OCC/NOAC EXHIBIT NO.

#### BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Ohio	)	
Edison Company, The Cleveland Electric	)	
Illuminating Company and The Toledo	)	
Edison Company for Authority to Provide	)	Case No. 14-1297-EL-SSO
for a Standard Service Offer Pursuant to	)	
R.C. 4928.143 in the Form of an Electric	)	
Security Plan.	)	

(Public Version)

#### REHEARING DIRECT TESTIMONY OF JAMES F. WILSON

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

#### And

Northwest Ohio Aggregation Coalition 5577 Airport Hwy Suite 101 Toledo, Ohio 43615-7364

June 22, 2016

## **TABLE OF CONTENTS**

I.	INTRODUCTION	.1
II.	SUMMARY AND RECOMMENDATION	.3
III.	THE MODIFIED RIDER RRS PROPOSAL REMAINS VERY COSTLY TO CUSTOMERS	1
IV,	THE PROPOSED RIDER RRS MODIFICATIONS ARE STRUCTURALLY FLAWED; THEY WOULD LEAD TO NONSENSICAL RESULTS AND FURTHER RAISE THE COST TO CUSTOMERS	7
V.	THE MODIFIED RIDER RRS PROPOSAL'S PROVISIONS REGARDING PLANT RETIREMENTS ARE UNFAIR TO CUSTOMERS2	28
VI.	THE PROPOSED MODIFICATIONS TO RIDER RRS WEAKEN ITS ALREADY WEAK IMPACT ON RATE STABILITY	32

# **EXHIBITS**

Exhibits JFW-1 to JFW-4

ě.

1	I.	INTRODUCTION
2		
3	<i>Q1</i> .	PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.
4	<i>A1</i> .	My name is James F. Wilson. I am an economist and principal of Wilson Energy
5		Economics. My business address is 4800 Hampden Lane Suite 200, Bethesda,
6		MD 20814.
7		
8	<i>Q2</i> .	HAVE YOU PREVIOUSLY TESTIFIED IN THIS PROCEEDING?
9	<i>A2</i> .	Yes. I submitted direct testimony in this proceeding on behalf of the Office of the
10		Ohio Consumers' Counsel ("OCC") and the Northeast Ohio Public Energy
11		Council ("NOPEC") on December 22, 2014. I also submitted supplemental
12		testimony on May 11, 2015, and second supplemental testimony on December 30,
13		2015, on behalf of the same parties. My experience and qualifications were
14		described in my direct testimony, which also included a list of past cases in which
15		I testified before the Public Utilities Commission of Ohio ("PUCO"). My
16		curriculum vitae, further describing my experience and qualifications and listing
17		other past testimony, was attached to my direct testimony.

1	<i>Q3</i> .	ON WHOSE BEHALF ARE YOU NOW TESTIFYING IN THIS
2		PROCEEDING?
3	<i>A3</i> .	I am testifying on behalf of OCC and the Northwest Ohio Aggregation Coalition
4		("NOAC").
5		
6	<i>Q4</i> .	WHAT IS THE PURPOSE AND SCOPE OF YOUR REHEARING
7		TESTIMONY?
8	<i>A4</i> .	On May 2, 2016, numerous parties, including the applicants in this proceeding
9		(Ohio Edison Company, The Cleveland Electric Illuminating Company, and The
10		Toledo Edison Company; "FE Companies") filed requests for rehearing of the
11		PUCO's Opinion and Order issued in this proceeding on March 31, 2016. The FE
12		Companies' Request for Rehearing proposed an alternative approach to the Retail
13		Rate Stability Rider ("Rider RRS") that had been approved in the March 31
14		Opinion and Order ("Modified RRS Proposal"). In an entry dated June 3, 2016,
15		the PUCO determined that a hearing should be held regarding the provisions of
16		the Modified RRS Proposal.
17		
18		My assignment was to evaluate the Modified RRS Proposal, supporting
19		testimony, work papers, and additional discovery, to evaluate the proposed
20		changes to Rider RRS, and to update my estimate of the cost to customers under

Rider RSS. I was also asked to evaluate the FE Companies' various claims 1 2 regarding benefits of the Modified RRS Proposal. 3 II. 4 SUMMARY AND RECOMMENDATION 5 6 Q5. PLEASE BRIEFLY SUMMARIZE YOUR EVALUATION AND MAIN 7 **CONCLUSIONS REGARDING RIDER RRS FROM YOUR EARLIER** 8 **TESTIMONY IN THIS PROCEEDING.** A5. 9 In my direct testimony, I evaluated the FE Companies' estimate of the potential future net costs to customers under the proposed PPA and associated Rider RRS. 10 I concluded that the FE Companies' estimated cost was unreliable, primarily due 11 12 to the speculative nature of the price assumptions used in the analysis, and that the 13 net cost to customers of the proposed Rider RRS would likely be much greater. I 14 prepared three alternative scenarios; under the two most scenarios, Rider RRS would cost customers \$3.0 billion or \$3.9 billion over the 15 years of the rider and 15 16 PPA as proposed at that time. I also found that any incremental price stability the arrangement might provide by serving as a type of hedge (which I considered 17 doubtful), would be of little value compared to the expected net cost, and risk of 18 even higher cost, to customers. 19

