OCC EXHIBIT NO. \_\_\_\_\_

## BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of	)	
Ohio Power Company for Authority to	)	
Establish a Standard Service Offer	)	Case No. 16-1852-EL-SSO
Pursuant to Section 4928.143, Revised Code,	)	
In the Form of an Electric Security Plan.	)	
In the Matter of the Application of	)	
Ohio Power Company for Approval of	)	Case No. 16-1853-EL-AAM
Certain Accounting Authority.	)	

#### DIRECT TESTIMONY OF ROBERT B. FORTNEY

#### On Behalf of the The Office of the Ohio Consumers' Counsel 10 West Broad Street, Suite 1800 Columbus, Ohio 43215-3485

May 2, 2017

1	<i>Q1</i> .	PLEASE STATE YOUR NAME, ADDRESS AND POSITION.
2	<i>A1</i> .	My name is Robert B. Fortney. My business address is 10 West Broad Street, Suite
3		1800, Columbus, Ohio 43215-3485. I am employed by the Office of the Ohio
4		Consumers' Counsel ("OCC") as a Rate Design and Cost of Service Analyst.
5		
6	<i>Q2</i> .	WHAT ARE YOUR RESPONSIBILITIES AS A RATE DESIGN AND COST OF
7		SERVICE ANALYST?
8	<i>A2</i> .	I am responsible for investigating utility applications regarding rate and tariff activities
9		related to tariff language, cost of service studies, revenue distribution, cost allocation, and
10		rate design that impact the residential consumers of Ohio. My primary focus is to make
11		recommendations to protect residential consumers from unnecessary utility rate increases
12		and unfair regulatory practices.
13		
14	<i>Q3</i> .	PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND.
15	<i>A3</i> .	I earned a Bachelor of Science degree in Business Administration from Ball State
16		University in Muncie, Indiana in 1971. I earned a Master of Business Administration
17		degree from the University of Dayton in 1979.
18		
19	<i>Q4</i> .	PLEASE SUMMARIZE YOUR PROFESSIONAL BACKGROUND AS IT RELATES
20		TO UTILITY REGULATION.
21	<i>A4</i> .	From July 1985 to August 2012, I was employed by the Public Utilities Commission of
22		Ohio ("PUCO"). During that time I held a number of positions (e.g., Rate Analyst, Rate
23		Analyst Supervisor, Public Utilities Administrator) in various divisions and departments
24		that focused on utility applications regarding rates and tariff issues. In August 2012, I
25		retired from the PUCO as a Public Utilities Administrator 2, Chief of the Rates and
26		Tariffs Division, which focused on utility rates and tariff matters. The role of that
27		division was to investigate and analyze the rate- and tariff-related filings and applications
28		of the electric, gas, and water utilities regulated by the PUCO and to make Staff
29		recommendations to the PUCO regarding those filings.

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1	Q5.	HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE PUCO?
2	A5.	Yes. I have testified on numerous occasions to advocate to the PUCO the positions of the
3		PUCO Staff. Over the course of my career at the PUCO, I often recommended to the
4		PUCO cost allocation methodologies needed to develop a reasonable distribution of
5		revenues. I also was responsible for recommending reasonable rate designs needed to
6		recover the revenue requirement, by class of service and in total. In addition, I testified
7		for the OCC in three proceedings since joining its staff. A list of proceedings that I have
8		submitted testimony to the PUCO is provided in Attachment RBF-1 to this testimony.
9		
10	Q6.	WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?
11	<b>A6</b> .	My focus is on the issue of using a Partial Straight Fixed Variable (SFV) rate design to
12		create rates for residential customers, as proposed by the Ohio Power Company ("the
13		Utility" or "AEP-Ohio") in this proceeding. The Utility proposes to increase its
14		Customer Charge for a standard residential customer by \$5.00 (from \$8.40 to \$13.40)
15		effective with the Order in this filing. The Utility further proposes to increase the
16		Customer Charge by an additional \$5.00 (from \$13.40 to \$18.40) on January 1, 2018.
17		The increases in the Customer Charge would be accompanied by corresponding
18		decreases in the volumetric charge to ensure revenue neutrality for the Residential class.
19		Utility Witness Andrea Moore addresses the rationale for the change in her testimony.
20		
21	Q7.	WHAT IS THE RATIONALE OFFERED BY THE UTILITY FOR ITS PARTIAL
22		SFV RATE DESIGN PROPOSAL?
<b>า</b> ว	17	The Utility has proposed what I would characterize as a "partial" Straight Fixed Variable

A7. The Utility has proposed what I would characterize as a "partial" Straight-Fixed Variable
("SFV") rate design for residential customers. A "full" SFV rate design would have only
a customer charge with no volumetric charges. Even though in this case there is still a

2

1	volumetric energy charge per kWh, the Utility has proposed to significantly increase its
2	Customer Charge for its residential customers.
3	
4	Beginning on page 13 of her pre-filed direct testimony, AEP- Ohio Witness Moore has
5	cited her rationale for moving the rate design towards a SFV: "Distribution costs are
6	incurred by sizing the distribution system to meet customer(s) peak kW demand usage.
7	These costs vary by peak demand requirements, not by kWh usage or simply by
8	connecting a customer to the system. These costs would ideally be collected through a
9	demand charge, but this cannot be done for all customers due to the current limitations of
10	the Company's metering infrastructure. In addition, by removing a portion of the fixed
11	costs from the energy charge, some customers will see less volatility in bills from high
12	usage months, especially customers who use electric heat. Another benefit from this
13	design is that Percentage of Income Payment Plan customers in 2014 and 2015 have used
14	on average slightly over the breakeven kWh for the customer charge of 1,030 kilowatt
15	hours. This proposal will lower the Percentage of Income Payment Plan ("PIPP") bills,
16	therefore lowering the future revenue requirement of the Universal Service Fund. <sup>1</sup>

<sup>&</sup>lt;sup>1</sup> In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan, Case No. 16-1852-EL-SSO, Direct Testimony of Andrea E. Moore filed November 23, 2016, page 13.

