

**BEFORE THE  
PUBLIC UTILITIES COMMISSION OF OHIO**

In the matter of the Application of Vectren	)	
Energy Delivery of Ohio, Inc. for	)	Case No. 18-49-GA-ALT
Approval of an Alternative Rate Plan.	)	
	)	
In the Matter of the Application of	)	
Vectren Energy Delivery of Ohio, Inc. for	)	Case No. 18-0298-GA-AIR
Approval of an Increase in Gas Rates.	)	
	)	
In the Matter of the Application of	)	
Vectren Energy Delivery of Ohio, Inc., for	)	Case No. 18-0299-GA-ALT
Approval of an Alternative Rate Plan.	)	

**DIRECT TESTIMONY OF  
RON NELSON  
ON BEHALF OF  
ENVIRONMENTAL LAW AND POLICY CENTER**

Filed: November 7, 2018

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1    **I.       BACKGROUND AND QUALIFICATIONS**

2

3    **Q.       Please state your name, occupation, and business address.**

4    A.       My name is Ron Nelson. I am a Manager with Strategen Consulting. My business  
5           address is Suite 400, 2150 Allston Way, Berkeley, California 94704.

6    **Q.       Who are you testifying on behalf of in this proceeding?**

7    A.       I am testifying on behalf of the Environmental Law & Policy Center (ELPC).

8    **Q.       What is your educational and professional background?**

9    A.       Currently, I am a Manager at Strategen Consulting. The Strategen team is nationally  
10           recognized for its thought leadership and deep expertise in rate design, renewable  
11           program development, grid modernization and new grid technologies including  
12           distributed and centralized renewable energy, energy storage, smart grid technologies,  
13           and electric vehicles. During my time at Strategen, I have worked with numerous  
14           consumer advocates on issues related to cost of service modeling and theory, rate design,  
15           renewable program design, cost recovery issues, utility business models, and electric  
16           vehicles.

17           Before joining Strategen in early 2018, I worked for the Minnesota Attorney General's  
18           Office for almost five years, where I led the Office's work on cost of service, rate design,  
19           and utility business model issues for both natural gas and electric utilities. Before that, I  
20           worked for two universities and the United States Geological Survey as an economic  
21           researcher. I have a Master of Science from Colorado State University in Agriculture and

1 Resource Economics, and a Bachelor of Arts and Minor in Environmental Economics  
2 and Mathematics, respectively, from Western Washington University.

3 **Q. Have you testified in similar regulatory proceedings previously?**

4 A. Yes. I have testified in numerous natural gas and electric utility proceedings in  
5 Minnesota, Oklahoma, and Illinois on issues related to cost of service modeling, revenue  
6 apportionment, rate design, renewable program development, tariff analysis, fuel clause  
7 structure, multi-year rate plans, performance metrics, performance incentive mechanisms,  
8 revenue decoupling, and the utility business model. A full resume is attached as Exhibit  
9 ELPC-Nelson-1.

10 **Q. Have you testified before the Public Utilities Commission of Ohio (Commission) in**  
11 **prior proceedings?**

12 A. No.

13  
14 **II. PURPOSE OF TESTIMONY**

15  
16 **Q. What is the purpose of your testimony?**

17 A. I am testifying in support of ELPC's objections on matters related to rate design changes  
18 proposed by Vectren Energy Delivery of Ohio, Inc. (VEDO or the Company) and the  
19 Staff of the Public Utilities Commission of Ohio (Staff). Specifically, my testimony will  
20 address the Company's and Staff's proposals to continue utilizing a "Straight Fixed  
21 Variable" (SFV) approach to rate design for the Residential Class and extend an SFV rate  
22 design to the "Group 1" General Service Customers (GS Customers), or small business

1 customers.<sup>1</sup> More generally, I will discuss the shortcomings of utilizing the SFV rate  
2 design for any customer class.

3 **Q. Please provide a high-level summary of your analysis and the conclusions you came**  
4 **to regarding VEDO's proposals.**

5 A. VEDO's proposed increases to the fixed customer charges for the Residential and GS  
6 Customer classes are not just or reasonable. VEDO recommends collecting a  
7 contentiously broad category of costs through the fixed charge that would negatively  
8 impact low-income customers and conflict with state policy goals, such as conservation,  
9 by lowering the volumetric rate. The proposal is unjust because it leads to inequitable  
10 costs being imposed on each customer that are not related to their fair share of costs  
11 incurred. Recovering more costs through a higher volumetric rate and lower customer  
12 charge will lead to more equitable outcomes for customers.