1	In my first supplemental testimony, I rebutted assertions that there is inadequate
2	revenue in the PJM markets to attract and retain sufficient generation to satisfy
3	resource adequacy objectives (so-called "missing money"). I explained that, to
4	the contrary, the PJM markets have had sufficient new entry and adequate total
5	resources to consistently exceed applicable resource adequacy targets; and
6	through PJM's three-year-forward Reliability Pricing Model ("RPM") capacity
7	construct, capacity commitments are already in place through May 31, 2018,
8	indicating there is no "missing money." I also noted in my first supplemental
9	testimony that there has been new generation built specifically in Ohio, and
10	identified new gas-fired power plants under construction or development in Ohio
11	(of which, at that time, there were four). In my second supplemental testimony, I
12	updated my estimate of the cost to customers of the proposed Rider RRS to reflect
13	proposed changes to it according to a Third Supplemental Stipulation and
14	Recommendation filed on December 1, 2015, and to reflect updated market
15	conditions. My updated estimate was a \$3.9 billion cost to customers for the
16	revised, eight-year duration of the proposed Rider RRS. I also provided an update
17	on resource adequacy conditions, noting additional proposed new power plants
18	for Ohio, and PJM's lowered load forecast.

1 Q6. WHAT DID YOU RECOMMEND WITH REGARD TO THE PROPOSED

#### 2 *RIDER RRS, IN YOUR EARLIER TESTIMONY?*

3 A6. I have consistently recommended that the Rider RRS proposal be rejected,

5 hedge, and shift the costs and risks associated with the associated deregulated

because the proposal would be costly to customers, provide little or no value as a

6 generation to customers, while eliminating the owners' incentives to manage the

7 costs and risks of these plants. I also recommended that, should the PUCO

8 choose to approve Rider RRS in some form, it be modified to reduce the cost and

9 risk to customers and restore some incentive to the FE Companies to control costs

10 and maximize operation and revenue.

11

4

#### 12 Q7. PLEASE DESCRIBE THE MODIFIED RRS PROPOSAL.

A7. The Modified RRS Proposal is described in the Rehearing Testimony of Eileen
M. Mikkelsen (pp. 5-6). While Ms. Mikkelsen describes the proposal as "a few
modest modifications to the calculation" of Rider RRS, the proposal would make
two very significant changes to it:

i. Whereas Rider RRS has always been structured to recover the
cost, net of market revenues, of power plants owned by
subsidiaries of the FE Companies' affiliate FirstEnergy Solutions

20 Corp. ("FES"), the Modified RRS Proposal is now calculated in a

1	manner that is totally disconnected from the actual cost, revenue
2	or operation of any generating plants.
3	ii. Whereas a main purpose of Rider RRS has always been to
4	subsidize FES plants that have been losing money in recent years,
5	Ms. Mikkelsen claims (p. 6) the cash received by the FE
6	Companies under the Modified RRS Proposal would not flow to
7	FES.
8	
9	Rider RRS has always pertained to the costs and revenues of specific power
10	plants: the Davis-Besse Nuclear Power Station ("Davis-Besse") and the W. H.
11	Sammis Plant ("Sammis") owned by subsidiaries of FES, and an entitlement to a
12	portion of the output of two generating plants of the Ohio Valley Electric
13	Corporation ("OVEC") (for brevity, the "FES plants").
14	
15	Under the Modified RRS Proposal, the power plant fixed and variable costs to be
16	passed through Modified Rider RRS would not be the actual FES plants' costs as
17	earlier proposed. Instead, the costs passed through Rider RRS would be the fixed
18	and variable costs as forecast by the FE Companies in 2014 that are in the record
19	in this proceeding. The energy revenues offsetting the calculated costs would be
20	based on actual market energy prices, but would use, not actual FES plant
21	generation amounts (GWh), but the monthly on-peak and off-peak generation

1		amounts from the FE Companies' 2014 modeling and forecasts. Similarly,
2		capacity revenues would be calculated based on actual capacity prices but
3		assumed, not actual, cleared capacity quantities. And the Rider RRS revenues
4		would remain with the FE Companies rather than being passed to FES through a
5		power purchase agreement.
6		
7	Q8.	DO THE FE COMPANIES PROPOSE OTHER CHANGES TO RIDER RRS,
8		IN ADDITION TO THESE TWO SIGNIFICANT CHANGES?
9	<i>A8</i> .	Yes. Ms. Mikkelsen proposes various other changes regarding information
10		sharing, compliance reviews, and termination provisions (pp. 7-9). In addition,
11		there is a new proposal with regard to the possible adjustment of Rider RRS as a
12		result of asset retirements, described later in my testimony.
13		
14	Q9.	WHAT DO THE FE COMPANIES CLAIM ARE THE BENEFITS OF THE
15		MODIFIED RRS PROPOSAL?
16	A9.	Ms. Mikkelsen claims the Modified RRS Proposal addresses some of the concerns
17		parties had raised about Rider RRS, and has the following benefits compared to
18		Rider RRS as approved by PUCO (pp. 6-7, 10-11).
19		i. Ms. Mikkelsen claims that by fixing the costs to be collected, the
20		Modified Rider RRS addresses various concerns about rising

1			capital and operating costs, extended outages, and environmental
2			compliance costs and risks.
3		ii.	Ms. Mikkelsen claims that by directing the cash collected under
4			the Modified Rider RRS to the FE Companies, not FES, more
5			cash becomes available for the FE Companies' initiatives such as
6			grid modernization.
7		iii.	Ms. Mikkelsen claims that by disconnecting Rider RRS from
8			actual FES plant operation, concerns about the incentives with
9			respect to how the plants are operated and bid into the PJM
10			markets are addressed.
11		iv.	Ms. Mikkelsen claims (p. 10) that the Modified Rider RRS will
12			still have the effect of "stabilizing or providing certainty regarding
13			retail electric service" of the earlier Rider RRS proposal.
14			
15	Q10.	PLEAS	SE SUMMARIZE YOUR CONCLUSIONS REGARDING THE
16		PROP	OSED CHANGES TO RIDER RRS.
17	A10.	The pro	oposal to fix the cost and generation quantities to be used in the Modified
18		Rider F	RRS calculations would result in nonsensical calculations based on
19		generat	ion quantities that are inconsistent with the prices used. In essence, the
20		propose	ed approach would assume inefficient dispatch, and this would raise the
21		cost to	customers of Rider RRS.

