate design for its "Group 1" General Service Customers receiving service under Rate 320 (General Default Sales Service), Rate 321 (General Standard Choice Offer Service), and Rate 325 (General Transportation Service). "Group 1 Customers," as defined in the current and proposed Tariff, are customers having a meter with a rated capacity of 450 Cfh or less.

VEDO is making this proposal as part of its Alt Plan Case. Exhibits filed in the Alt Plan Case include a description of the Company's SFV proposal.

Q47. Has VEDO previously implemented SFV rate design for any of its customers?

A. Yes. In its order in the Company's last rate case (Case No. 07-1080-GA-AIR), the Commission approved SFV rate design for VEDO's residential customers. Pursuant to

1 the order, VEDO implemented SFV for residential customers one year after rates
2 approved in that case were implemented. The actual SFV implementation date was
3 February 22, 2010.

4 VEDO has also extended SFV principles to the design of its Distribution
5 Replacement Rider (DRR), which recovers the costs associated with its program to
6 accelerate the replacement of bare steel and cast iron pipelines. Both residential and
7 Group 1 customers pay a fixed monthly DRR charge. No volumetric DRR charges apply
8 to these customers.

9 **Q48. Are the service requirements and load characteristics of Group 1 Customers similar**
10 **to those of residential customers?**

11 A. Yes. Group 1 Customers typically require the same service line and meter as do
12 residential customers. As VEDO Witness Russell A. Feingold discusses in his direct
13 testimony, the load characteristics of Group 1 Customers are similar to those of
14 residential customers. For example, in 2017, residential customers' heat sensitive usage
15 was 79 percent of those customers' total usage for the year. Group 1 customers' heat
16 sensitive usage represented 81 percent of that group's total usage.

17 **Q49. Has the Commission previously approved SFV rate design for non-residential**
18 **customers?**

19 A. Yes. Most recently, the Commission approved SFV rate design for small general service
20 customers of Suburban Natural Gas (*see* Case No. 17-0594-GA-ALT).

21 **Q50. Does the Company believe that the same rationale for approving SFV in prior cases**
22 **applies here?**

23 A. Yes. In addition to the factors discussed above, the Company believes that SFV rate
24 design continues to provide the benefits recognized by the Commission in prior cases,
25 including by upholding state policy, providing accurate and equitable cost recovery, and

eliminating disincentives to conservation on the part of the utility. These benefits and others are discussed in the exhibits to VEDO's Alternative Rate Plan.

VI. RATE DESIGN APPROACH

Q51. What guiding principles did VEDO consider in determining its proposed rate design in this proceeding?

A. VEDO has consistently supported a rate design framework under which fixed costs are recovered via fixed charges, to the extent practicable. Among other things, fixed charges promote fairness to all customers – the customer's bill reflects the actual cost of providing service rather than being based upon the volume of gas consumed. The Company's SFV proposal for Group 1 General Service customers is consistent with this objective.

VEDO's proposal to implement the ECF is also consistent with this principle.

While not impacting the recovery of fixed costs from SFV customers, it nonetheless helps ensure that the recovery of fixed costs does not vary based on Btu content, which neither is within the Company's control nor has any bearing on the actual cost to serve.

Q52. Has VEDO designed the proposed rates and charges to mitigate inter-class subsidies?

A. Yes. The Company's cost of service study (COSS) prepared by Witness Feingold derives the proposed revenue requirement at equalized rates of return applicable to four groups or classes of customers: Residential (Rates 310, 311 and 315), General Service (Rates 320, 321 and 325), Large General Transportation (Rate 345) and Large Volume Transportation (Rate 360). As is almost always the case, allocating the revenue requirement to the rate classes based on equal rates of return can result in not only dissimilar impacts across the classes, but potentially rate shock for some classes. It is

appropriate to mitigate the impact of rate increases on customers to the extent possible, applying the principle of gradualism to the rate changes of all customers.

With that in mind, VEDO developed its proposed rates with the following objectives in mind:

- Each Rate Schedule will receive a rate increase.
- The maximum increase to the bill of any Large Volume Transportation customer (Rate 360) will be approximately equal to the overall increase to the Rate Schedule, which is targeted at approximately 10 percent.
- Proposed rates will demonstrate reasonable movement toward equal rates of return in the COSS.

Q53. Do the rates proposed by VEDO in this proceeding accomplish those three objectives?

A. Yes. As demonstrated on Schedule E-4 and Schedule E-5, sponsored by VEDO Witnesses J. Cas Swiz and Russell A. Feingold, each Rate Schedule has received an increase, and rates proposed under Rate 360 result in increases between 10 percent and 11 percent. Attachment E to my testimony shows the remaining subsidies that exist between the customer classes, and that even with those remaining subsidies the relative rates of return (which are also shown on Schedule E-3.2-1) have improved when compared to current rates.

Q54. How did VEDO determine the apportionment of the proposed revenue requirement applicable to each Rate Schedule in this proceeding between fixed monthly charges and volumetric charges?

A. For those Rate Schedules with both fixed and volumetric charges, the portion of the class revenue requirement to be recovered through each of these charges was guided by a combination of the magnitude of the revenue increase proposed in each class.

For the Large Transportation Rate Schedules with both fixed and volumetric charges (Rate 345 and Rate 360), VEDO worked to ensure that the overall increase in

base rates was apportioned between the fixed component and volumetric component equally. For instance, for Rate 345, the overall increase of \$1,069,412 represents roughly a 20 percent increase on overall base rates (*i.e.*, revenues from a combination of the Customer Charge and Volumetric Charge). That being the case, VEDO proposed to increase the Customer Charge by 20 percent (from \$150 per customer per month to \$180 per customer per month). The volumetric block rates were then increased in a ratable manner such that the difference between Step 1 and Step 2 (and Step 2 and Step 3 for Rate 360) was increased by the same overall percentage, approximately 20 percent.

For the General Service Rate Schedules (Rate 320/321/325), as explained by Witness Feingold, the fixed Monthly Charge for Group 1 customers was derived based on the specific ratios of customer and demand costs per customer between Residential and Group 1. For Group 2 and Group 3 customers, the increase in the fixed Monthly Charge for Group 2 (growth from \$40 to \$75) drove the increase to Group 3 (growth from \$80 to \$155) to maintain the same approximate ratio under proposed rates. The remaining amount of the increase was assigned to the Volumetric Charge.