13 **Q. Do Staff's recommendations regarding the Residential and GS Customer fixed**  
14 **customer charges adequately remedy these flaws?**

15 A. No.

16 **Q. Will VEDO have the opportunity to recover its revenue requirement if lower**  
17 **customer charges are used to collect revenues?**

18 A. Rates are designed to recover VEDO's revenue requirement in a rate case. If the  
19 Commission orders a lower customer charge, then an offsetting amount is collected

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<sup>1</sup> Group 1 General Service Customers are customers having a meter with a rated capacity of 450 Cfh or less and are served under Rate 320 (General Default Sales Service), Rate 321 (General Standard Choice Offer Service), and Rate 325 (General Transportation Service). See Albertson Direct at 21.

1 through the volumetric rate. If the Commission determines that the utility should have  
2 more revenue certainty, it could consider revenue decoupling. I do not provide testimony  
3 on revenue decoupling here because it was not included in VEDO's Application or the  
4 Staff Report.

5 **Q. Please summarize the recommendations that you make in your direct testimony.**

6 A. I make the following recommendations:

- 7 1. The Commission should reject the proposed increase in the Residential customer  
8 charge from \$18.37 to \$35.41 and instead limit any rate increase it authorizes to  
9 the volumetric charge.
- 10 2. The Commission should also reject VEDO's proposal to move the GS Customers  
11 to an SFV rate design and instead limit any rate increase it authorizes to the  
12 volumetric charge.

### 13 **III. RATE DESIGN**

14

15 **Q. What rate design changes is VEDO proposing for Residential and GS Customers?**

16 A. In Witness Scott E. Albertson's direct testimony, the Company recommends continuing  
17 the SFV rate design for the Residential Class resulting in a customer charge increase from  
18 \$18.47 to \$35.41 – a 92% increase.<sup>2</sup> In addition, the Company has proposed a significant  
19 increase to the fixed customer charge applied to Group 1 GS Customers. This would

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<sup>2</sup> See Schedule E-4.1.

1 result in a customer charge increase from the current charge of \$20 to \$46.19—a \$26.19  
2 dollar, or over 125 percent, increase.<sup>3</sup>

3 **Q. Did Staff provide rate design recommendations that differed from VEDO’s**  
4 **proposal?**

5 A. Yes. The Staff recommended slightly different customer charges for the two classes. For  
6 the Residential Class, Staff recommended a \$30.95 customer charge, instead of VEDO’s  
7 \$35.41 proposal. For the GS Customers, the Staff recommended a \$40.24 customer  
8 charge, instead of VEDO’s \$46 proposal.

9 **Q. What rate design related arguments did the Company use to support their SFV rate**  
10 **design proposal?**

11 A. Witness Albertson makes multiple claims about the superiority of an SFV rate design.  
12 First, he argues that SFV rate design is superior because “fixed costs are recovered via  
13 fixed charges.”<sup>4</sup> Second, he claims that SFV rate design is equitable because it “reflects  
14 the actual costs of providing services.”<sup>5</sup> Lastly, Witness Albertson claims that SFV rate  
15 design provide benefits related to state policy goals.<sup>6</sup> I disagree with each of these claims  
16 made by Witness Albertson’s regarding the superiority of SFV rate design compared to  
17 other rate design approaches discussed below.

18 **Q. What support did Staff offer in support of its recommended Residential and GS**  
19 **Classes customer charges?**

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<sup>3</sup> See Schedule E-4.1.

<sup>4</sup> Albertson Direct at 23.

<sup>5</sup> Albertson Direct at 23.

<sup>6</sup> Albertson Direct at 23.

1 A. The Staff heavily relied on previous Commission orders. The Staff also provided a high-  
2 level discussion of rate design guidelines approving modified or full SFV rate designs.<sup>7</sup>  
3 In its discussion of rate design guidelines, the Staff touches on the concept of “cost” at a  
4 high-level and notes that designing rates involves subjective determinations by analysts  
5 and the Commission.<sup>8</sup> Staff did not address case specific impacts on low-income  
6 customers or price signals for conservation.