1		Current expectations are for energy prices to remain low in the coming years.
2		When energy prices are low and the Sammis plant is uneconomic, it should not
3		run. But under Modified Rider RRS, the calculations would instead assume that
4		Sammis runs at a loss, and the calculated losses would be passed through to
5		customers. The use of inconsistent generation quantities would also diminish the
6		already weak impact of Rider RRS on price stability.
7		
8		The proposal to allow reducing the Modified Rider RRS costs by a "proportional
9		amount" in the event of retirements is unfair to customers, because it would likely
10		be the most uneconomical capacity that would be retired. Considered as a hedge
11		for customers, Rider RRS (with or without the proposed modifications) is costly
12		and ineffective.
13		
14	<b>Q</b> 11.	HAVE YOU ESTIMATED THE COST TO CUSTOMERS BASED ON THE
15		MODIFIED RRS PROPOSAL?
16	<i>A11</i> .	Yes, I have update two of the three scenarios. The results are shown in Table 1,
17		later in my testimony. Under my first scenario, based on the U.S. Energy
18		Information Administration ("EIA") Annual Energy Outlook ("AEO") "reference
19		case" projection, customers would incur a cost of \$1.3 billion over the eight years
20		of Modified Rider RRS. This compares to Ms. Mikkelsen's estimate (p. 4) of a

1		\$0.56 billion credit. The currently applicable AEO reference case projection is
2		now AEO 2016, released in May 2016. <sup>1</sup>
3		
4		Under my third alternative scenario, I assume natural gas prices follow the pattern
5		reflected in recent forward prices (accessed June 15, 2016), which are available
6		for the entire period of the Modified RRS. Under this scenario, the total cost to
7		customers would be \$3.6 billion over the eight years of the rider.
8		
9	<i>Q12</i> .	PLEASE SUMMARIZE YOUR RECOMMENDATION REGARDING THE
10		MODIFIED RRS PROPOSAL.
11	<i>A12</i> .	The proposed modifications to Rider RRS should not be approved. The currently-
12		approved version of Rider RRS will be very costly to customers, and the Modified
13		Rider RRS would further raise the cost to customers, due to the use of simulated
14		generation quantities that will at times be highly inconsistent with future energy
15		prices.
16		
17	<i>Q13</i> .	HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?
18	<i>A13</i> .	The next section provides my updated estimate of the cost to customers of the
19		proposed Modified Rider RRS. Section IV explains the nonsensical results that

<sup>&</sup>lt;sup>1</sup> U.S. Energy Information Administration, *Annual Energy Outlook 2016 Early Release, May 2016*, available at <u>http://www.eia.gov/forecasts/aeo/er/index.cfm</u>.

1		can obtain from the proposal to fix the generation cost and quantity values to be
2		used in the Modified Rider RRS calculations. Section V discusses the proposed
3		provisions for adjusting Modified Rider RRS in the event of asset retirements.
4		Finally, Section VI discusses the impact of the proposed changes on Modified
5		Rider RRS as a hedge.
6		
7	III.	THE MODIFIED RIDER RRS PROPOSAL REMAINS VERY COSTLY
8		<b>TO CUSTOMERS</b>
9		
10	<i>Q14</i> .	DID THE FE COMPANIES PROVIDE AN UPDATED ESTIMATE OF THE
11		DOLLAR AMOUNTS THAT WOULD BE COLLECTED FROM
12		CUSTOMERS UNDER THE MODIFIED RRS PROPOSAL?
13	A14.	No. The FE Companies cite to their Rider RRS estimate (\$0.56 billion credit;
14		Mikkelsen p. 4) based on the Third Supplemental Stipulation, which relies upon
15		the increasingly outdated forecasts the FE Companies submitted in 2014 in this
16		proceeding. While the Modified RRS Proposal makes significant changes to the
17		rider, it does not change the FE Companies' estimate of the cost to customers. It

1	Q15.	WHAT IS THE COST TO CUSTOMERS OF MODIFIED RIDER RRS
2		BASED ON YOUR ANALYSIS?
3	A15.	I produced three estimates (scenarios) of the costs to customers under modified
4		Rider RRS, just as I produced three estimates of costs related to the FE
5		Companies' original Rider RRS proposal. The results are shown in Table 1.
6		
7		My first scenario, described in detail in my direct testimony, assumes natural gas
8		prices will rise as suggested by EIA's Annual Energy Outlook ("AEO")
9		"reference case" projection, and energy prices change in a corresponding manner.
10		In approving Rider RRS, the PUCO found my projection based on the AEO
11		reference case to be "reasonable and reliable." <sup>2</sup> Under this scenario, customers
12		would be charged \$1.3 billion over the eight years of the Modified Rider RRS.
13		This compares to Ms. Mikkelsen's estimate (p. 4) of a \$0.56 billion credit to
14		customers. The currently applicable AEO reference case projection is now AEO
15		2016, released in May 2016. <sup>3</sup>
16		
17		Under my third alternative scenario, I assume natural gas prices follow the pattern
18		reflected in recent forward prices (accessed June 15, 2016), which are available
19		for the entire period of the Modified RRS. Under this scenario, the total cost to

<sup>&</sup>lt;sup>2</sup> Opinion and Order at 85.