1	<i>Q8</i> .	ISN'T IT THE PUCO'S POLICY TO ''ENCOURAGE'' THE USE OF A SFV RATE
2		DESIGN FOR ELECTRIC DISTRIBUTION UTILITIES?
3	<i>A8</i> .	Yes. The PUCO found in Case No. 10-3126-EL-UNC that "the Commission encourages
4		electric utilities to file their next base rate cases utilizing the SFV rate design" and "if a
5		utility files a base rate case that does not utilize the SFV rate design, the Commission
6		directs Staff to include in its Staff Report an alternative rate design that includes SFV
7		principles." <sup>2</sup>
8		
9		In its Opinion and Order of March 31, 2016 in Case No. 14-1297-EL-SSO on page 93,
10		the PUCO stated "Implementation of SFV rate design removes disincentives to electric
11		utilities to promote energy efficiency, is more consistent with principles of cost causation,
12		and has been a policy goal for the Commission for some time. In the Matter of
13		Aligning Elec. Distribution Utility Rate Structure with Ohio's Public Policies to Promote
14		Competition, Energy Efficiency and Distributed Generation, Case No. 10-3126-EL-UNC,
15		Finding and Order (Aug, 21, 2013)." <sup>3</sup>

<sup>&</sup>lt;sup>2</sup> In the matter of Aligning Electric Distribution Utility Rate Structure With Ohio's Public policies to Promote Competition, Energy Efficiency, and Distributed Generation, Case No. 10-3126-EL-UNC, Finding and Order of August 21, 2013, page 20.

<sup>&</sup>lt;sup>3</sup> In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company for Authority to Provide a Standard Service Offer Pursuant to R.C. §4928.143 in the Form of an Electric Security Plan, Case No. 14-1297-EL-SSO, Opinion and Order dated March 31, 2016, page 93.

1	Q9.	SO, IN LIGHT OF WHAT THE PUCO HAS INDICATED TO BE "A POLICY
2		GOAL," DO YOU OBJECT TO THE UTILITY'S MOVEMENT TOWARDS A SFV
3		RATE DESIGN IN THIS CASE?
4	<b>A9</b> .	Yes. I am recommending that the PUCO reject the partial SFV proposal. For the reasons
5		I will expand upon, I recommend that the PUCO reconsider its policy goal of requiring
6		SFV distribution rates for residential electric customers. It should not mandate what rate
7		design a utility files in its application, but should treat each case individually, and weigh
8		the comments and evidence filed in each case.
9		
10	<i>Q10</i> .	HASN'T THE PUCO ALREADY RULED ON THIS ISSUE?
11	<i>A10</i> .	Not exactly While the PUCO indicated that it "encourages" electric utilities to utilize a
12		SFV rate design in base distribution cases, it nonetheless did not foreclose parties from
13		presenting alternatives to or opposing the SFV rate design in such cases. The PUCO has
14		indicated that "any interested party will have a full and fair opportunity to address
15		whether the proposed SFV should be implemented and to raise any other issues specific
16		to the Companies' service territories" <sup>4</sup> and that "nothing in the Order precludes any party
17		from commenting on or presenting evidence regarding a specific rate design that is
18		proposed as part of a utility's distribution rate case by the utility, Staff or any other
19		party". <sup>5</sup>

<sup>&</sup>lt;sup>4</sup> Case No. 14-1297-EL-SSO, Opinion and Order, March 21, 2016, page 94.

<sup>&</sup>lt;sup>5</sup> Case No. 10-3126-EL-UNC, Second Entry on Rehearing, December 4, 2013, page 5.

1		The Company has proposed a SFV rate design in this SSO proceeding. I am providing
2		comments that raise some legitimate issues that I hope the PUCO will consider.
3		
4	<i>Q11</i> .	SHOULD THE PUCO RECONSIDER ITS POLICY GOAL?
5	<i>A11</i> .	Yes. Utilities and State Utility Commissions should be cautious before adopting a
6		particular method of rate design on the basis of what may be a superficial appeal. And
7		more important, we should avoid a situation where a costing method, once adopted,
8		becomes the predominant and unchallenged determinant of rate design. <sup>6</sup> Based upon my
9		experience in rate-making and upon my review of various source documents related to
10		the SFV rate design (Attachment RBF-2), I believe that the SFV rate design is flawed and
11		I point out those flaws to the PUCO.
12		
13	<i>Q12</i> .	WHAT ARE THE FLAWS YOU WISH TO POINT OUT?
14	A12.	The PUCO adopted a modified SFV rate design for all four major natural gas utilities in
15		Ohio because (A) the SFV rate design will produce more stable bills for customers; (B)
16		the SFV rate design would be easier to understand; (C) the SFV would produce a more
17		accurate price signal; and (D) the SFV rate design would assure a more equitable
18		allocation of distribution system costs to cost causers. The PUCO believes that these
19		same characteristics could be applicable to an SFV rate design for electric utilities. <sup>7</sup>
20		

<sup>&</sup>lt;sup>6</sup> Charging for Distribution Utility Services: Issues in Rate Design, page 39, December, 2000, Frederick Weston, The Regulatory Assistance Project, Montpelier, VT.

<sup>&</sup>lt;sup>7</sup> Case No. 10-3126-EL-UNC, Finding and Order, August 21, 2013, pages 19 – 20.