7 **Q. Do you agree generally with VEDO’s and Staff’s support for high fixed charges for**  
8 **residential and small business customers?**

9 A. No. I strongly believe that high fixed charges are bad for customers, impede the  
10 achievement of Ohio state policy goals, and are not necessary to insulate utilities from  
11 revenue stability concerns. Approving the proposed increase in fixed charges would be  
12 unfair to many customers served by VEDO and would be contrary to the public interest.  
13 It is not necessary (nor is it just or reasonable) to recover all, or even most, of a utility’s  
14 fixed costs through fixed charges. Such an approach is not fair since not all customers  
15 incur the same amount of fixed costs. Moreover, while a rate design that includes high  
16 fixed charges may theoretically address the utility’s disincentive for conservation in the  
17 short-term, at the same time it undermines state policy goals to increase conservation.

18 **Q. Why do you disagree with Witness Albertson’s position that fixed costs should be**  
19 **“recovered via fixed charges?”**

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<sup>7</sup> Staff Report at 26.

<sup>8</sup> Staff Report at 26.



1 A. The concept that fixed costs should be recovered through fixed charges is an extremely  
2 over-simplified approach to rate design.

3 **Q. What is a key assumption when claiming that fixed costs should be recovered**  
4 **through fixed charges?**

5 A. A key component of Witness Albertson's and Staff's approach to designing rates is how  
6 one defines "fixed costs."

7 **Q. Do other industries always utilize fixed charges to recover their fixed costs?**

8 A. No. In fact, it is very common for companies to recover fixed costs through other types  
9 of pricing mechanisms. For example, gasoline require massive amounts of pipelines and  
10 other "fixed" infrastructure to get the product to market but providers recover all these  
11 costs through a per unit charge.

12 **Q. Did Witness Albertson or Staff explicitly define fixed costs within their testimonies?**

13 A. Not to my knowledge. However, a recent report conducted for the Commission defines  
14 fixed costs, in accounting terms, as "interest and depreciation. All other costs, including  
15 the shareholder return, associated, income taxes, labor, and revenue-sensitive costs are  
16 technically variable costs—they change from month to month and from year to year."<sup>9</sup>

17 **Q. Did VEDO or Staff use the accounting definition of fixed costs?**

18 A. No. VEDO and Staff appear to utilize a very broad and loose category of fixed costs.

19 **Q. How does VEDO categorize fixed costs?**

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<sup>9</sup> See Regulatory Assistance Project. Recommendations for Ohio's Power Forward Inquiry at 48. February 2018.

1 A. Witness Feingold indicates that VEDO considers all demand and customer related costs  
2 within the cost of service analysis to be fixed costs.<sup>10</sup> To clarify, in the cost of service  
3 study, demand related costs are those that vary with customer demand. For example,  
4 distribution mains are sized and pressurized based on the demand related requirements of  
5 the system customers. Customer costs are costs related to the number of customers,  
6 including metering and billing costs. The Company concludes that, because all demand  
7 and customer related costs are fixed, these costs should be recovered through a fixed  
8 charge.

9 **Q. Do you agree that all demand and customer related costs are fixed and should be**  
10 **recovered through a fixed charge?**

11 A. No. I do not agree with VEDO's or Staff's approach. To begin with, I think grouping  
12 costs into the broad categories of fixed and variable is inappropriate for rate design.  
13 Instead, costs should be discussed in more specific terms utilizing the classification  
14 provided in the cost of service study: commodity, demand, and customer related costs—  
15 not fixed and variable. Regardless of this issue, most, or all, demand related costs are  
16 variable in the long-term. This is because the gas distribution system is built (and re-  
17 built) to meet the peak demands of customers—which vary over time. Because demand  
18 changes over time, encouraging customers to reduce demand can decrease the cost to  
19 build the system over time.

20 **Q. What costs do you believe should be recovered through the fixed charge?**

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<sup>10</sup> Feingold Direct at 32.