<sup>&</sup>lt;sup>3</sup> U.S. Energy Information Administration, *Annual Energy Outlook 2016 Early Release, May 2016*, available at <u>http://www.eia.gov/forecasts/aeo/er/index.cfm</u>.

- 1 customers would be \$3.6 billion over the eight years of the rider. My second
- 2 scenario cannot be updated at this time, because an updated High Oil and Gas
- 3 Scenario will not be available until July 7, 2016.
- 4

Table 1: Sum	Table 1: Summary of Modified RRS Proposal Cost Estimates									
(\$ bil.)	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Scenario 1: AEO	2016 Re	ference C	ase (Earl	y Release	e)					
Resulting RRS	0.387	0.500	0.329	0.088	0.074	0.082	0.112	(0.001)	0.011	0.387
Risk-sharing credit	0.000	0.000	0.000	0.000	0.000	-0.010	-0.020	-0.030	-0.031	-0.091
RRS with risk- sharing credit	0.376	0.481	0.310	0.069	0.056	0.054	0.074	(0.049)	(0.027)	1.344
Scenario 2: AEO	2015 Hig	h Oil and	l Gas Res	ource Ca	se (not u	pdated)				
Resulting RRS	0.270	0.379	0.375	0.256	0.345	0.313	0.362	0.338	0.175	2.813
Risk-sharing credit	0.000	0.000	0.000	0.000	0.000	-0.010	-0.020	-0.030	-0.040	-0.100
RRS with risk- sharing credit	0.270	0.379	0.375	0.256	0.345	0.303	0.342	0.308	0.135	2.713
Scenario 3: Base	Scenario 3: Based on Recent Forward Prices (accessed June 15, 2016)									
Resulting RRS	0.371	0.512	0.487	0.370	0.444	0.421	0.451	0.420	0.199	3.675
Risk-sharing credit	0.000	0.000	0.000	0.000	0.000	-0.010	-0.020	-0.030	-0.040	-0.100
RRS with risk- sharing credit	0.371	0.512	0.487	0.370	0.444	0.411	0.431	0.390	0.159	3.575

1 Q16. HOW LIKELY ARE THESE SCENARIOS, COMPARED TO THE FE

#### 2 COMPANIES' RIDER RRS ESTIMATE?

*A16.* I consider all of my scenarios more likely than the FE Companies' estimate of
Rider RRS, which relies on outdated forecasts of **Example 1** natural gas and
electricity prices. I also consider these estimates more likely than estimates based
on the now-outdated AEO 2015 reference case.

7

Exhibit JFW-1 shows the AEO 2016 reference case, and compares it to the earlier 8 9 AEO reference cases, current forward prices, and the forecast used in the FE 10 Companies' Rider RRS simulation. The AEO 2016 reference case natural gas 11 projection is still a relatively high, conservative estimate of natural gas prices. It remains well above market participants' expectations as reflected in forward 12 13 prices. It is also well above recent, publicly-available ICF forecasts, which have natural gas prices around \$3/MMBtu through 2018, and under \$4/MMBtu until 14 2020.<sup>4</sup> Consequently, my estimate of the cost to customers based on the AEO 15 reference case is very conservative - the cost to customers is likely to be higher 16 than this estimate, and may well be closer to my scenario 3 estimate. I conclude 17 18 that the Modified Rider RRS is likely to be very expensive for customers.

<sup>&</sup>lt;sup>4</sup> Exhibit JFW-2, ICF 2016 Fuel Outlook Webinar, February 17, 2016, slide 10, available at <u>http://www.icfi.com/insights/webinars/2016/2016-fuels-outlook</u>.

- 1 Q17. DOES YOUR ESTIMATED COST TO CUSTOMERS USE THE LATEST
- 2

#### **CAPACITY PRICE INFORMATION?**

- 3 A17. No, I did not update the capacity price assumptions. Additional capacity prices
- 4 have become available for 2018/19 and 2019/20, and they are considerably lower
- 5 than the prices assumed in the FE Companies' Rider RRS estimate (\$164.77/MW-

6 day and \$100.00/MW-day, respectively, compared to

respectively, used in the FE Companies' estimate). Updating
the capacity prices would increase the estimated cost to customers shown in Table
1 by an additional billion.

10

11

#### Q18. WHAT WOULD THE COST BE FOR A TYPICAL RESIDENTIAL

# 12 CUSTOMER, UNDER MODIFIED RIDER RRS?

13 *A18.* Under my updated Scenario 1, a typical residential customer, assumed to consume

- 14 1,000 KWh per month on average, would bear \$297 to \$311 in additional cost due
- 15 to the modified Rider RRS (depending on which company serves the customer),
- and as much as \$111 per year, as shown in Table 2. Under my updated Scenario
- 17 3, the typical residential customer would bear \$789 to \$827 in additional cost due
- to Rider RRS, and as much as \$118 per year.