VII. STATUTORY REQUIREMENTS

Q55. Under R.C. 4929.05, before the Commission may approve the Alternative Rate Plan, it must find that VEDO complies with R.C. 4905.35. In your opinion, what facts show that VEDO complies with Section 4905.35, Revised Code?

A. R.C. 4905.35 (1) prohibits a public utility from making or giving any undue or unreasonable preference or advantage to any person, corporation, or locality; (2) prohibits a public utility from subjecting any person, corporation, or locality to any undue or unreasonable prejudice or disadvantage; (3) requires that natural gas companies offer their regulated services or goods to all similarly situated consumers under comparable

1 terms and conditions, including persons with which it is affiliated or which it controls; (4)
2 requires that natural gas companies that offer bundled services that include both regulated
3 and unregulated services or goods offer the regulated services or goods on an unbundled
4 basis of the same quality as, or better quality than, the bundled service; and (5) prohibits
5 natural gas companies from conditioning or limiting the availability of any regulated
6 services or goods on the basis of the identity of the supplier of any other services or
7 goods or on the purchase of any unregulated services or goods from the company.

8 I am not aware of any facts that suggest VEDO does not comply with R.C.
9 4905.35. I am generally familiar with VEDO's management, operations, and the services
10 that it provides. VEDO makes its public utility services available on a comparable and
11 nondiscriminatory basis. VEDO does not make or give any undue or unreasonable
12 preference or advantage to any person, corporation, or locality, or subject any person,
13 firm, corporation, or locality to any undue or unreasonable prejudice or disadvantage.

14 Likewise, VEDO offers its regulated services or goods under comparable terms
15 and conditions to all similarly-situated consumers, including persons with which it is
16 affiliated or which it controls. This is evidenced by VEDO's Supplier Code of Conduct
17 and Affiliate Code of Conduct (see Tariff Sheets No. 52 and No. 72), and VEDO has
18 applied these principles in developing its service offerings, the terms and conditions upon
19 which it provides public utility service, and its rates.

20 Moreover, VEDO does not presently have any bundled service offerings that
21 include a regulated and unregulated service.

22 Finally, VEDO does not condition or limit the availability of any regulated
23 services or goods, including any discounted rates or quality, price, terms, or condition of

1 its service or goods, on the basis of the identity of the supplier of any other services or
2 goods, or on the purchase of any unregulated services or goods from VEDO.

3 **Q56. R.C. 4929.05 also requires VEDO to show that it substantially complies with the**
4 **state policies set forth in R.C. 4929.02 and that it expects to remain in compliance**
5 **with those policies after the Alternate Rate Plan is implemented. In your opinion,**
6 **does VEDO substantially comply with state policy, and what facts show that it does?**

7 A. In my opinion, VEDO substantially complies with state policy. Ohio's policy promotes,
8 among other things, the availability of adequate, reliable, and reasonably priced services
9 and goods as well as the unbundling and comparability of those services and goods. It
10 supports effective choices for supplies and suppliers; encourages market access to
11 supply- and demand-side services and goods; and acknowledges the importance of
12 effective competition and the regulatory treatment needed to support competition.

13 The Alternative Rate Plan exhibits discuss how the individual Plan elements
14 support state policy. These exhibits were prepared under my supervision, or under the
15 supervision of the witness responsible for the element of the Plan in question. I can verify
16 that the statements contained in those exhibits, as pertaining to the ECF and Group 1 SFV
17 proposals, are true and correct.

18 **Q57. Finally, R.C. 4929.05 requires the Commission to find that VEDO's proposal is just**
19 **and reasonable. Do you believe that the Alternative Rate Plan is just and**
20 **reasonable?**

21 A. Yes. My testimony above explains why the ECF and Group 1 SFV proposals are just and
22 reasonable, and the other elements are supported by the testimony of Witnesses Russell
23 A. Feingold, Sarah J. Vyvoda, Ellis S. Redd, J. Cas Swiz, and K. Chase Kelley. Again,
24 additional discussion on the justness and reasonableness of all Plan elements may be
25 found in the Alternative Rate Plan exhibits.

1

2 **VIII. CONCLUSION**

3 **Q58. Does that conclude your prepared direct testimony?**

4 A. Yes, it does.

Vectren Energy Delivery of Ohio, Inc.
Investigation Fee

Labor	Time (Minutes)	% of One Hour	Hourly Pay Rate	Truck Rate Per Hour	Loading Rates Per Hour					Supervision Overhead	Total Cost
					Payroll Taxes	Non-Prod	Benefits				
Investigator	90	150.0%	\$ 16.50	\$ 6.50	7.20%	19.00%	31.30%			10.00%	\$52.69

Vectren Energy Delivery of Ohio, Inc.
After-Hours Charge

Labor	Time (Minutes)	% of One Hour	Hourly Pay Rate	Truck Rate Per Hour	Loading Rates Per Hour					Total Cost
					Payroll Taxes	Non-Prod	Benefits	Supervision Overhead		
<u>Labor</u>										
<u>During Business Hours</u>										
Service Technician - Reconnect	31.00	51.7%	\$ 30.96	\$ 6.50	7.20%	19.00%	31.30%	10.00%	\$ 30.15	
Dispatcher - Reconnect	2.00	3.3%	\$ 21.34		7.20%	19.00%	31.30%	10.00%	\$ 1.19	
Customer Service Support - Reconnect	10.50	17.5%	\$ 17.53		7.20%	19.00%	31.30%	10.00%	\$ 5.14	
									\$ 36.48 A	
<u>After Normal Business Hours @ same time</u>										
Service Technician - Reconnect (a)	31.00	51.7%	\$ 61.92	\$ 6.50	7.20%	19.00%	31.30%	10.00%	\$ 56.94	
Dispatcher - Reconnect	2.00	3.3%	\$ 21.34		7.20%	19.00%	31.30%	10.00%	\$ 1.19	
Customer Service Support - Reconnect	10.50	17.5%	\$ 17.53		7.20%	19.00%	31.30%	10.00%	\$ 5.14	
									\$ 63.27 B	

Difference (B-A)	\$ 26.79
Propose	\$ 25.00

Assumptions:

- (1) VEDO Service Technician, Senior per Labor Agreement \$30.96 effective 11/1/2017 (original Labor Agreement effective 7/1/2015)
(a) An after-hours service call requires a special Call-out from a Service Technician on call. The labor contract requires a minimum of two hours pay at double the standard hourly rate.