1 A. Optimally, customer-specific costs would be the only costs collected through the  
2 customer charge, such as metering, billing, and service line costs. Customer-specific  
3 costs are generally a subset of the costs classified as customer-related in the cost of  
4 service study. In the extreme case, all costs classified as customer-related costs could be  
5 considered for recovery through a customer charge. However, I do not find it appropriate  
6 to recover many of the costs typically classified by utilities as customer-related through  
7 the customer charge, such as the costs of distribution mains (i.e. not customer-specific  
8 costs).

9 **Q. Do you believe it is appropriate to collect demand related costs through the**  
10 **customer charge, as proposed by VEDO?**

11 A. No. Collecting demand related costs through the customer charge creates an inequitable  
12 intraclass subsidy.

13 **Q. What is an intraclass subsidy?**

14 A. An intraclass subsidy occurs when the price charged to one customer within a customer  
15 class does not align with the costs caused by that customer. The mismatch between  
16 prices and costs results in a situation where a different customer in the class ultimately  
17 pays for the cost because ratemaking is a zero-sum game after the revenue requirement is  
18 set. For example, if a customer class is assigned \$100 and a customer caused \$10 of  
19 costs but pays on \$9, another customer in the class would have to pay one dollar more  
20 than they caused for the utility to obtain its revenue requirement.

1 **Q. Can you address Witness Albertson’s claim that SFV rate design is equitable**  
2 **because it “reflects the actual costs of providing services.”<sup>11</sup>**

3 A. I disagree with Witness Albertson’s claim because SFV rate design collects a fixed,  
4 averaged amount of demand related costs from each customer but almost every customer  
5 has a different peak demand. For example, consider a scenario where two residents cause  
6 different costs and derive different benefits from the natural gas system. The first is a  
7 resident with an extremely large, inefficient house that runs multiple gas-reliant  
8 appliances, such as a gas dryer, gas furnace and gas water heater. The second resident  
9 lives in an efficient multi-family household and only has a gas water heater. Resident  
10 one could easily have a demand that is five or ten times greater than that of the second  
11 resident—but under an SFV rate design, both customers would pay the same for demand-  
12 related costs. This is an inequitable outcome that creates an intraclass subsidy and does  
13 not align with cost causation. In this case, not only is the first customer using more of the  
14 commodity, but they are also likely using more of the distribution infrastructure used to  
15 deliver gas.

16 **Q. Please explain why an SFV rate design does not align with cost causation.**

17 A. Because demand varies by customer, the collection of demand related costs from  
18 customers should also vary in order to more closely align with cost causation. High  
19 volume customers that more heavily utilize and benefit from the natural gas network  
20 should pay more because many times the demand they place on the system is greater and  
21 causes more costs than a low volume user. SFV rate design does not do this—it collects

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<sup>11</sup> Albertson Direct at 23.

1 the same amount of demand related costs from each customer within a given rate class  
2 tariff.

3 **Q. Does the Staff sufficiently recognize the difference between customer and demand**  
4 **related costs when designing rates?**

5 A. Not in my opinion. The Staff does not justify why recovering demand related costs  
6 through a customer charge is reasonable. In fact, the Staff's own customer charge  
7 calculation suggests a \$25 customer charge for the GS Customers, but they recommend  
8 \$40.24.<sup>12</sup>

9 **Q. Is there a superior approach to recovering demand related costs through fixed**  
10 **charges?**

11 A. Yes. Demand related costs should be recovered through the volumetric portion of  
12 customer bills, given the current metering and technology present on the natural gas  
13 system. Large volume users will pay a higher amount of demand related costs, while low  
14 volume users will pay less—aligning rates more closely with cost causation in many  
15 cases and improving equity between customers.

16 With that said, collecting costs through a volumetric rate will still result in a  
17 subsidy. That is because subsidies are unavoidable within rate design—but not all  
18 subsidies are undesirable. To avoid subsidies, each customer would have to have an  
19 individually designed rate that perfectly collected his or her “cost of service.” For  
20 example, a rate would need to be designed to collect the costs associated with the ultra-  
21 large home one customer lives in and a different rate for the customer in a super-efficient

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<sup>12</sup> Staff Report at 34.