Table	Table 2: Rider RRS Cost for a 1,000 KWh/month Residential Customer (\$/year)									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Scenario 1: AEO 2016 Reference Case:										
OE	82.97	106.14	68.47	15.23	12.33	11.82	16.41	(10.71)	(5.97)	296.68
CEI	85.60	109.50	70.64	15.71	12.72	12.19	16.93	(11.05)	(6.16)	306.08
TE	86.95	111.23	71.75	15.96	12.92	12.38	17.19	(11.23)	(6.26)	310.90
Scenario 3: Recent Forward Prices:										
OE	81.80	113.03	107.46	81.66	98.11	90.77	95.06	86.19	35.09	789.16
CEI	84.39	116.61	110.87	84.25	101.21	93.64	98.07	88.92	36.20	814.15
TE	85.72	118.44	112.61	85.57	102.81	95.12	99.61	90.32	36.77	826.97

1

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11

12

2	Q19.	IS YOUR UPDATED ESTIMATE A CONSERVATIVE ESTIMATE OF THE
3		POTENTIAL COST TO CUSTOMERS OF MODIFIED RIDER RRS?

Yes. I consider my estimate conservative; the cost to customers could be much 4 *A19*. 5 higher, for at least the following reasons.

i. The updated AEO 2016 forecast remains well above

current forward prices for natural gas. Natural gas and

energy prices are likely to be lower than what I have

assumed in my updated analysis (Scenario 1). 9

ii. I used the FE Companies' outdated forecast of

capacity prices for 2020 through 2024. The evidence has been that current capacity prices attract more than enough new entry. 13

iii. I did not attempt to quantify the potential impact of using 14 generation quantities in the Rider RRS calculation that will 15

1		be inconsistent with future energy prices. As I explain later
2		in my testimony, this aspect of Modified Rider RSS will
3		raise the cost to customers relative to the prior Rider RRS
4		approach.
5		
6	IV.	THE PROPOSED RIDER RRS MODIFICATIONS ARE
7		STRUCTURALLY FLAWED; THEY WOULD LEAD TO NONSENSICAL
8		<b>RESULTS AND FURTHER RAISE THE COST TO CUSTOMERS</b>
9		
10	Q20.	YOU DESCRIBED THAT UNDER THE MODIFIED RRS PROPOSAL,
11		RIDER RRS WOULD BE CALCULATED BASED ON THE MONTHLY ON-
12		PEAK AND OFF-PEAK GENERATION QUANTITIES THAT ARE IN THE
13		RECORD, NOT ACTUAL GENERATION QUANTITIES. PLEASE
14		COMMENT ON THIS CHANGE.
15	A20.	This is a major change to the Rider RRS proposal that has a substantial impact on
16		the potential outcomes of Rider RRS for customers. Throughout the various
17		earlier versions of the Rider RRS proposal, the amounts to be collected through
18		the rider would depend upon the actual operation and dispatch of the FES plants,
19		and their actual energy market earnings (the difference between energy prices
20		earned and fuel costs incurred, for the actual generation amounts).

1		Fixing the generation amounts can create some strange and nonsensical outcomes.
2		If, over the duration of Modified Rider RRS through 2024, market conditions
3		remain reasonably similar to what was assumed in the 2014 modeling that
4		determined these generation quantities, fixing this assumption might not have a
5		large impact on the Rider RRS calculations. However, more likely, coal, natural
6		gas, and energy price relationships will continue to change, and new plants will be
7		built while others will retire. These and many other possible developments, such
8		as new environmental policies, will influence market outcomes and the dispatch
9		of these plants, likely resulting in energy and fuel prices, and generation amounts,
10		very different from what was projected back in 2014. More important, the fixed
11		generation quantities will, from time to time, turn out to be very inconsistent with
12		the actual market prices that will be used in the calculations.
13		
14	<i>Q21</i> .	PLEASE ELABORATE ON WHY THE FIXED GENERATION QUANTITIES
15		THAT WOULD BE USED IN THE MODIFIED RIDER RRS CALCULATION
16		WOULD BE INCONSISTENT WITH THE ENERGY PRICES THAT
17		WOULD BE USED.
18	<i>A21</i> .	These generation quantities were based on a dispatch model, and they are
19		consistent with the energy price patterns and other assumptions used within the
20		model at the time. As Ms. Mikkelsen describes (p. 11, emphasis added), "The
21		underlying generation output assumptions that will be used going forward for

1	purposes of developing Rider RRS are shaped based on the results of the
2	economic dispatch model used to derive the generation output projections relied
3	upon in this proceeding." That is, during peak times when energy prices are
4	generally higher, the generation quantities tend to be higher; and in off-peak
5	periods when prices are low or even below plant fuel cost, the generation is low or
6	zero for some units. Within the FE Companies' simulation, energy prices varied
7	substantially from hour to hour, day to day, peak to off-peak, season to season,
8	and year to year. The hourly energy prices used for 2019, for instance, ranged
9	from MWh. <sup>5</sup>
10	
11	Under the original Rider RRS proposal, Rider RRS would be calculated based on
12	actual future plant operation and energy market earnings. Thus, under the
13	original proposal, the plant generation quantities would be consistent with the
14	energy prices used in the Rider RRS calculation – both would reflect actual future
15	market conditions and plant operation, which of course can and likely will vary
16	substantially over time.
17	
18	But under the Modified Rider RRS Proposal, generation quantities reflecting the
19	price patterns used in the 2014 simulation would be multiplied by actual energy

<sup>&</sup>lt;sup>5</sup> Response to confidential Data Request SC Set 1 RPD-028 Att, 1.