1		In its Opinion and Order of March 31, 2016 in Case No. 14-1297-EL-SSO (FirstEnergy,
2		ESP IV case), the PUCO reiterates that implementation of SFV rate design (A) removes
3		disincentives to electric utilities to promote energy efficiency, (B) is more consistent with
4		principles of cost causation, and (C) has been a policy goal of the Commission for some
5		time and restates that transition to a SFV rate design balances the elimination of
6		disincentives for the utilities to promote energy efficiency and conservation programs
7		with the promotion of cost causation. <sup>8</sup>
8		
9	<i>Q13</i> .	DO YOU AGREE WITH THE PUCO'S POLICY TO ADOPT A MODIFIED SFV
10		RATE DESIGN FOR RESIDENTIAL CUSTOMERS OF AN ELECTRIC
10 11		RATE DESIGN FOR RESIDENTIAL CUSTOMERS OF AN ELECTRIC DISTRIBUTION COMPANY?
10 11 12	A13.	RATE DESIGN FOR RESIDENTIAL CUSTOMERS OF AN ELECTRICDISTRIBUTION COMPANY?I do not dispute that, at least in theory, a SFV rate design, along with other mechanisms
10 11 12 13	A13.	RATE DESIGN FOR RESIDENTIAL CUSTOMERS OF AN ELECTRICDISTRIBUTION COMPANY?I do not dispute that, at least in theory, a SFV rate design, along with other mechanismsthat allow the recovery of the costs of energy efficiency and peak demand reduction
10 11 12 13 14	A13.	RATE DESIGN FOR RESIDENTIAL CUSTOMERS OF AN ELECTRICDISTRIBUTION COMPANY?I do not dispute that, at least in theory, a SFV rate design, along with other mechanismsthat allow the recovery of the costs of energy efficiency and peak demand reductioninitiatives, reduces the disincentive for electric utilities to promote energy efficiency.
10 11 12 13 14 15	A13.	RATE DESIGN FOR RESIDENTIAL CUSTOMERS OF AN ELECTRICDISTRIBUTION COMPANY?I do not dispute that, at least in theory, a SFV rate design, along with other mechanismsthat allow the recovery of the costs of energy efficiency and peak demand reductioninitiatives, reduces the disincentive for electric utilities to promote energy efficiency.High fixed rate structures, however, actually promote additional consumption because a
10 11 12 13 14 15 16	A13.	RATE DESIGN FOR RESIDENTIAL CUSTOMERS OF AN ELECTRIC         DISTRIBUTION COMPANY?         I do not dispute that, at least in theory, a SFV rate design, along with other mechanisms         that allow the recovery of the costs of energy efficiency and peak demand reduction         initiatives, reduces the disincentive for electric utilities to promote energy efficiency.         High fixed rate structures, however, actually promote additional consumption because a         consumer's price of incremental consumption is less than what an efficient price structure
10 11 12 13 14 15 16	A13.	RATE DESIGN FOR RESIDENTIAL CUSTOMERS OF AN ELECTRIC         DISTRIBUTION COMPANY?         I do not dispute that, at least in theory, a SFV rate design, along with other mechanisms         that allow the recovery of the costs of energy efficiency and peak demand reduction         initiatives, reduces the disincentive for electric utilities to promote energy efficiency.         High fixed rate structures, however, actually promote additional consumption because a         consumer's price of incremental consumption is less than what an efficient price structure         would otherwise be. In his testimony in an Indianapolis Power & Light Company case,

<sup>&</sup>lt;sup>8</sup> Case No. 14-1297-EL-SSO, Opinion and Order, March 31, 2016, page 93 and 120.

1	agrees that "a pricing structure that is largely fixed, such that customers' effective prices
2	do not vary with consumption, promotes the inefficient utilization of resources."9
3	A clear example of this principle is exhibited in the natural gas transmission pipeline
4	industry. As discussed in its well-known Order 636, the Federal Energy Regulatory
5	Commission's ("FERC") adoption of a SFV pricing method was a result of national
6	policy to encourage increased use of domestic natural gas by promoting additional
7	interruptible (and incremental firm) gas usage. The FERC's SFV pricing mechanism
8	greatly reduced the price of incremental natural gas consumption. This resulted in
9	significantly increasing the demand for, and use of natural gas in the United States after
10	Order 636 was issued in 1992. <sup>10</sup> With specific regard to the SFV rate design adopted in
11	Order 636, FERC stated " The Commission (i.e. FERC) believes it is beyond a doubt
12	that it is the national interest to promote the use of clean and abundant gas over
13	alternative fuels such as foreign oil. SFV is the best method for doing that. <sup>11</sup>
14	
15	So, while the PUCO seems to believe that because rates have been historically volumetric
16	based, there has been a disincentive for utilities to promote conservation, or encourage
17	reduced consumption, I question that reasoning. In support of my doubts, Watson points
18	out that FERC's objective in adopting SFV pricing suggests the exact opposite. The

<sup>&</sup>lt;sup>9</sup> Petition of Indianapolis Power & Light Company to Increase Rates and Charges for Electric Utility Service, Cause Nos. 44576 and 44602, Direct Testimony Glenn A. Watkins on behalf of the Indiana Office of Utility Consumer Counselor, July 27, 2015, page 60.

<sup>&</sup>lt;sup>10</sup> Watkins, pages 58 and 59.

<sup>&</sup>lt;sup>11</sup> Watkins, page 59 and FERC Docket Nos. RM91-11-001 and RM87-34-065, Order No. 636, April 19, 1992, page 7.

1		price signal that results from SFV pricing is meant to promote additional consumption,
2		not reduce it. <sup>12</sup>
3		
4		Watson further concurs that one of the most important and effective tools that any
5		regulatory agency has to promote conservation by customers is by developing rates that
6		send proper pricing signals to conserve and utilize resources efficiently. <sup>13</sup> Pricing
7		structures that are weighted heavily on fixed charges are much more inferior from a
8		conservation and energy efficiency standpoint than pricing structures that require
9		consumers to incur more costs with additional consumption.
10		
11	<i>Q14</i> .	WHY ARE PRICING STRUCTURES THAT ARE WEIGHTED HEAVILY ON
12		FIXED CHARGES INFERIOR (FROM A CONSERVATION BASIS) TO THOSE
13		THAT ARE MORE VOLUMETRIC BASED?
14	A14.	Energy efficiency and distributed generation ("DG") are widely viewed as important
15		tools for helping reduce energy costs, create jobs, and improve economic
16		competitiveness. Increasing fixed charges to customers can significantly reduce
17		incentives for customers to reduce consumption through energy efficiency, DG, or other
18		means. By reducing the value of a kWh saved or self-generated, a higher fixed charge to
19		customers directly reduces the incentive that customers have to lower their bills by

<sup>&</sup>lt;sup>12</sup> Watkins, page 59.

<sup>&</sup>lt;sup>13</sup> Watkins, page 60.

reducing consumption. Customers should not be penalized for being efficient and
 conservative.<sup>14</sup>

3

# 4 Q15. IS THE IMPLEMENTATION OF SFV RATE DESIGN MORE CONSISTENT WITH 5 PRINCIPLES OF COST CAUSATION THAN A CUSTOMER CHARGE THAT 6 ELECTRIC UTILITIES HAVE TRADITIONALLY USED TO COLLECT CERTAIN 7 MINIMUM COSTS FROM CUSTOMERS?