1 multi-family household. In the absence of individual rate designs for these two  
2 customers, the multi-family resident is almost certainly subsidizing the customer in the  
3 ultra-large home under a rate design rescheme with high fixed charges because rates are  
4 based off averages. Even if a lower customer charge did exacerbate an intra-class  
5 subsidy, as the Company claims, it helps to achieve the state policy goals of energy  
6 efficiency and conservation. Achieving policy goals can easily outweigh the  
7 consideration of one of many intra-class subsidies. To summarize, eliminating intraclass  
8 subsidies should not be a goal when designing rates; eliminating *undesirable* intraclass  
9 subsidies should be the goal.

10 **Q. Does Staff's discussion about rate design guidelines sufficiently discuss subsidies**  
11 **and how tradeoffs should be considered?**

12 A. Not in my opinion. Staff discusses equity at a high-level but does not provide a granular  
13 discussion on the tradeoffs associated with SFV rate design. The main issue that Staff  
14 ignores is that SFV rate design's main appeal is stabilizing revenues for stockholders, not  
15 achieving other important state policy goals.

16 **Q. Does Staff's reliance on prior Commission decisions on SFV address your concerns?**

17 A. No. In prior decisions on SFV, such as the 2008 order in the last Vectren rate case (No.  
18 07-1080-GA-AIR et al.), the Commission spoke to a wide range of rate design  
19 considerations including impacts on low-income customers, the price signal for  
20 conservation, and gradualism concerns.<sup>13</sup> The Staff report does not address whether

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<sup>13</sup> Case No. 07-1080-GA-AIR, Opinion and Order (Jan. 7, 2009) at 11-15.

different facts regarding those considerations weigh in favor of a different rate design approach in this case.

**Q. How does an SFV rate design impede customer interests?**

A. It does in many ways. For example, SFV rate design impedes utilities from achieving energy efficiency and conservation related goals consistent with Ohio policies. The impediment can be in the form of, for example, a higher cost of attaining a percentage of energy efficiency savings.

**Q. How does an SFV rate design impede progress towards achieving energy efficiency and conservation goals?**

A. Increasing the fixed charge extends payback periods for energy efficiency and conservation investments. Especially given the low price of natural gas, consumers' incentive to make investments in energy efficiency and conservation are more tied to the magnitude of the customer charge than ever. In fact, natural gas prices are so low that they consist of less than 50 percent of an average residential customer's bill currently.<sup>14</sup> Stated another way, gas rates were approximately 2 to 3 times higher depending on the month in 2008 than the cost of gas proposed by VEDO in this case.<sup>15</sup> Changes in natural gas prices have significantly changed the impact that an SFV rate design has on the price signals conveyed to customers—eroding the previous justifications for an SFV rate design.

**Q. Are there other ways that SFV rate design conflicts with state policy goals?**

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<sup>14</sup> See Harris Direct, Attachment A at 37. See also Schedule E-4.1.

<sup>15</sup> See Case No. 07-1080-GA-AIR. Testimony of Stephen E. Puican at 6.

1 A. Yes. It is important to keep in mind that rates are set in a static way—we base rates off a  
2 test year. However, consumer behavior is dynamic and the rates we set statically create  
3 dynamic behavioral reactions. Take, for example, the price elasticity of demand.

4 The price elasticity of demand is the percent change in quantity demanded, given a  
5 percent change in price. Basic economic theory suggests that lowering the marginal cost  
6 of natural gas (i.e. the volumetric component) will increase natural gas consumption and  
7 vice versa. The price elasticity of demand is a way to measure the impact that a price  
8 change has on demand, or consumption. While elasticities are often low, the cumulative  
9 impact that price changes has on consumption can be large.<sup>16</sup> The relationship between  
10 the price and consumption of natural gas is problematic since ratepayers pay VEDO to  
11 administer energy efficiency programs, and VEDO measures its success, to some extent,  
12 based on energy efficiency achieving savings goals.<sup>17</sup>

13 **Q. Why is increasing the fixed charge and decreasing the volumetric rate problematic**  
14 **considering that ratepayers pay VEDO to administer energy efficiency?**

15 A. I will demonstrate with a basic and simplified example. Note that the following analysis,  
16 like many other economic analyses, holds all else constant to focus solely on the impact  
17 that price has on consumption. Consider a short-run price elasticity of demand of -0.1  
18 and a long-run price elasticity of demand of -0.2. Table 1 below demonstrates a basic  
19 calculation of the effect that lowering the volumetric price of natural gas has on customer  
20 consumption.