1		prices during the duration of Rider RRS (through 2024). These future prices
2		could be very different from what was assumed in the simulation.
3		
4	<i>Q22</i> .	WHAT ARE THE POTENTIAL CONSEQUENCES OF USING
5		INCONSISTENT GENERATION AND PRICE ASSUMPTIONS IN THE
6		MODIFIED RIDER RRS CALCULATION?
7	A22.	It would result in multiplying prices times quantities that are inconsistent with
8		those prices, leading to nonsensical results. As one example, this could result in
9		using relatively low generation quantities during some periods of high prices.
10		That would understate plant earnings, resulting in a lower revenue offset than
11		would have occurred under the original Rider RRS proposal, and higher costs
12		recovered from customers. Perhaps more frequent (given the FE Companies'
13		high energy price assumptions), during periods when actual energy prices are very
14		low, using generation quantities from the 2014 simulation could lead to
15		substantial losses, when in fact the plants would likely have run very little and had
16		smaller losses. This would result in artificial, calculated losses to be collected
17		from customers.
18		
19		The Modified Rider RRS Proposal can result in collecting costs from customers
20		that were never incurred, and would not have been incurred even under the FE
21		Companies' Rider RRS simulation. It can also lead to collecting net costs from

1		customers when the plants are actually profitable, and even under the original
2		Rider RRS proposal there would have been a credit. Overall, the proposed
3		modification to the calculation essentially results in assuming inefficient plant
4		operation, which will tend to raise the cost of Rider RRS to customers compared
5		to the earlier approach to Rider RRS.
6		
7	<i>Q23</i> .	YOU HAVE IDENTIFIED PROBLEMS WITH THE MODIFIED RRS
8		PROPOSAL THAT WOULD RESULT FROM FUTURE MARKET PRICES
9		BEING DIFFERENT FROM THE PRICES ASSUMED IN THE FE
10		COMPANIES' 2014 RIDER RRS ESTIMATE. HOW DO CURRENT PRICE
11		EXPECTATIONS COMPARE TO THE PRICES USED IN THE FE
12		<b>COMPANIES' SIMULATION OF PLANT OPERATION?</b>
13	A23.	Current expectations are that market prices will be <b>set to be and the prices</b> that were
14		assumed in the Rider RRS simulation. Exhibit JFW-3 compares the monthly
15		averages of the prices used in the FE Companies' Rider RRS estimate to current
16		forward prices for the AD Hub point (data accessed on June 16, 2016). Because
17		current expectations are so different from the prices used in the simulation, the
18		simulated plant dispatch and resulting generation values that the FE Companies
19		propose to use under the Modified RRS Proposal are likely to be highly
20		inconsistent with the actual dispatch (or any reasonable dispatch) based on actual
21		future prices.

<i>Q24</i> .	ARE FUTURE PLANT GENERATION QUANTITIES LIKELY TO BE VERY
	DIFFERENT AT TIMES FROM WHAT WAS ASSUMED IN THE FE
	COMPANIES' RIDER RRS SIMULATIONS?
A24.	Yes. Some Sammis units have operated <b>set of their</b> available capacity levels
	in some recent years and months, and this can be expected to occur from time to
	time in the coming years. <sup>6</sup>
Q25.	WHAT DO CURRENT FORWARD PRICES SUGGEST WITH REGARD TO
	THE FUTURE DISPATCH OF THE SAMMIS PLANT?
A25.	Current forward prices suggest that Sammis will be uneconomic
	in the coming years, and also
	Exhibit JFW-4 compares the AD Hub peak and off-peak forward prices to the
	generation cost (fuel and reagent) from Mr. Lisowski's workpapers. Over the 71
	months for which forward prices are available, Sammis' generation cost
	, and
	When Sammis' generation cost exceeds market prices, its
	generation is uneconomic and it should not run.
	2 A24. Q25.

<sup>&</sup>lt;sup>6</sup> Response to Competitively Sensitive Confidential Data Request SC 1 INT-10 Attachment 1.

CAN YOU GIVE AN EXAMPLE OF THE IMPACT OF USING 1 *Q26*. **GENERATION AND COST VALUES FROM THE FE COMPANIES' 2014** 2 SIMULATIONS THAT MAY BE INCONSISTENT WITH ACTUAL FUTURE 3 4 **ENERGY PRICES AND PLANT OPERATION?** Yes. For simplicity, my example will focus only on the Sammis plant, and 5 A26. assume future market conditions are as in the FE Companies' simulation, except 6 7 as noted. 8 Mr. Lisowski's workpapers (Competitively Sensitive Attachment JJL-1) show 9 that the FE Companies' Rider RRS estimate contains in fuel cost 10 (primarily coal cost) in 2022 for the Sammis plant. Under the Modified Rider 11 , would be a component of the RRS proposal, this dollar amount, 12 total cost net of revenues to be collected from customers through Rider RRS in 13 2022. This component of the calculation is known today and would not change. 14 If the Sammis plant actually runs very few hours and burns very little coal that 15 year (which could happen due to an extended outage and/or low energy prices, 16 among other possible causes), the actual fuel cost could of course be much lower. 17 Exhibit JFW-4 suggests the Sammis plant may 18 that year. If the Sammis plant fuel cost is only, say, 19 that year, it would be difficult to explain to customers why they are transferring to 20 the FE Companies, along with other costs and revenues flowing through Rider 21

1		RRS, dollars more for coal purchases than was actually incurred at
2		the Sammis plant.
3		
4	Q27.	HAVEN'T THE FE COMPANIES PROPOSED THAT UNDER THE
5		MODIFIED PROPOSAL, RIDER RRS IS NO LONGER CONNECTED TO
6		THE FES PLANTS?
7	A27.	Yes, that is how the FE Companies want the Modified Rider RRS to be
8		understood: that, while the dollar amounts of Modified Rider RRS would be
9		calculated based on the results of a 2014 simulation of the operation of the
10		Sammis and other power plants, Rider RRS should no longer be understood as
11		connected to the operation of those plants. However, this could be difficult to
12		explain to the customers who see the Modified Rider RRS charge on their
13		monthly bills, and request an explanation of how the charge was determined. The
14		explanation will, of course, necessarily refer to simulated Sammis plant
15		generation amounts.