- (1) VEDO Service Technician, Senior per Labor Agreement \$30.96 effective 11/1/2017 (original Labor Agreement effective 7/1/2015)
- (2) Shift Premium \$0.15 during normal business hours (1st shift); and \$0.60 after normal business hours (2nd shift)
- (3) An after-hours service call requires a call-out. The labor contract requires a minimum of 2 hours pay at double the standard hourly pay rate.

Vectren Energy Delivery of Ohio, Inc.

Avoided Disconnection Fee

Loading Rates Per Hour									
Labor	Time (Minutes)	% of One Hour	Hourly Pay Rate	Truck Rate Per Hour	Payroll Taxes	Non-Prod	Benefits	Supervision Overhead	Total Cost
Service Tech Sr. - Disconnect	19.0	31.7%	\$ 30.96	\$ 6.50	7.20%	19.00%	31.30%	10.00%	\$ 18.47
Dispatcher - Disconnect	2.0	3.3%	\$ 21.34		0.00%	0.00%	0.00%	0.00%	\$ 0.71
Customer Service Support - Disconnect	10.5	17.5%	\$ 17.53		7.20%	19.00%	31.30%	10.00%	\$ 5.14
10 Day Letter (managed by Pinnacle)									0.553

Total Cost	\$ 24.87
Propose	\$ 15.00

Assumptions:

- (1) One man crew to disconnect
- (2) VEDO Service Technician, Senior per Labor Agreement \$30.96 effective 11/1/2017 (original Labor Agreement effective 7/1/2015)
- (3) Shift Premium \$0.15 during normal business hours (1st shift); and \$0.60 after normal business hours (2nd shift)

Vectren Energy Delivery of Ohio, Inc.

Monthly BTU for 2008

	<u>(MCF DRY)</u>	<u>(MMBTU)</u>	WEIGHTED AVERAGE BTU CONTENT <u>(BTU/CF DRY)</u>
January 2008	9,160,217	9,337,731	1,019.38
February 2008	8,564,546	8,730,262	1,019.35
March 2008	6,899,236	7,029,009	1,018.81
April 2008	3,699,299	3,767,732	1,018.50
May 2008	2,701,282	2,753,815	1,019.45
June 2008	2,067,068	2,109,493	1,020.52
July 2008	2,041,185	2,084,340	1,021.14
August 2008	2,140,295	2,193,229	1,024.73
September 2008	2,040,869	2,083,718	1,021.00
October 2008	3,409,707	3,482,178	1,021.25
November 2008	6,035,245	6,156,478	1,020.09
December 2008	8,651,905	8,894,961	1,028.09
Totals for 2008	57,410,854	58,622,946	1,021.11

Vectren Energy Delivery of Ohio, Inc.

Monthly BTU for 2009

	<u>(MCF DRY)</u>	<u>(MMBTU)</u>	WEIGHTED AVERAGE BTU CONTENT <u>(BTU/CF DRY)</u>
January 2009	10,153,777	10,422,152	1,026.43
February 2009	7,313,440	7,479,301	1,022.68
March 2009	5,345,027	5,457,954	1,021.13
April 2009	3,746,307	3,823,850	1,020.70
May 2009	2,033,530	2,069,144	1,017.51
June 2009	1,769,465	1,797,250	1,015.70
July 2009	1,740,896	1,768,089	1,015.62
August 2009	1,774,871	1,802,294	1,015.45
September 2009	1,851,649	1,881,348	1,016.04
October 2009	3,478,904	3,544,652	1,018.90
November 2009	4,453,742	4,516,137	1,014.01
December 2009	8,078,724	8,201,987	1,015.26
Totals for 2009	51,740,332	52,764,158	1,019.79

Vectren Energy Delivery of Ohio, Inc.

Monthly BTU for 2010

	<u>(MCF DRY)</u>	<u>(MMBTU)</u>	WEIGHTED AVERAGE BTU CONTENT <u>(BTU/CF DRY)</u>
January 2010	9,626,425	9,785,425	1,016.52
February 2010	8,272,594	8,407,730	1,016.34
March 2010	5,469,893	5,562,181	1,016.87
April 2010	2,797,333	2,839,561	1,015.10
May 2010	2,366,078	2,399,017	1,013.92
June 2010	1,966,273	1,994,370	1,014.29
July 2010	1,946,198	1,973,915	1,014.24
August 2010	2,123,829	2,149,236	1,011.96
September 2010	2,028,205	2,055,264	1,013.34
October 2010	3,024,687	3,074,935	1,016.61
November 2010	5,261,846	5,342,300	1,015.29
December 2010	9,275,648	9,419,257	1,015.48
Totals for 2010	54,159,009	55,003,191	1,015.59

Vectren Energy Delivery of Ohio, Inc.

Monthly BTU for 2011

	<u>(MCF DRY)</u>	<u>(MMBTU)</u>	WEIGHTED AVERAGE BTU CONTENT <u>(BTU/CF DRY)</u>
January 2011	9,945,696	10,090,500	1,014.56
February 2011	7,580,658	7,690,471	1,014.49
March 2011	6,235,201	6,322,849	1,014.06
April 2011	3,598,475	3,644,279	1,012.73
May 2011	2,775,859	2,809,642	1,012.17
June 2011	2,043,179	2,076,657	1,016.39
July 2011	1,942,336	1,978,776	1,018.76
August 2011	2,043,990	2,083,054	1,019.11
September 2011	2,204,066	2,248,978	1,020.38
October 2011	3,512,892	3,575,317	1,017.77
November 2011	4,719,670	4,779,396	1,012.65
December 2011	6,907,461	6,990,495	1,012.02
Totals for 2011	53,509,483	54,290,414	1,014.59

Vectren Energy Delivery of Ohio, Inc.