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<sup>16</sup> E.g. Bernstein and Griffin. Regional Differences in the Price-Elasticity of Demand for Energy. February 2006. Prepared for the National Renewal Energy Laboratory.

<sup>17</sup> Harris Direct at 12.



1

**Table 1**

<b>Elasticity Effect on Consumption of SFV Rate Design</b>	
Usage Subject to SFV	13,593,930
Price with Alternative Rate	\$0.740
Price with SFV Rate	\$0.466
Change in \$/unit	\$0.273
Change in Price %	36.94%
1% Increments	32
<b>Short-run</b>	
Elasticity	-0.1
Increase in Usage	441,816
% Increase in Usage	3.25%
<b>Long-run</b>	
Elasticity	-0.2
Increase in Usage	897,529
% Increase in Usage	6.60%

2

3 **Q. Please explain the calculation made in Table 1.**

4 A. Table 1 estimates the changes in the Residential Class' total consumption, given the  
5 proposed change in the volumetric rate. Specifically, I calculated the volumetric rates  
6 that would provide VEDO with its revenue requirement under the proposed \$35.41 and  
7 current \$18.37 customer charges, which yields volumetric rates of \$0.466 and \$0.740 per  
8 Ccf inclusive of gas, respectively.<sup>18</sup> I used these two volumetric rates to determine the  
9 percent change in price, which is 36.94%. I then calculated the number of 1%  
10 incremental changes to reflect that the elasticity is being applied to over a large  
11 incremental change in price. Finally, I calculate the impact on consumption based on a

<sup>18</sup> Note that the volumetric rate associated with the \$18.37 customer charges assumes all revenues, including the Distribution Replacement Rider, are collected through the volumetric rate.

1 short-run price elasticity of demand of -0.1 and a long-run price elasticity of demand of -  
2 0.2.

3 **Q. Please interpret the results reflected in Table 1.**

4 A. Based on the price elasticity of demand assumptions in Table 1, using an SFV rate design  
5 would increase consumption by approximately 3.25 percent, or 440,000 Ccf, in the short-  
6 run and approximately 6.6 percent, or 900,000 Ccf, over the long-run. This is the  
7 equivalent of increasing the Residential Class' consumption by the total annual  
8 consumption of approximately 600 and 1,200 average households, respectively.  
9 Lowering the volumetric price of natural gas increases consumption, diminishing state  
10 and utility efforts promoting energy efficiency.

11 **Q. What does this basic price elasticity of demand example demonstrate?**

12 A. At a high-level, it demonstrates that energy efficiency and natural gas are substitutes. For  
13 this reason, when the marginal price of natural gas is lowered (which is the price used to  
14 calculate payback periods) customers will invest less in energy efficiency, and more  
15 natural gas will be consumed. Approving a rate design that increases consumption, as  
16 does an SFV rate design, defeats the purpose of paying VEDO to administer energy  
17 efficiency programs because the combination of the two actions may result in increased  
18 gas sales. Said more simply, ratepayers could be paying VEDO to administer energy  
19 efficiency programs for nothing in return, if the Commission increases the fixed charge.  
20 To be clear, I support energy efficiency efforts. It is a cost-effective and important  
21 resource for all ratepayers, especially low-income residents. However, the Commission  
22 needs to consider policy interactions. One bad policy—adopting an SFV rate design, for

example—can deplete or completely defeat the purpose of a good policy. Commission’s must consider these interactions in order to maximize benefits for ratepayers and not let the utilities “game” energy efficiency claims.

This example also demonstrates that an SFV rate design and energy efficiency are clearly at odds with one another. SFV rate design has been used to remove the utility’s disincentive to promote energy efficiency, but SFV rate design disincentivizes energy efficiency investments. Throwing money at energy efficiency programs may have little to no benefit, if the Commission continues to increase customer charges.