CAN YOU GIVE AN EXAMPLE OF HOW USING THE GENERATION AND 1 *Q28*. COST VALUES FROM THE FE COMPANIES' 2014 SIMULATIONS CAN 2 **RESULT IN COLLECTING COSTS FROM CUSTOMERS THAT WERE** 3 4 NEVER INCURRED, AND WOULD NOT HAVE BEEN INCURRED EVEN 5 **UNDER THE RIDER RRS SIMULATION'S ASSUMPTIONS?** 6 A28. Yes. Suppose, by way of example, that energy prices are very low in 2017, 7 especially during off-peak hours, and the operation of the Sammis plant is substantially reduced. In particular, suppose energy prices average /MWh 8 across all hours, rather than the MWh<sup>7</sup> assumed in the simulation, and the 9 10 Sammis plant drops to capacity factor, rather than the <sup>8</sup> assumed in the simulation. Suppose further that, operating in fewer hours, and mostly during 11 peak periods when prices are higher, the average energy price earned by Sammis 12 /MWh. Under these assumptions, the Sammis plant's actual cost net of 13 is market revenues would rise from the million based on the FE Companies' 14 estimate (as detailed in Mr. Lisowski's workpapers), to million. Under the 15 original Rider RRS proposal, the million would be collected from customers 16 through Rider RRS, along with amounts for Davis-Besse and OVEC. 17

<sup>&</sup>lt;sup>7</sup> Lisowski workpapers.

<sup>&</sup>lt;sup>8</sup> Lisowski workpapers.

1		The FE Companies' simulation model would also have reduced the generation,
2		and achieved a higher average energy price, under the alternative assumptions
3		suggested above. It might also have estimated that <b>million</b> should be
4		collected through Rider RRS, if all other assumptions proved accurate.
5		
6		However, under the Modified Rider RRS, the actual plant operation and cost are
7		not considered. The fact that Sammis reduces operation (saving fuel cost), and
8		runs primarily in peak hours (achieving a higher average energy price) would not
9		be recognized in the calculation. Using the original, higher level of assumed
10		generation, and lower average energy price, Modified Rider RRS would result in
11		collecting from customers not the million actual (or simulated) net cost for
12		the Sammis plant, but over <b>million</b> under these assumptions.
13		
14	Q29.	CAN YOU GIVE AN EXAMPLE OF HOW MODIFIED RIDER RRS CAN
15		LEAD TO COLLECTING NET COSTS FROM CUSTOMERS WHEN THE
16		PLANTS ARE ACTUALLY PROFITABLE, AND UNDER THE ORIGINAL
17		RIDER RRS PROPOSAL THERE WOULD HAVE BEEN A CREDIT?
18	A29.	Yes. Suppose that in 2017, compared to the FE Companies' Rider RRS estimate,
19		energy prices are somewhat higher (MWH rather than MWH) <sup>9</sup> and

<sup>&</sup>lt;sup>9</sup> Lisowski workpapers.

1		coal costs are somewhat lower (MWh rather than MWh). <sup>10</sup> Then the
2		Sammis plant's market earnings would exceed its costs by million (assuming
3		all other costs, quantities and prices are as assumed in the FE Companies' Rider
4		RRS estimate, as detailed in Mr. Lisowski's workpapers). Under the original
5		Rider RRS proposal, this million would be credited to customers through
6		Rider RRS, along with amounts for the other generation that flow through the
7		rider.
8		
9		However, under the Modified Rider RRS proposal, the lower fuel price is not
10		recognized, as that assumption (along with all other cost assumptions) is fixed.
11		Calculating the Sammis plant net costs using the assumed fuel cost, rather than
12		the lower actual fuel cost, results in a calculated <b>contract of the second second</b> , which would be
13		collected from customers through Modified Rider RRS.
14		
15	Q30.	OVERALL, WOULD YOU EXPECT USING FIXED GENERATION
16		QUANTITIES TO INCREASE OR DECREASE THE COST OF RIDER RRS
17		TO CUSTOMERS, RELATIVE TO USING ACTUAL QUANTITIES?
18	A30.	Using generation quantities that at times are inconsistent with energy prices will
19		result in inefficient dispatch assumptions, and tend to understate the profitability
20		of plant operation. There will be too little generation when prices are attractive,

<sup>&</sup>lt;sup>10</sup> Lisowski workpapers.