Monthly BTU for 2012

	<u>(MCF DRY)</u>	<u>(MMBTU)</u>	WEIGHTED AVERAGE BTU CONTENT <u>(BTU/CF DRY)</u>
January 2012	8,446,134	8,532,247	1,010.20
February 2012	7,033,246	7,111,152	1,011.08
March 2012	4,074,081	4,144,363	1,017.25
April 2012	3,655,846	3,717,028	1,016.74
May 2012	2,344,543	2,400,007	1,023.66
June 2012	2,175,329	2,224,925	1,022.80
July 2012	1,954,045	2,004,861	1,026.01
August 2012	2,082,281	2,134,778	1,025.21
September 2012	2,254,798	2,300,321	1,020.19
October 2012	3,854,484	3,933,727	1,020.56
November 2012	5,678,715	5,762,668	1,014.78
December 2012	6,483,867	6,629,594	1,022.48
Totals for 2012	50,037,369	50,895,671	1,017.15

Vectren Energy Delivery of Ohio, Inc.

Monthly BTU for 2013

	<u>(MCF DRY)</u>	<u>(MMBTU)</u>	WEIGHTED AVERAGE BTU CONTENT <u>(BTU/CF DRY)</u>
January 2013	8,323,364	8,476,188	1,018.36
February 2013	7,631,355	7,759,165	1,016.75
March 2013	7,436,327	7,586,226	1,020.16
April 2013	3,886,565	3,970,714	1,021.65
May 2013	2,472,397	2,528,832	1,022.83
June 2013	2,063,200	2,114,376	1,024.80
July 2013	2,088,727	2,142,517	1,025.75
August 2013	2,120,889	2,169,848	1,023.08
September 2013	2,099,589	2,142,367	1,020.37
October 2013	3,639,757	3,708,299	1,018.83
November 2013	6,230,489	6,359,978	1,020.78
December 2013	8,064,227	8,281,300	1,026.92
Totals for 2013	56,056,886	57,239,810	1,021.10

Vectren Energy Delivery of Ohio, Inc.

Monthly BTU for 2014

	<u>(MCF DRY)</u>	<u>(MMBTU)</u>	WEIGHTED AVERAGE BTU CONTENT <u>(BTU/CF DRY)</u>
January 2014	11,222,513	11,465,637	1,021.66
February 2014	9,117,142	9,297,623	1,019.80
March 2014	7,459,726	7,594,415	1,018.06
April 2014	3,704,128	3,799,195	1,025.67
May 2014	2,650,728	2,734,789	1,031.71
June 2014	2,059,572	2,124,504	1,031.53
July 2014	2,062,540	2,183,192	1,058.50
August 2014	1,961,348	2,094,895	1,068.09
September 2014	2,215,258	2,351,718	1,061.60
October 2014	3,376,749	3,598,118	1,065.56
November 2014	6,765,318	7,164,714	1,059.04
December 2014	7,398,010	7,861,579	1,062.66
Totals for 2014	59,993,032	62,270,379	1,037.96

Vectren Energy Delivery of Ohio, Inc.

Monthly BTU for 2015

	<u>(MCF DRY)</u>	<u>(MMBTU)</u>	WEIGHTED AVERAGE BTU CONTENT <u>(BTU/CF DRY)</u>
January 2015	9,506,307	10,225,404	1,075.64
February 2015	9,877,700	10,571,364	1,070.23
March 2015	6,873,464	7,348,609	1,069.13
April 2015	3,589,616	3,872,517	1,078.81
May 2015	2,476,555	2,652,807	1,071.17
June 2015	2,248,527	2,385,856	1,061.08
July 2015	2,250,629	2,387,366	1,060.76
August 2015	2,115,896	2,272,904	1,074.20
September 2015	2,230,206	2,365,986	1,060.88
October 2015	3,174,677	3,408,128	1,073.54
November 2015	4,669,072	4,999,938	1,070.86
December 2015	5,849,216	6,279,999	1,073.65
Totals for 2015	54,861,865	58,770,878	1,071.25

Vectren Energy Delivery of Ohio, Inc.

Monthly BTU for 2016

	<u>(MCF DRY)</u>	<u>(MMBTU)</u>	WEIGHTED AVERAGE BTU CONTENT <u>(BTU/CF DRY)</u>
January 2016	9,297,875	9,984,230	1,073.82
February 2016	7,565,008	8,095,355	1,070.11
March 2016	5,062,085	5,410,934	1,068.91
April 2016	4,152,829	4,437,403	1,068.53
May 2016	2,996,788	3,209,460	1,070.97
June 2016	2,251,676	2,413,861	1,072.03
July 2016	2,205,244	2,361,899	1,071.04
August 2016	2,156,754	2,313,384	1,072.62
September 2016	2,247,179	2,407,854	1,071.50
October 2016	2,942,491	3,156,463	1,072.72
November 2016	4,778,878	5,126,062	1,072.65
December 2016	8,540,184	9,158,296	1,072.38
Totals for 2016	54,196,991	58,075,201	1,071.56

Vectren Energy Delivery of Ohio, Inc.

Monthly BTU for 2017

	<u>(MCF DRY)</u>	<u>(MMBTU)</u>	WEIGHTED AVERAGE BTU CONTENT <u>(BTU/CF DRY)</u>
January 2017	7,968,315	8,542,811	1,072.10
February 2017	5,904,300	6,341,102	1,073.98
March 2017	6,418,397	6,868,898	1,070.19
April 2017	3,183,448	3,392,869	1,065.78
May 2017	2,891,364	3,083,251	1,066.37
June 2017	2,188,229	2,328,431	1,064.07
July 2017	2,133,931	2,275,432	1,066.31
August 2017	2,274,225	2,436,791	1,071.48
September 2017	2,269,324	2,438,943	1,074.74
October 2017	3,345,351	3,583,713	1,071.25
November 2017	5,921,517	6,327,055	1,068.49
December 2017	8,987,956	9,617,616	1,070.06
Totals for 2017	53,486,357	57,236,912	1,070.12

Vectren Energy Delivery of Ohio, Inc.