A15. Rate design necessarily involves tying cost causation to the type of rate used to recover
that cost from customers. In the case of customer costs, the cause of costs focuses on
those costs that vary with the number of customers served. This includes such costs as
metering, billing, collection and customer assistance. The fixed charge for residential
service should not exceed the customer-specific charges attributable to an incremental
customer. For urban and suburban residential customers, this is the cost of a service
drop, the portion of the meter costs directly related to billing for usage, plus the cost of

16

15

Yes, high fixed charges as part of a SFV rate design can stabilize utility revenues in the
 near term and are easy to administer.<sup>16</sup> This approach, however, deviates from the long established rate design principles, which hold that only customer-specific charges (those

periodic billing and collection.<sup>15</sup>

<sup>&</sup>lt;sup>14</sup> Caught in a Fix: The Problem with Fixed Charges for Electricity, pages 16 and 17, February 9, 2016, Melissa Whited, Tim Woolf and Joseph Daniel, Prepared for Consumers Union by Synapse Energy Economics, Cambridge Massachusetts.

<sup>&</sup>lt;sup>15</sup> Smart Rate Design For A Smart Future, page 36, July, 2015, Jim Lazar and Wilson Gonzalez, The Regulatory Assistance Project, Montpelier, VT.

<sup>&</sup>lt;sup>16</sup> Lazar and Gonzalez, page 48.

1		that actually change with the number of customers served) properly belong in fixed
2		monthly fees. It also deviates from the accepted economic theory of pricing on the basis
3		of long-run marginal costs. <sup>17</sup>
4		
5	<b>Q16</b> .	WHAT DO LONG-RUN MARGINAL COSTS HAVE TO DO WITH RATE-
6		MAKING?
7	A16.	Watkins concurs that the policy that the fixed costs of an electric distribution company
8		should be collected from customers through fixed monthly charges is incorrect. <sup>18</sup> First of
9		all, distribution costs are NOT fixed: investment in distribution is constant and growing,
10		and unavoidable. <sup>19</sup> Inevitably, the utility will have to make new capital investments;
11		customer growth may require new generating equipment or distribution lines to be
12		upgraded; <sup>20</sup> investments will be made for reliability purposes and to replace existing
13		systems; <sup>21</sup> and, investments will be made to account for losses, heat build-up and
14		overloads. <sup>22</sup>
15		
16		Watkins further concurs that proper pricing should reflect a utility's long-run costs,
17		wherein all costs are variable or volumetric in nature, and users requiring more of the
18		utility's products or services should pay more than the customers who use less of the

<sup>&</sup>lt;sup>17</sup> Lazar and Gonzalez, page 48.

<sup>&</sup>lt;sup>18</sup> Watkins, page 58.

<sup>&</sup>lt;sup>19</sup> Weston, page 7.

<sup>&</sup>lt;sup>20</sup> Whited et al, page 23.

<sup>&</sup>lt;sup>21</sup> Weston, page 32.

<sup>&</sup>lt;sup>22</sup> Weston, page 38.

1	same products and services. Stated more simply, those customers who conserve or are
2	otherwise more energy efficient, or those who use less of the commodity for any reason,
3	should pay less that those who use more. <sup>23</sup> While it may be true that kWh usage has no
4	effect on the costs an electric distribution utility previously expended to build its system
5	(i.e. sunk costs) (even that is questionable – distribution losses, heat build-up and
6	frequency of overloads are aspects of energy use that affect distribution investment and
7	operations and, thus, are marginal energy costs in distribution <sup>24</sup> ), the notion that a
8	volumetric price should reflect only those costs which vary with usage is misleading.
9	
10	The relevant economic costs are those that vary over the long-run, not the short-run.
11	The practically achievable benchmark for efficient pricing is more likely to be a type of
12	average long-run incremental cost, computed for a large, expected incremental block of
13	sales, instead of a short-run marginal cost, estimated for a single sale. In the long-run, all
14	costs are variable. While increased electricity use does not affect the cost of existing
15	capacity, it very well may affect the need for new capacity. If regulators want to promote
16	efficient resource allocation, they will set the volumetric rate to reflect long-run cost
17	causation. <sup>25</sup> "As setting a general base of minimum public policy utility rates and of rate
18	relationships, the more significant marginal or incremental costs are those of a relatively

<sup>&</sup>lt;sup>23</sup> Watkins, page 58.

<sup>&</sup>lt;sup>24</sup> Weston, page 38.

<sup>&</sup>lt;sup>25</sup> Economic Concerns About High Fixed Charge Pricing for Electric Service, page 1, October, 2014, Steve Kihm at http://americas powerplan.co

1		long-run variety – of a variety that treats even capital costs or capacity costs as Variable
2		costs." <sup>26</sup>
3		
4		While it may be argued that sunk costs have already been made and are unavoidable,
5		utilities should not, and generally do not, make decisions based on sunk costs; rather,
6		they make decisions on a forward-looking basis. Similarly, rate structures should be
7		based on forward-going costs to ensure that customers are being sent the right price
8		signals, as customer consumption will drive future utility investments. <sup>27</sup>
9		
10	Q17.	EVEN IF A COST IS FIXED IN THE SHORT-RUN, WHY IS IT NOT GOOD
11		POLICY THAT IT SHOULD BE COLLECTED IN A FIXED CHARGE FROM
12		CUSTOMERS?
13	A17.	Investments in plant are made to provide a supply of safe and reliable electricity, and the
14		costs should be collected in proportion to how much of that electricity a customer uses. A
15		new 5,000 sq. ft. home, with possibly an electric vehicle charging station, requires more
16		local distribution system capacity than a new 500 sq. ft. efficiency apartment. Given a
17		choice between the fixed charge and the variable charge, the volumetric charge is the
18		more appropriate mechanism to collect those capacity costs from customers. If they are
19		allocated to the fixed charge, the signal is that all residential customers require the same

<sup>&</sup>lt;sup>26</sup> Principles of Public Utility Rates, page 356, James Bonbright, 1961, Columbia University Press, New York.

<sup>&</sup>lt;sup>27</sup> Whited et al, page 23.