**Q. How does SFV effect equity within the residential rate class?**

A. When compared to a rate design that collects some or all demand related costs through a volumetric rate, SFV rate design shifts cost collection to lower usage customers. According to data filed in VEDO Witness Rina H. Harris’s direct testimony, single and multi-family low income residents consume less per household than a typical resident in similar housing.<sup>19</sup> Witness Harris’ table is recreated below.

**Table 2**

Residential	Number of Households	2016 Gas Use (million Ccf/yr)	Avg. Use per Household (Ccf/yr)
Single Family	150,506	120.3	799
Multifamily	26,847	15.6	583
Single Family Low Income	84,609	62.3	737
Multi Family Low Income	30,101	15.3	509
Total	292,063	213.6	731

<sup>19</sup> See Harris Direct, Attachment A at 37.

1 The information provided by Witness Harris indicates that low income single households  
2 consume approximately 8 percent less and multi-family households consume  
3 approximately 15 percent less natural gas on average than similar residential households.  
4 This data indicates that low-income residents would be worse off under VEDO's and  
5 Staff proposals compared to a rate design that retains the current customer charge.

6 **Q. How does a rate design with a high customer charge impact bills by usage level?**

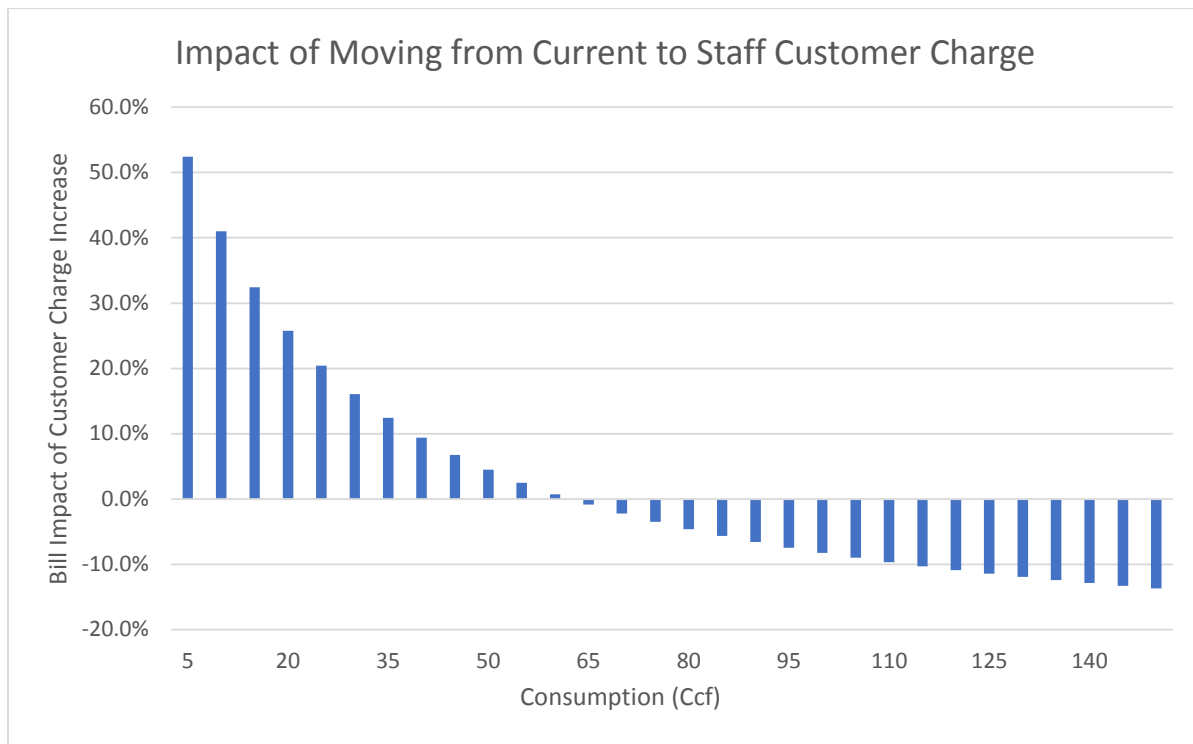
7 A. Figure 1 below demonstrates that low usage customers receive higher bills under rate  
8 designs that utilize higher fixed charges. Specifically, Figure 1 displays the bill impacts  
9 associated with moving from the current customer charge of \$18.37 and moving to  
10 Staff's proposed customer charge of \$30.95.<sup>20</sup>

11

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<sup>20</sup> As above, note that the volumetric rate associated with the \$18.37 customer charges assumes all revenues, including the Distribution Replacement Rider, are collected through the volumetric rate.