Monthly BTU for 2018

	<u>(MCF DRY)</u>	<u>(MMBTU)</u>	WEIGHTED AVERAGE BTU CONTENT <u>(BTU/CF DRY)</u>
January 2018	10,121,946	10,777,875	1,064.80
February 2018	6,925,345	7,392,556	1,067.46
March 2018			
April 2018			
May 2018			
June 2018			
July 2018			
August 2018			
September 2018			
October 2018			
November 2018			
December 2018			
Totals for 2018	17,047,291	18,170,431	1,065.88

SAMPLE OF CURRENT BILL RESIDENTIAL CUSTOMER

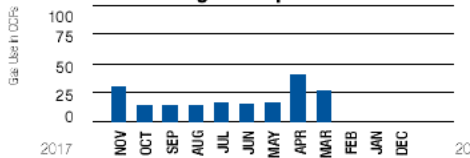
Billing Date: Nov 20, 2017
Date Due: Dec 7, 2017
Amount Due: \$94.14
 Amount Due After Dec 7, 2017 \$95.16

Energy Tip If you are leaving for the holidays turn your water heater to the vacation setting or to the lowest setting available so you are not paying to heat water you won't be using for several days. You can also lower your furnace thermostat. However, do not lower below 50 degrees for risk of frozen pipes.

Energy Tip The holiday season is here! Preparing for holiday entertaining can include additional costs. You can help manage energy costs by turning down your thermostat when entertaining. Extra bodies in the home mean extra warmth at no additional cost to you!

Looking for a gift for that hard to buy for friend or relative? Give the Gift of Energy! Through Vectren's Gift of Energy program you can make a payment toward the energy bill of a friend, loved one or neighbor. To give the Gift of Energy complete and return the online form located at www.vectren.com or call 1-800-227-1376.

Gas Usage Comparison



Average Temperature for this Billing Period

Current 45° Previous 65° Last Year NA°
 Next Scheduled Read Date 12/16/17

Your Account Information

Account Number:	Previous Bill Amount	\$105.92
	Payment(s) Received	\$185.92
	Payment Reversal	\$105.92
Service Address:	Balance Carried Forward	\$25.92
HUBER HEIGHTS OH 45424	Total Miscellaneous Charges	\$25.00
	Vectren Delivery and Supply Charges	\$68.22
	Charges This Period	\$68.22
	(Includes Late Payment Charges of \$1.57)	
	Total Amount Due:	\$94.14

Detailed Account Activity

Natural Gas Service

Meter Number	Service Period From To	Number of Days	Meter Readings Beginning Ending	CCF Used	Multiplier	Gas Rate
D0193275	10/19/17 11/15/17	27	6173A 6203A	30	1.000000	Res 311

Energy Delivery Detail

Distribution and Service Charges	\$28.63	
(Includes a Monthly Charge of \$18.37)		
Total Vectren Energy Delivery Charges	\$28.63	

Gas Supplier Detail

Account Number		Sales Tax	\$0.88
Standard Choice Offer -		Total Gas Supplier Charges	\$13.02
0.40467 per CCF	\$12.14		
		Total Current Energy Delivery and Gas Supplier Charges	\$41.65

Month/Yr	CCF's	Month/Yr	CCF's	Month/Yr	CCF's	Month/Yr	CCF's
NOV 17	30.000	AUG 17	14.000	MAY 17	17.000	FEB 17	
OCT 17	14.000	JUL 17	17.000	APR 17	40.000	JAN 17	
SEP 17	14.000	JUN 17	15.000	MAR 17	26.000	DEC 16	
Total CCF: 187				Monthly Avg: 20.778			

Miscellaneous Charges

Return Check Charge	\$25.00
---------------------	---------

Please return this portion with your payment made payable to Vectren.



Change of address or phone?
 Contact Customer Service at
 1-800-227-1376

Account Number: [REDACTED]

000003409

I=0000

HUBER HEIGHTS OH 45424-3364

Date Due	Dec 7 2017
Amount Due:	\$94.14
Amount Enclosed	\$
Amount Due After Dec 7, 2017	\$95.16
Allow 5 business days for mailing	

Write account number on check and mail to:
 Vectren Energy Delivery
 P O Box 6262
 Indianapolis IN 46206-6262



Important Vectren Energy Delivery Numbers

Customer Service: 1 800 227 1376 | Call Before You Dig: 811 or 1 800 362 2764 | Ohio Relay Service: 711 | www.vectren.com

General Information

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Multiplier - Factor used to calculate consumption on meters with higher than the standard delivery pressure. A multiplier greater than 1 indicates a delivery pressure that is greater than Vectren's standard delivery pressure.

PIPP Plus - The Percentage of Income Payment Plan Plus (PIPP Plus) is available if your total income is at or below 150% of the Federal poverty level. This program does not reduce or waive energy costs; it only establishes a payment plan to allow you to maintain your utility service.

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RES 310	DSS Residential Default Sales Service
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RES 315	Choice Residential Transportation Service
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COM 325	Choice General Transportation Service
COM 341	DSS Dual Fuel Standard Choice Offer Service

Meter Abbreviations

A = Actual meter reading
E = Estimated meter reading

Page 2

Billing Date: Nov 20, 2017	
Date Due: Dec 7, 2017	
Amount Due:	\$94.14
Amount Due After Dec 7, 2017	\$95.16

Account Number:

Service Address

HUBER HEIGHTS OH 45424

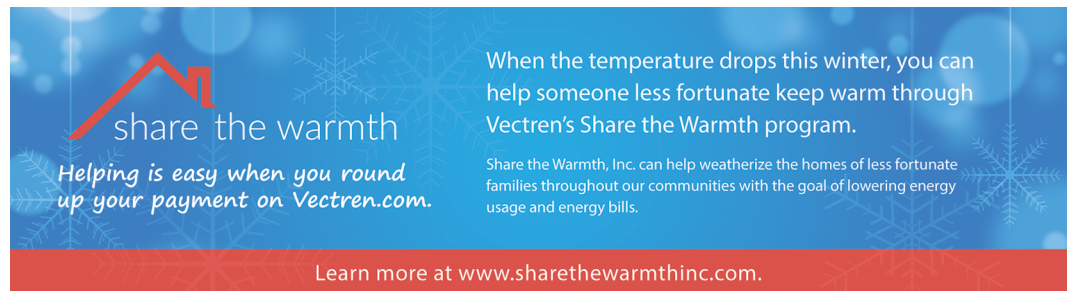
Miscellaneous Charges

Total Miscellaneous Charges \$25.00

Supplier Information

If you have any questions about your gas supply charges call

For "Choice" program consumer tips and "apples to apples" comparisons for competitive supplier pricing use the Gas Usage History Chart and visit the Public Utilities Commission of Ohio's (PUCO) web site at www.puco.ohio.gov or call 1-800-686-7826 or visit the Ohio Consumers' Counsel's web site at www.pickocc.org or call 1-877-742-5622



share the warmth

Helping is easy when you round up your payment on Vectren.com.