1		amount of system capacity, regardless of the size of the residence (or, even more
2		important, the size of the connected load). <sup>28</sup>
3		
4	Q18.	CAN (AND SHOULD) THE PUCO TAKE INTO ACCOUNT LONG-TERM COSTS
5		IN RATE DESIGN?
6	A18.	Yes. In fact in its Entry of December 29, 2010 in Case No. 10-3126-EL-UNC, the PUCO
7		states: "Finally, we are cognizant of our own obligation to initiate programs that will
8		promote and encourage conservation of energy and a reduction in the growth rate of
9		energy consumption, promote economic efficiencies, and take into account long-run
10		incremental costs." (Section 4905.70, Revised Code). <sup>29</sup> As noted above, a SFV rate
11		design takes into account only historic sunk costs and does nothing to recognize the long-
12		run incremental costs.
13		
14	Q19.	THE PUCO ADOPTED A MODIFIED SFV RATE DESIGN FOR ALL FOUR
15		MAJOR NATURAL GAS UTILITIES IN OHIO BECAUSE (A) THE SFV RATE
16		DESIGN WILL PRODUCE MORE STABLE BILLS FOR CUSTOMERS; (B) THE
17		SFV RATE DESIGN WOULD BE EASIER TO UNDERSTAND; (C) THE SFV
18		WOULD PRODUCE A MORE ACCURATE PRICE SIGNAL; AND (D) THE SFV
19		RATE DESIGN WOULD ASSURE A MORE EQUITABLE ALLOCATION OF
20		DISTRIBUTION SYSTEM COSTS TO COST CAUSERS. THE PUCO BELIEVES
21		THAT THESE SAME CHARACTERISTICS COULD BE APPLICABLE TO AN SFV

<sup>&</sup>lt;sup>28</sup> Kihm, page 1.

<sup>&</sup>lt;sup>29</sup> Case No. 10-3126-EL-UNC, page 5.

#### **RATE DESIGN FOR ELECTRIC UTILITIES. ARE THESE CHARACTERISTICS** 1 **EQUALLY APPLICABLE FOR ELECTRIC UTILITIES?** 2 A19. No. 3 4 5 *Q20*. DOES THE SFV RATE DESIGN PRODUCE MORE STABLE BILLS FOR **CUSTOMERS?** 6 7 A20. Consumer bills that include a revenue neutral SFV rate design may be less volatile than 8 those based strictly on consumption. However, it is generally preferable that individual customers make their own consumption decisions.<sup>30</sup> The PUCO apparently not only 9 wants to micro manage the electric distribution company by making them propose a SFV 10 rate design, but also wants to micro manage its customers. If a customer wants year-11 12 around stable electric bills the customer can opt to enroll in budget billing with its electric company. Also, a residential customer who heats with gas and cools with electricity 13 14 already has a-built-in stability (as a result of higher electric bills in the summer due to cooling and higher gas bills in the winter due to heating) in its total gas and electric utility 15 bills, which a SFV rate design destabilizes. It should be the customer's choice to best 16 manage its utility payments. 17

18

## 19 *Q 21. IS THE SFV RATE DESIGN EASIER TO UNDERSTAND?*

A21. No. I have worked with electric rates for over 27 years and I still don't understand why a
customer who lives in a 5,000 square feet house, heats with electricity, has a hot tub, a

<sup>&</sup>lt;sup>30</sup> Weston, page 51.

1		heated pool, an electric vehicle, and a multitude of electric appliances and gadgets should
2		pay the same distribution bill as a customer living in a 500 square feet apartment with gas
3		heat. A fixed charge is no easier to understand than a rate per kWh that charges a set
4		amount for each kWh used. In fact, because that is how most items are purchased (on a
5		per unit basis), a usage charge is, quite probably, easier to understand for the customer
6		(i.e., the fewer units consumed the lower the charge). The complexity of today's utility
7		bills is not due to the customer charge and the volumetric charges, it is due to the multiple
8		riders to which each customer is subjected.
9		
10	<i>Q22</i> .	DOES THE SFV RATE DESIGN PRODUCE A MORE ACCURATE PRICE SIGNAL
11		
		TO CUSTOMERS?
12	A22.	<i>TO CUSTOMERS?</i> No. If the price signal the PUCO wants to send is "usage doesn't matter," then the SFV
12 13	A22.	<i>TO CUSTOMERS?</i> No. If the price signal the PUCO wants to send is "usage doesn't matter," then the SFV rate design is appropriate. Fixed, recurring, unavoidable charges tell a consumer little
12 13 14	A22.	TO CUSTOMERS? No. If the price signal the PUCO wants to send is "usage doesn't matter," then the SFV rate design is appropriate. Fixed, recurring, unavoidable charges tell a consumer little about the costs that his or her consumption imposes on the system. In fact, these charges
12 13 14 15	A22.	TO CUSTOMERS? No. If the price signal the PUCO wants to send is "usage doesn't matter," then the SFV rate design is appropriate. Fixed, recurring, unavoidable charges tell a consumer little about the costs that his or her consumption imposes on the system. In fact, these charges offer consumers no information at all about the scarcity and costs of distribution

<sup>&</sup>lt;sup>31</sup> Weston, page 42.

1	<i>Q23</i> .	DOES THE SFV RATE DESIGN ASSURE A MORE EQUITABLE ALLOCATION
2		OF DISTRIBUTION COSTS TO CUSTOMERS WHO CAUSE THE COST?
3	A23.	No. Those who make greater use of the network should bear a proportionately greater
4		share of its costs and pay usage-based rates because those who use more of the service
5		should cover proportionately more of its costs. <sup>32</sup>
6		
7	<i>Q24</i> .	BUT THE SFV RATE APPLIES ONLY TO THE DISTRIBUTION PORTION OF A
8		CUSTOMER'S BILL, RIGHT?
9	A24.	The original rationale for public utility regulation was to protect customers from the
10		monopoly power of utilities. <sup>33</sup> In spite of the fact that the electric utility industry in Ohio
11		was unbundled and restructured, that goal should remain. The distribution network,
12		which normally accounted for anywhere from ten to forty percent of a vertically-
13		integrated utility's total investment, has now become the object of central concern to
14		firms who no longer own generation assets. <sup>34</sup> The fact that significant other revenue may
15		be collected volumetrically through generation rates, transmission rates, trackers and
16		riders does not lessen the need for the reasonable design of base distribution rates. <sup>35</sup> It's
17		the principle that counts.

<sup>&</sup>lt;sup>32</sup> Weston, page 40.