1

**Figure 1**

2

3 **Q. Please describe and discuss the important takeaways from Figure 1.**

4 A. Figure 1 demonstrates the large impact that an SFV rate design has on low-usage  
 5 customers. Figure 1 has average bill impacts on the vertical axis and the level of average  
 6 monthly consumption on the x-axis. For example, a resident consuming 30 Ccf per  
 7 month would realize an approximate bill increase of over 15 percent on average. On the  
 8 other hand, a resident that consumes 95 Ccf per month on average would realize above a  
 9 7.5 percent decrease in their bill.

10 As referenced early, low-income multi-family households use approximately 42 Ccf per  
 11 month on average. Figure 1 indicates that SFV rate design could increase multi-family  
 12 households' bills by approximately 9 percent depending on load profiles throughout the

1 year. It is inequitable to give low-income residents a 9 percent rate increase simply by  
2 changing the rate design.

3  
4 **IV. CONCLUSION**

5  
6 **Q. Please summarize your recommendations.**

7 **A.** I make the following recommendations:

- 8 1. The Commission should also reject the proposed increase in the Residential  
9 customer charge from \$18.37 to \$35.41 and instead limit any rate increase it  
10 authorizes to the volumetric charge.
- 11 2. The Commission should reject VEDO's proposal to move the GS Customers to an  
12 SFV rate design and instead limit any rate increase it authorizes to the volumetric  
13 charge.

## PROFESSIONAL BACKGROUND AND EDUCATION

### EDUCATION

- M.S. Agricultural and Resource Economics**  
Colorado State University, Fort Collins, CO, 2013
- Minor Mathematics**  
Western Washington University, Bellingham, WA, 2011
- B.A. Environmental Economics**  
Western Washington University, Bellingham, WA, 2006

### EMPLOYMENT

- |                |   |
|----------------|---|
| 2018 - Present | Manager, Strategen Consulting   |
| 2013 – 2017    | Utilities Economist, Antitrust and Utilities Division, Office of the Minnesota Attorney General |
| 2012 – 2013    | Consulting Economist, United States Geological Survey   |
| 2011 – 2013    | Economic Research Assistant, Colorado State University  |

### PREVIOUS TESTIMONY

<b>Company</b>	<b>Docket No.</b>	<b>Subject</b>
Commonwealth Edison	18-0753	Distributed Generation Rebates
Ameren Illinois Company	18-0537	Distributed Generation Rebates
Oklahoma Gas and Electric	201700496	CCOSS and Revenue Apportionment
Minnesota Power	E-002/GR-16-664	CCOSS, Rate Design, and the Utility Business Model
Otter Tail Power	E-002/GR-15-1033	Marginal and Embedded CCOSS and Rate Design
Xcel Energy	E-002/GR-15-826	CCOSS, Rate Design, PBR
Minnesota Energy Resources Corp.	G-011/GR-15-736	CCOSS and Rate Design
CenterPoint Energy	E-002/GR-15-424	CCOSS and Rate Design
Dakota Energy Association	E-002/GR-14-482	CCOSS and Rate Design
Xcel Energy	E-002/GR-13-868	CCOSS and Rate Design
Minnesota Energy Resources Corp.	G-011/GR-13-617	CCOSS
CenterPoint Energy	G-008/GR-13-316	CCOSS

## **CERTIFICATE OF SERVICE**

I hereby certify that a true copy of the foregoing Testimony submitted on behalf of the Environmental Law & Policy Center was served by electronic mail, upon all Parties of Record, on November 7, 2018.

/s/ Madeline Fleisher

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Madeline Fleisher



**This foregoing document was electronically filed with the Public Utilities**

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**Case No(s). 18-0298-GA-AIR, 18-0299-GA-ALT, 18-0049-GA-ALT**

Summary: Testimony Direct Testimony of Ron Nelson on behalf of the Environmental Law & Policy Center electronically filed by Madeline Fleisher on behalf of Environmental Law & Policy Center