When the temperature drops this winter, you can help someone less fortunate keep warm through Vectren's Share the Warmth program.

Share the Warmth, Inc. can help weatherize the homes of less fortunate families throughout our communities with the goal of lowering energy usage and energy bills.

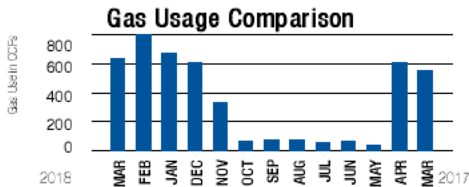
Learn more at www.sharethewarmthinc.com.

SAMPLE OF CURRENT BILL GENERAL SERVICE CUSTOMER

Billing Date: Mar 21, 2018
Date Due: Apr 7, 2018
Amount Due: \$444.51

Amount Due After Apr 7, 2018 \$450.89

It's time to test your smoke alarms and carbon monoxide detectors as you set your clocks ahead! A good time to remember to test your smoke alarms and carbon monoxide detectors is when you change your clocks twice a year as daylight savings time begins and ends



Average Temperature for this Billing Period

Current	Previous	Last Year
39°	32°	42°

Next Scheduled Read Date 04/18/18

Your Account Information

Account Number:	Previous Bill Amount	\$569.98
	Payment(s) Received	\$569.98
	Balance Carried Forward	\$0.00
Service Address:	Vectren Delivery and Supply Charges	\$444.51
DAYTON OH 45405	Charges This Period	\$444.51
	Total Amount Due:	\$444.51

Detailed Account Activity
Natural Gas Service

Meter Number	Service Period From To	Number of Days	Meter Readings Beginning Ending	CCF Used	Multiplier	Gas Rate
D0473866	02/15/18 03/16/18	29	90828A 91468A	640	1.000000	Com 321

Energy Delivery Detail

 Distribution and Service Charges \$157.40
 (Includes a Monthly Charge of \$40.00)

Total Vectren Energy Delivery Charges \$157.40
Gas Supplier Detail

Account Number	Sales Tax	\$19.41
Standard Choice Offer -	Total Gas Supplier Charges	\$287.11
0.41828 per CCF		\$267.70

Total Current Energy Delivery and Gas Supplier Charges \$444.51

Month/Yr	CCF's	Month/Yr	CCF's	Month/Yr	CCF's	Month/Yr	CCF's
MAR 18	640.000	DEC 17	603.000	SEP 17	72.000	JUN 17	68.000
FEB 18	797.000	NOV 17	334.000	AUG 17	79.000	MAY 17	43.000
JAN 18	673.000	OCT 17	67.000	JUL 17	58.000	APR 17	604.000
Total CCF: 4038				Monthly Avg: 336.5			

Supplier Information

If you have any questions about your gas supply charges call

Please return this portion with your payment made payable to Vectren.


 Change of address or phone?
 Contact Customer Service at
 1 800 227 1376

Account Number:

000000143

I=0000

BEAVERCREEK OH 45432-4122

Date Due	Apr 7 2018
Amount Due:	\$444.51
Amount Enclosed	\$
Amount Due After Apr 7, 2018	\$450.89
Allow 5 business days for mailing	

Write account number on check and mail to:

 Vectren Energy Delivery
 P O Box 6262
 Indianapolis IN 46206-6262


Important Vectren Energy Delivery Numbers

Customer Service: 1 800 227 1376 | Call Before You Dig: 811 or 1 800 362 2764 | Ohio Relay Service: 711 | www.vectren.com

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RES 310	DSS Residential Default Sales Service
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RES 315	Choice Residential Transportation Service
Commercial Rate Codes	
COM 320	DSS General Default Sales Service
COM 321	SCO General Standard Choice Offer Service
COM 325	Choice General Transportation Service
COM 341	DSS Dual Fuel Standard Choice Offer Service

Meter Abbreviations

A = Actual meter reading
E = Estimated meter reading

Billing Date: Mar 21, 2018**Date Due:** Apr 7, 2018**Amount Due:** \$444.51

Amount Due After Apr 7, 2018 \$450.89

Account Number:

[REDACTED]

Service Address

[REDACTED]

[REDACTED]

DAYTON OH 45405

Supplier Information

For "Choice" program consumer tips and "apples to apples" comparisons for competitive supplier pricing use the Gas Usage History Chart and visit the Public Utilities Commission of Ohio's (PUCO) web site at www.puco.ohio.gov or call 1-800-686-7826 or visit the Ohio Consumers' Counsel's web site at www.pickocc.org or call 1-877-742-5622

**SAMPLE OF CURRENT BILL
LARGE GENERAL
TRANSPORTATION CUSTOMER**

Billing Date: Mar 6, 2018**Date Due: Mar 23, 2018****Amount Due: \$1,927.23**

Amount Due After Mar 23, 2018 \$1,956.14

Your Account Information**Account Number:**

[REDACTED]

Previous Bill Amount \$2 819 74

Payment(s) Received \$2 819 74

Balance Carried Forward \$0 00

Charges This Period \$1 927 23

(Includes Late Payment Charges of \$42 30)

Service Address

[REDACTED]

DAYTON OH 45417

Total Amount Due: \$1,927.23**Detailed Account Activity****Gas Meter Information**

Meter Number	Service Period From To	Number of Days	Meter Readings		CCF Used	Pressure Factor
			Beginning	Ending		
D0288390	02/01/18 03/01/18	28	1175636A	1188834A	13198	1.000000

Gas Transportation Service

Volumetric Charge \$1 320 33

Customer Charge \$150 00

Excise Tax \$122 91

Gross Receipts Tax \$87 65

DRR \$204 04

Total Current Charges - Rate Schedule 345 \$1,884.93**Distribution Detail**

First 15000 CCF at 0 10004 per CCF \$ 1320 33

Over 15000 CCF at 0 08814 per CCF \$ 0 00

BILL MESSAGE

[REDACTED]

Please return this portion with your payment made payable to Vectren.