<sup>&</sup>lt;sup>33</sup> Evaluating Alternative Rate Mechanisms: A Conceptual Approach for State Utility Commissions, The Electricity Journal, Volume 27, Issue 4, May, 2014, page 21, Ken Costello.

<sup>&</sup>lt;sup>34</sup> Weston, page 9.

<sup>&</sup>lt;sup>35</sup> Watkins, page 60.

#### 1 Q25. ARE THERE OTHER ISSUES THAT THE PUCO SHOULD CONSIDER?

2 A25. Yes. Residential customers who use less energy than the average residential consumer will experience the greatest percentage jumps in their electric bills when the fixed charge 3 is raised, because the billings are based less on usage and more on a flat fee structure.<sup>36</sup> 4 5 The larger the customer charge, the lower the percentage increase (or greater the percentage decrease) in total bills for above-average use customers.<sup>37</sup> This can be readily 6 seen in the typical bills presented by AEP Ohio Witness Gill in his Exhibit DRG-7 (pages 7 8 1 of 16 and 9 of 16) attached to his testimony. At the proposed rates, a residential nonheating customer in the AEP Ohio rate zone using 30 kWh a month would see an increase 9 in its monthly **total** bill of 45.40%. On the other hand, a residential non-heating 10 customer using 2000 kWh a month would see a **decrease** in its monthly **total** bill of 11 1.72%. The break-even point (where a customer would see the same total bill) is slightly 12 over 1,200 kWh. There are many reasons a customer might have low energy usage – 13 they may have energy efficient appliances, they may have DG, they may be conscientious 14 in avoiding the wasteful use of electricity, or they may also be located in smaller homes 15 or apartments and therefore impose lower distribution costs on the grid.<sup>38</sup> 16 17

<sup>&</sup>lt;sup>36</sup> Whited et al, page 14.

<sup>&</sup>lt;sup>37</sup> Residential Winners and Losers behind the Energy versus Customer Charge Debate, The Electricity Journal, Volume 27, Issue 4, May, 2014, page 2, Larry Blank and Doug Gegax.

<sup>&</sup>lt;sup>38</sup> Whited et al, page 14.

1 2	Q26.	DOES A SFV RATE DESIGN IMPOSE DISPROPORTIONATE RATE IMPACTS ON LOW-INCOME CUSTOMERS?			
3	A26.	I have seen studies which equate low users with low income consumers. I have also seen			
4		studies that imply there is little or no correlation. However, to the degree there are low-			
5		use customers who are also low-income, the SFV rate design raises those bills			
6		disproportionately to those who can least afford it. <sup>39</sup> Even seemingly small changes in			
7		rate design can have significant consequences for customers. <sup>40</sup>			
8					
9	Q27.	DIDN'T THE UTILITY'S COST OF SERVICE STUDY INDICATE THAT THE			
10		PROPOSED MOVEMENT TO SFV RATE DESIGN IS WARRANTED?			
11	A27.	No. AEP Ohio Witness Moore points out on page 13, lines 2 -4 of her testimony, that			
12		the Utility filed, in Case No. 11-351-EL-AIR, an updated cost of service study showing			
13		that a "full" customer charge (without an energy charge) should be \$27.42 for a standard			
14		residential customer. She further explains that distribution costs are incurred by sizing			
15		the distribution system to meet customer(s) peak kW demand usage; but, since demand			
16		costs cannot be determined for most residential customers due to meter limitations, those			
17		costs, because they are fixed, are best reflected in the customer charge. <sup>41</sup> The \$27.42			
18		charge assumes that all demand-related charges should be included in the customer			
19		charge. <sup>42</sup> . In the absence of any demand, no such system would be built at all. <sup>43</sup> There is			

<sup>&</sup>lt;sup>39</sup> Whited et al, page 17.

<sup>&</sup>lt;sup>40</sup> Weston, page 6.

<sup>&</sup>lt;sup>41</sup> Case No. 16-1852-EL-SSO, Moore testimony, page 13.

<sup>&</sup>lt;sup>42</sup> Utility's response to OCC-INT-2-275(b)) (Attached).

<sup>&</sup>lt;sup>43</sup> Watkins, pages 39 – 41.

1		a positive and significant correlation between monthly kWh usage and maximum
2		monthly demand, which strongly suggests that some portion and possibly all demand-
3		related costs allocated to the residential class should be recovered through the energy
4		charge. <sup>44</sup> Cost of service studies are used to allocate a utility's historic costs among the
5		various customer classes. These studies can, and do, serve as useful guidelines or
6		benchmarks when setting rates, but the results of these studies should not be directly
7		translated into rates. To provide efficient price signals, prices should be designed to
8		reflect <i>future</i> marginal costs. <sup>45</sup>
9		
10	Q28.	PLEASE SUMMARIZE YOUR RECOMMENDATIONS IN THIS PROCEEDING?
11	A28.	I am recommending that the PUCO reject the SFV proposal. I recommend the Company
12		maintain the current Customer Charge of \$8.40 and a volumetric charge of \$0.182747 for
13		the standard Residential class.
14		
15		I recommend that the PUCO reconsider its policy goal of requiring SFV distribution
16		rates for residential electric customers. I urge the PUCO to reconsider its SFV rate
17		design policy and adopt a pricing and rate-setting policy that serves the long-term public
18		interests: fairness, economic efficiency, innovation and environmental protection. In the
19		distribution system, this calls for usage-based pricing. <sup>46</sup> Further, instead of mandating a

\_\_\_\_\_

<sup>&</sup>lt;sup>44</sup> Blank and Gegax, page 5.

<sup>&</sup>lt;sup>45</sup> Whited et al, page 25.

<sup>&</sup>lt;sup>46</sup> Weston, page 40.

1		SFV rate design, the PUCO should be encouraging utilities to consider other innovative	
2		rate designs (e.g. time-of-use-rates).	
3			
4	Q29.	DID THE UTILITY CONDUCT A BILL FREQUENCY ANALYSIS?	
5	A29.	No. In response to OCC-INT-2-277(c) the Utility stated "The Company has not	
6		performed a bill frequency data analysis." As a rate analyst, I find this to be disturbing.	
7		To make radical changes in rate design which affect customers differently based on the	
8		energy they use, I believe it is vital in the analytical process to view the frequency of the	
9		actual usage in ranges. Without that analysis, the number of customers negatively or	
10		positively impacted is unknown. This is another reason that I recommend the partial SFV	
11		proposed by the Utility be rejected.	
12			
13		I highly recommend that the PUCO require bill frequency analyses to be included and	
14		provided with any application to implement a SFV rate design, prior to approving any	
15		such proposal.	
16			
17	Q30.	DOES THAT CONCLUDE YOUR TESTIMONY?	
18	A30.	Yes, it does. However, I reserve the right to incorporate new information that may	
19		subsequently become available. I also reserve the right to supplement my testimony in	
20		the event the Utility or any other party submits new or corrected information in	
21		connection with this proceeding.	

21

#### **CERTIFICATE OF SERVICE**

It is hereby certified that a true copy of the foregoing *Direct Testimony of Robert B. Fortney* on *Behalf of The Ohio Consumers' Counsel* was served via electronic transmission this 2nd day of

> <u>/s/ William J. Michael</u> William J. Michael Assistant Consumers' Counsel

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# Robert Fortney Proceedings with Testimony Submitted to the Public Utilities Commission of Ohio

Company	Docket No.	Date
Cleveland Electric Illuminating Company	85-675-EL-AIR	1986
Cleveland Electric Illuminating Company	86-2025-EL-AIR	1987
Toledo Edison Company	86-2026-EL-AIR	1987
Ohio Edison Company	87-689-EL-AIR	1987
Cleveland Electric Illuminating Company	88-170-EL-AIR	1988
Toledo Edison Company	88-171-EL-AIR	1988
Ohio Edison Company	89-1001-EL-AIR	1990
Cincinnati Gas & Electric Company	91-410-EL-AIR	1991
Columbus Southern Power Company	91-418-EL-AIR	1992
Cincinnati Gas & Electric Company	92-1464-EL-AIR	1993
Ohio Power Company	94-996-EL-AIR	1994
Toledo Edison Company	94-1987-EL-CSS	1995
Cleveland Electric Illuminating Company	94-1964-EL-CSS	1995
Toledo Edison Company	95-299-EL-AIR	1995
Cleveland Electric Illuminating Company	95-300-EL-AIR	1996
All Electric Companies (Rulemaking Proceeding)	96-406-EL-COI	1998
Cleveland Electric Illuminating Company	97-358-EL-ATA	1998
Toledo Edison Company	97-359-EL-ATA	1998
Cleveland Electric Illuminating Company	97-1146-EL-COI	1998
Toledo Edison Company	97-1147-EL-COI	1998
FirstEnergy	96-1211-EL-UNC	1998
Columbus Southern Power Company	01-1356-EL-ATA	2002
Columbus Southern Power Company	01-1357-EL-AAM	2002
Rulemaking Proceeding	01-2708-EL-COI	2002
FirstEnergy	01-3019-EL-UNC	2002
Ohio Power Company	01-1358-EL-ATA	2002
Ohio Power Company	01-1359-EL-AAM	2002
The Dayton Power and Light Company	02-0570-EL-ATA	2003
Dayton Power and Light Company	02-2364-EL-CSS	2003
Dayton Power and Light Company	02-2879-EL-AAM	2003
Dayton Power and Light Company	02-2779-EL-ATA	2003
FirstEnergy Corporation	03-2144-EL-ATA	2004
Cincinnati Gas & Electric Company	03-0093-EL-ATA	2004
Cincinnati Gas & Electric Company	03-2079-EL-AAM	2004
Cincinnati Gas & Electric Company	03-2081-EL-AAM	2004
Monongahela Power Company	04-0880-EL-UNC	2004
Monongahela Power Company	05-0765-EL-UNC	2005

Dayton Power and Light Company	05-0276-EL-AIR	2005
FirstEnergy	07-0551-EL-AIR	2008
FirstEnergy	08-0936-EL-SSO	2008
FirstEnergy	08-0935-EL-SSO	2008
Ormet Primary Aluminum Corporation	09-0119-EL-AEC	2009
Cleveland Electric Illuminating Company	08-1238-EL-AEC	2009
Columbus Southern Power Company	09-0516-EL-AEC	2009
FirstEnergy	10-0388-EL-SSO	2010
FirstEnergy	10-0176-EL-ATA	2011
Columbus Southern Power Company	11-0346-EL-SSO	2011
Ohio Power Company	11-0348-EL-SSO	2011
Columbus Southern Power Company	10-0343-EL-ATA	2011
Ohio Power Company	10-0344-EL-ATA	2011
AEP Ohio	10-2376-EL-UNC	2011
AEP Ohio	10-2929-EL-UNC	2011
AEP Ohio	11-4921-EL-RDR	2011
FirstEnergy	12-1230-EL-SSO	2012
AEP Ohio	14-1693-EL-RDR	2015
Aqua	16-0907-WW-AIR	2016
Dayton Power and Light Company	16-0395-EL-SSO	2017

#### Source Documents Regarding Straight Fixed Variable (SFV) Rate Design

Smart Rate Design for a Smart Future, July, 2015: Lazar, J. and Gonzalez, W. (2015). Smart Rate Design for a Smart Future. Montpelier, VT: Regulatory Assistance Project.

Pricing Do's and Don'ts: Designing Retail Rates As If Efficiency Counts, April, 2011: Lazar, J., Schwartz, L. and Allen, R. (2011). Pricing Do's and Don'ts: Designing Retail Rates As If Efficiency Counts. Montpelier, VT: Regulatory Assistance Project.

Addressing the Throughput Incentive and Digging into Decoupling, Pennsylvania PUC En Banc Session in Docket M-2015-2518883, Harrisburg, PA, March 3, 2016: Presented by Sedano, R. (2016). Addressing the Throughput Incentive and Digging Deeper into Decoupling. Montpelier, VT: Regulatory Assistance Project.

Fixed Charges / Demand Charges, Advanced Energy Economy, October 14, 2015: Presented by Lazar, J. (2015). Fixed Charges / Demand Charges. Montpelier, VT: Regulatory Assistance Project.

Minimum Bills: An Alternative to High Customer Charges, Solar Electric Power Association, San Diego, April 29, 2015: Lazar, J. (2015). Minimum Bills: An Alternative to High Customer Charges. Montpelier, VT: Regulatory Assistance Project.