**Change of address or phone?**
Contact Customer Service at
1 800 227 1376

[REDACTED]

000003487

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[REDACTED]

Date Due	Mar 23 2018
Amount Due:	\$1,927.23
Amount Enclosed	\$ _____
Amount Due After Mar 23, 2018	\$1,956.14
Allow 5 business days for mailing	

Write account number on check and mail to:

Vectren Energy Delivery

P O Box 6262

Indianapolis IN 46206-6262



[REDACTED]

Important Vectren Energy Delivery Numbers

Customer Service: 1 800 227 1376 | Call Before You Dig: 811 or 1 800 362 2764 | Ohio Relay Service: 711 | www.vectren.com

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A = Actual meter reading
E = Estimated meter reading

Vectren Energy Delivery of Ohio, Inc.
Proposed Bill Presentation

Rates 310, 311, 315, 320, 321, 325

Current

Meter Number	Service Period		Number of Days	Meter Readings		CCF Used	Multiplier	Gas Rate
	From	To		Beginning	Ending			
D0473866	02/15/18	03/16/18	29	90828	91468	640	1.000000	Com XXX

Proposed

Meter Number	Service Period		Number of Days	Meter Readings		Change from "CCF Used"	Add Block	Change from "Multiplier"	Add Block	Gas Rate
	From	To		Beginning	Ending	Metered CCF	Energy Conversion Factor	Pressure Factor	Billing CCF	
D0473866	02/15/18	03/16/18	29	90828	91468	640	0.9907	1.000000	634.048	Com XXX

Metered CCF X Energy Conversion Factor X Pressure Factor = Billing CCF

Rate 345, 360

Current

Meter Number	Service Period		Number of Days	Meter Readings		CCF Used	Pressure Factor
	From	To		Beginning	Ending		
D0288390	02/01/18	03/01/18	28	1175636A	1188834A	13198	1.000000

Proposed

Meter Number	Service Period		Number of Days	Meter Readings		Change from "CCF Used"	Add Block		Add Block
	From	To		Beginning	Ending	Metered CCF	Energy Conversion Factor	Pressure Factor	Billing CCF
D0288390	02/01/18	03/01/18	28	1175636A	1188834A	13198	0.9907	1.000000	13075.259

Metered CCF X Energy Conversion Factor X Pressure Factor = Billing CCF

**VECTREN ENERGY DELIVERY OF OHIO, INC.
PROPOSED CHANGES – CUSTOMER BILLS**

Important Vectren Energy Delivery Numbers

Customer Service: 1-800-227-1376 | Call Before You Dig: 811 or 1-800-362-2764 | Ohio Relay Service: 711 | www.vectren.com

General Information

24 Hour Emergency Service: Call 1-800-227-1376 if you smell a gas odor or if all of your natural gas appliances are out.

Customer Service Questions or Concerns: To contact Vectren Energy Delivery (Vectren) about your bill or service, visit www.vectren.com or call 1-800-227-1376 between 7 a.m. and 7 p.m., Monday through Friday. Authorized pay sites are available in your neighborhood for your convenience. To locate an authorized pay site nearest you, visit www.vectren.com or call 1-800-227-1376. You can pay your bill through a checking or savings account for free at www.vectren.com or by calling 1-800-227-1376. If you would like to write to Vectren, please send correspondence to P.O. Box 209, Evansville, IN 47702-0209 or visit our web site at www.vectren.com. If you have selected a third-party gas supplier through the natural gas Choice program and have questions regarding your gas supply charges, please refer to the gas supplier and toll free number listed in the “Bill Message” section of your bill. The nonpayment of charges for non-tariffed services that are unrelated to the charges you incurred for the delivery and consumption of gas at your home or business shall not result in the disconnection of your gas service.

Customers with billing or service issues or concerns regarding a disconnect notice should contact Vectren prior to contacting the Public Utilities Commission of Ohio (PUCO). If your complaint is not resolved after you have called Vectren, or for general utility information, residential and business customers may contact the **PUCO** for assistance at 1-800-686-7826 (toll free) from eight a.m. to five p.m. weekdays, or at www.puco.ohio.gov. Hearing or speech impaired customers may contact the PUCO via 7-1-1 (Ohio relay service). The Ohio consumers counsel (OCC) represents residential utility customers in matters before the PUCO. The OCC can be contacted at 1-877-742-5622 (toll free) from eight a.m. to five p.m. weekdays, or at www.pickocc.org.

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**VECTREN ENERGY DELIVERY OF OHIO, INC.
PROPOSED CHANGES – CUSTOMER BILLS**

Terms & Definitions

Distribution and Service Charges - Charges billed each month for the delivery of natural gas and other charges approved by the PUCO to ensure safe, reliable service.

Customer/Monthly Charge - Charge billed each month to recover a portion of the ongoing costs of providing service to the customer. This charge does not vary with gas consumption.

CCF (100 Cubic Feet) - Gas consumption is measured by your meter in hundreds of cubic feet.

Energy Conversion Factor (ECF) – The ECF adjusts metered usage for the energy content of the gas used. Energy content can vary monthly. The ECF is the ratio of the current energy content to the energy content at the time Vectren's base rates were established.

Standard Choice Offer - Under Vectrens Standard Choice Offer (SCO) service, Vectren customers are receiving natural gas provided by third-party suppliers. The SCO suppliers won the right in a competitive auction to provide gas supply to customers at a monthly SCO price, which is calculated by adding a fixed retail price adjustment determined in a periodic auction to the New York Mercantile Exchange (NYMEX) month-end settlement price for natural gas. Because the SCO price reflects the NYMEX-based market price, it can vary with changes in supply and demand. The SCO price is charged to customers who have not selected an alternate gas supplier through the natural gas Choice program. The name of the gas supplier providing SCO service appears on the bill.

Miscellaneous Charges - Examples of miscellaneous charges may include but are not limited to reconnect fees; labor charges and returned payment charges.