Foundations of Energy Regulation, House Natural Resources and Energy Committee, Montpelier, Vermont, January 20, 2015: Presented by Weston, R. (2015). Foundations of Energy Regulation. Montpelier, VT: Regulatory Assistance Project.

Foundations for Electric Utility Rate Design, Missouri Comprehensive Energy Plan, October 22, 2014: Presented by Sedano, R. (2014). Foundations for Electric Utility Rate Design. Montpelier, VT: Regulatory Assistance Project.

Revenue Regulation and Decoupling: A Guide to Theory and Application, June, 2011: Lazar, J., Weston, R. and Shirley, W. (June, 2011). Revenue Regulation and Decoupling: A Guide to Theory and Application. Montpelier, VT: Regulatory Assistance Project.

Electric Utility Residential Customer Charges and Minimum Bills: Alternative Approaches for Recovering Basic Distribution Costs: Lazar, J. (2015). Electric Utility Residential Customer Charges and Minimum Bills: Alternative Approaches for Recovering Basic Distribution Costs. Montpelier, VT: Regulatory Assistance Project.

Use Great Caution in Design of Residential Demand Charges, 2016: Lazar, J. (2016). Use Great Caution in Design of Residential Demand Charges. Montpelier, VT: Regulatory Assistance Project.

Smart Rate Design for a Smart Future, Appendix D: The Specter of Straight Fixed/Variable Rate Designs and the Exercise of Monopoly Power, July, 2015: Lazar, J. (2015). Smart Rate Design for a Smart Future, Appendix D: The Specter or Straight Fixed/Variable Rate Designs and the Exercise of Monopoly Power. Montpelier, VT: Regulatory Assistance Project.

Charging for Distribution Utility Services: Issues in Rate Design, December, 2000: Weston, R. (2000). Charging for Distribution Utility Services: Issues in Rate Design. Montpelier, VT: Regulatory Assistance Project.

Economic concerns about high fixed charge pricing for electric service. Steve Kihm, October 2014 at http://americaspowerplan.co/wp-content/uploads/2014/10/Economic-analysis-of-high-fixed-charges.pdf

Straight Fixed Variable: American Electric Power Company, Issues in Electricity: Straight Fixed Variable, 2014 at http://www.aep.com/about/IssuesAndPositions/Financial/Regulatory/AlternativeRegulation

Case No. 14-1297-EL-SSO: Supplemental Testimony of Scott J. Rubin On Behalf of The Office of the Ohio Consumers' Counsel, December 30, 2015.

Moving Toward Demand-Based Residential Rates, Scott J. Rubin, NASUCA Annual Meeting, Austin, TX, November 10, 2015. [NASUCA = National Association of State Utility Consumer Advocates]

Moving Toward Demand-Based Residential Rates, Scott J. Rubin, The Electricity Journal, Volume 28, November, 2015, pages 63 – 71, 2015 Elsevier Inc.

State of Indiana Cause Nos. 44576 & 4602 re: Indianapolis Power & Light Company: Verified Direct Testimony of Glenn A Watkins – Public Exhibit No. 14 On Behalf of the Indiana Office of Utility Consumer Counselor, July 27, 2015.

Caught in a Fix: The problem with Fixed Charges for Electricity, Prepared for Consumers Union, February 9, 2016 by Synapse Energy Economics, Inc.: Whited, Melissa; Woolf, Tim; Daniel, Joseph (February 9, 2016). Caught in a Fix: The problem with Fixed Charges for Electricity, Prepared for Consumers Union, February 9, 2016 by Synapse Energy Economics, Inc., Cambridge, MA.

Fixed Charges and Utility Customers, Prepared for Consumers Union by Synapse Energy Economics, 2016. www.consumersunion.org; www.synapse-energy.com/fixed\_charges\_factsheet.

Residential Winners and Losers Behind the Energy versus Customer Charge Debate, Larry Blank and Doug Gegax, The Electricity Journal, Volume 27, Issue 4, May, 2014, pages 31-39, 2014 Elsevier Inc.

Evaluating Alternative Rate Mechanisms: A Conceptual Approach for State Utility Commissions, Ken Costello, The Electricity Journal, Volume 27, Issue 4, May, 2014, pages 16-30, Elsevier Inc.

What's So Great About Fixed Charges, Severin Borenstein, November 5, 2014, http://www.thenergycollective.com.

Rooftop solar: Net metering is a net benefit, Marc Muro and Devashree Saha, Brookings, May 23,2016.

Rate Design for a Distributed Grid, Solar Energy Industries Association.

Curating the Future of Rate Design for Residential Customers, Ahmad Faruqui and Wade Davis, with Josephine Duh and Cody Warner, Electricity Policy, July, 2016.

Unjust, Unreasonable, and Unduly Discriminatory: Electric Utility Rates and the Campaign Against Rooftop Solar, Art Peskoe, Harvard Environmental Policy Initiative, February 1, 2016.

Pathway to a 21<sup>st</sup> Century Electric Utility, Peter H. Kind, Ceres, Inc., November, 2015.

1.0 Primer on Rate Design for Residential Distributed Generation, Edison Electric Institute, February, 2016.

Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates, Public Service Commission of Wisconsin, Docket 6690-UR-123, Post Hearing Brief of 10/01/14 and Reply Brief of 10/08/2014 of Renew Wisconsin.

Joint Application of Wisconsin Electric Power Company and Wisconsin Gas LLC, both dba We Energies, for Authority to Adjust Electric, Natural gas, and Steam Rates, Docket No. 05-UR-107, Initial Brief of the Citizens Utility Board, 10/07/14, 2014.

Charge Without a Cause? Assessing Electric Utility Demand Charges on Small Consumers; Paul Chernick, John Colgan, Rick Gilliam, Douglas Jester, and Mark Le Bel; Electric Policy, Electric Daily; August, 2016.

Bill Effects of Demand-Based Rates on Commonwealth Edison Residential Customers; Jeff Zethmayr: Energy Policy, Energy Daily: July, 2016.

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## Case No(s). 16-1852-EL-SSO, 16-1853-EL-AAM

Summary: Testimony Direct Testimony of Robert B. Fortney on Behalf of the Office of the Ohio Consumers' Counsel electronically filed by Ms. Deb J. Bingham on behalf of Michael, William J. Mr.