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Gas Cost Charge (DSS) - Under Vectrens Default Sales Service (DSS), Vectren purchases natural gas through third-party suppliers at a fixed retail price adjustment determined in a competitive auction plus the New York Mercantile Exchange (NYMEX) month-end settlement price for natural gas;

VECTREN ENERGY DELIVERY OF OHIO, INC. PROPOSED CHANGES – CUSTOMER BILLS

Vectrens costs are then passed on to DSS customers. Because the DSS charge reflects the NYMEX-based market price, it can vary monthly with changes in supply and demand. The DSS price is charged to customers who are not eligible to select an alternate gas supplier through the natural gas Choice program.

Gas Supplier Charges (also referred to as gas marketer charges) - Charges billed each month for the consumption of natural gas supplied by a retail gas supplier who is certified by the Public Utilities Commission of Ohio (PUCO) to sell natural gas in a competitive retail market.

Pressure Factor - Factor used to calculate consumption on meters with higher than the standard delivery pressure. A pressure factor greater than 1 indicates a delivery pressure that is greater than Vectren's standard delivery pressure.

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PIPP Plus - The Percentage of Income Payment Plan Plus (PIPP Plus) is available if your total income is at or below 150% of the Federal poverty level. This program does not reduce or waive energy costs; it only establishes a payment plan to allow you to maintain your utility service.

Residential Rate Codes

RES 310 - DSS Residential Default Sales Service
RES 311 - SCO Residential Standard Choice Offer Service
RES 315 - Choice Residential Transportation Service

Commercial Rate Codes

COM 320 - DSS General Default Sales Service
COM 321 - SCO General Standard Choice Offer Service
COM 325 - Choice General Transportation Service

Deleted: COM 341 - DSS Dual Fuel Standard Choice Offer Service

Meter Abbreviations

A = Actual meter reading
E = Estimated meter reading

PROPOSED CUSTOMER BILL

PAGE 2

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Meter Abbreviations

A = Actual meter reading

E = Estimated meter reading

**Vectren Energy Delivery of Ohio, Inc.
Gas Tariff Research - Billing Basis**

(Conducted Q4 2017)

	State/Jurisdiction	Number of Utilities Researched	Billing Basis	
			Therm	CCF
1	Alabama	3	1	2
2	Alaska	1		1
3	Arizona	2	2	
4	Arkansas	3		3
5	California	3	3	
6	Colorado	3	2	1
7	Connecticut	2		2
8	Delaware	2		2
9	District of Columbia	1	1	
10	Florida	1	1	
11	Georgia	2	2	
12	Hawaii	1	1	
13	Idaho	3	3	
14	Illinois	4	4	
15	Indiana	1	1	
16	Iowa	3	3	
17	Kansas	3	1	2
18	Kentucky	5		5
19	Louisiana	2		2
20	Maine	2	1	1
21	Maryland	3	3	
22	Massachusetts	2	2	
23	Michigan	4	1	3
24	Minnesota	3	3	
25	Mississippi	3	1	2

Vectren Energy Delivery of Ohio, Inc.
Gas Tariff Research - Billing Basis
(continued)

(Conducted Q4 2017)

	State/Jurisdiction	Number of Utilities Researched	Billing Basis	
			Therm	CCF
26	Missouri	3	1	2
27	Montana	2	2	
28	Nebraska	3	3	
29	Nevada	2	2	
30	New Hampshire	2	2	
31	New Jersey	4	3	1
32	New Mexico	2	2	
33	New York	4	2	2
34	North Carolina	2	2	
35	North Dakota	2	2	
36	Oklahoma	2	1	1
37	Oregon	3	3	
38	Pennsylvania	4	1	3
39	Rhode Island	1	1	
40	South Carolina	2	2	
41	South Dakota	2	2	
42	Tennessee	4	2	2
43	Texas	2		2
44	Utah	1	1	
45	Vermont	1		1
46	Virginia	3	1	2
47	Washington	2	2	
48	West Virginia	2		2
49	Wisconsin	5	5	
50	Wyoming	3	3	
	Totals	125	81	44

Number of States* with Therm Billing

41

* Includes District of Columbia. Ohio has been excluded from this analysis.

Vectren Energy Delivery of Ohio, Inc.
Revenue Requirement Mitigation

Line	(A)	(B)	(C) COSS	(D) COSS	(E) COSS	(F)	(G)	(H) (G/C)	(I) (C+G)	(J)	(K)	(L)	(M) (I-D)	Line
			Pro Forma Rate Schedule Margin	Proposed Margin for Equalized ROR	ROR at Current Rates	Relative ROR at Current Rates	Proposed Change in Margin	Proposed Percent Change in Margin	Margin at Proposed Rates	Movement Toward System Average	ROR at Proposed Rates	Relative ROR at Proposed Rates	Remaining Subsidy	
1		Cost of Service Study Class												1
2		Residential - 310/311/315	\$ 110,426	\$ 151,127	0.53%	0.14	\$ 26,759	24.2%	\$ 137,185	62%	5.32%	0.67	\$ (13,942)	2
3		General Service - 320/321/325	27,794	28,173	9.14%	2.34	5,125	18.4%	32,919	60%	12.25%	1.54	4,746	3
4		Large General Transport - 345	7,065	5,425	17.17%	4.40	1,069	15.1%	8,135	60%	18.82%	2.36	2,710	4
5		Large Volume Transport - 360	14,230	8,812	25.06%	6.42	1,068	7.5%	15,298	63%	23.84%	2.99	6,486	5
6		Total Delivery Margin	\$ 159,515	\$ 193,536	3.90%	1.00	\$ 34,021	21.3%	\$ 193,536		7.97%	1.00	\$ (0)	6
7		Miscellaneous Revenues Margin	\$ 2,665	\$ 2,665					\$ 2,665				\$ -	7
		Total Margin	\$ 162,180	\$ 196,201					\$ 196,201				\$ (0)	

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

4/13/2018 4:00:47 PM

in

Case No(s). 18-0298-GA-AIR, 18-0299-GA-ALT

Summary: Exhibit 13.0 - Direct Testimony of Scott E. Albertson electronically filed by Ms. Rebekah J. Glover on behalf of Vectren Energy Delivery of Ohio, Inc.