1		and too much generation when prices are unattractive. If future prices are low, as
2		suggested by current forecasts and forward prices, Modified Rider RRS would
3		calculate that Sammis runs as a loss in many future hours, and these artificial
4		losses would be passed through to customers. Therefore, this proposed change in
5		the Rider RRS calculation would raise the cost to be collected from customers.
6		
7	V.	THE MODIFIED RIDER RRS PROPOSAL'S PROVISIONS REGARDING
8		PLANT RETIREMENTS ARE UNFAIR TO CUSTOMERS
9		
10	<i>Q31</i> .	DOES THE MODIFIED RRS PROPOSAL HAVE PROVISIONS THAT
11		WOULD PREVENT RETIREMENTS?
12	<i>A31</i> .	No, there are no such provisions. The FE Companies' affiliate FES is free to
13		retire the Sammis or Davis-Besse power plants that, along with an OVEC
14		entitlement, have been the subject of Rider RRS.
15		
16	Q32.	SHOULD THE MODIFIED RRS PROPOSAL HAVE PROVISIONS THAT
17		WOULD PREVENT RETIREMENTS?
18	<i>A32</i> .	No. The FE Companies claim the plants have been losing money in recent years
19		and may be retired depending upon market conditions. If the plants are likely to
20		remain uneconomic, they should be retired, rather than being subsidized, as I
21		stated in my direct testimony (p. 48). Without regard to who bears the cost and

1		risk for the plants, if they are uneconomic, they should be retired. However,
2		under the Modified RRS Proposal, if the plants are retired, FES avoids the losses,
3		but there is no benefit for customers.
4		
5	Q33.	IN YOUR DIRECT TESTIMONY (P. 48), YOU CRITICIZED RIDER RRS
6		FOR GUARANTEEING FULL COST RECOVERY FOR THE FES PLANTS
7		AND THEREBY REMOVING THE OWNERS' INCENTIVE TO RETIRE
8		THEM IF UNECONOMIC. DOES MODIFIED RIDER RRS CORRECT
9		THIS PROBLEM?
10	A33.	This is somewhat unclear. The direct connection between Rider RRS and FES,
11		through a power purchase agreement, is removed under the proposal. However,
12		apparently there is nothing stopping the Modified Rider RRS collections from
13		flowing to FES. <sup>11</sup>

<sup>&</sup>lt;sup>11</sup> Responses to Data Requests SC 13-236, SC 13-244.

1	<i>Q34</i> .	WITNESS MIKKELSEN CLAIMS (P. 15) THAT "EFFECTIVELY, RIDER
2		RRS HELPS ENSURE THE CONTINUED OPERATION OF 3,200 MWS OF
3		FUEL DIVERSE BASELOAD GENERATION." HOWEVER, SHE ALSO
4		STATES THAT MODIFIED RIDER RRS IS NO LONGER TIED TO THE
5		FES PLANTS (P. 15), AND THAT NONE OF THE CASH FLOWS
6		DIRECTLY TO FES (P. 6). HOW ARE THESE STATEMENTS
7		RECONCILED?
8	A34.	This claim apparently rests upon the FE Companies' proposal that the PUCO
9		would be allowed to adjust Modified Rider RRS if there are substantial
10		retirements of generation formerly owned by the FE Companies. Specifically, the
11		FE Companies propose that, while they would be free to retire Davis-Besse or
12		Sammis, if the amount of the formerly rate-based nuclear or fossil generation
13		owned by the companies in January 2,000 (of which there is $9,120 \text{ MW}^{12}$ ) that
14		remains in operation falls below 3,200 MW, PUCO could proceed to reduce the
15		Modified Rider RRS charge/credit "by a proportional amount." Mikkelsen p. 15.
16		This provision could be considered to create some disincentive to cross the 3,200
17		MW threshold.

<sup>&</sup>lt;sup>12</sup> Response to Data Request SC 13-246.

IS THE PROPOSAL TO ALLOW MODIFIED RIDER RRS TO BE 1 *035*. **REDUCED "BY A PROPORTIONAL AMOUNT" FAIR TO CUSTOMERS?** 2 3 A35. No. If some generation is retired and some is retained, it will likely be the most 4 uneconomic generation that is retired. This can have an unfair impact through the 5 Modified Rider RRS. 6 7 Consider a simple example that ignores the other "formerly rate-based" 8 generation (or assume it is all retired). Suppose that due to carbon policy, Davis-Besse becomes profitable, while energy prices do not support Sammis. In 9 10 particular, suppose that the Rider RRS calculation related to Davis-Besse results in no Rider RRS credit or charge, while the calculation related to Sammis results 11 12 in a \$300 million per year charge to customers. Sammis is about two-thirds of the Rider RRS generation, so if Sammis is retired, the FE Companies' proposal would 13 allow PUCO to reduce the amounts collected through Rider RRS (which, recall, 14 15 are no longer connected to actual plant operation) by two-thirds, to \$100 million 16 per year.

17

Thus, under this scenario, there are no longer any losses at the Davis-Besse or
Sammis plants, due to the Sammis retirement. And if the Rider RRS calculation
would be adjusted to remove the calculations based on the Sammis capacity,
Rider RRS would result in no charge or credit. But under the FE Companies'

1		proposal, customers would still be charged \$100 million per year under Modified
2		Rider RRS due to the "proportional" adjustment.
3		
4	VI.	THE PROPOSED MODIFICATIONS TO RIDER RRS WEAKEN ITS
5		ALREADY WEAK IMPACT ON RATE STABILITY
6		
7	Q36.	WITNESS MIKKELSEN CLAIMS THE MODIFIED RIDER RRS WILL
8		STILL HAVE THE EFFECT OF "STABILIZING OR PROVIDING
9		CERTAINTY REGARDING RETAIL ELECTRIC SERVICE" OF THE
10		EARLIER RIDER RRS PROPOSAL. WAS THE EARLIER RIDER RRS
11		PROPOSAL EXPECTED TO HAVE MUCH IMPACT ON RATE
12		STABILITY?
13	A36.	No. As I explained in my direct testimony (p. 50), because Rider RRS is trued-up
14		after the fact to actual energy prices, when energy prices are high [or low], it
15		results in a bill credit [or charge] through Rider RRS at a later time when prices
16		may have returned to normal levels, or headed in the opposite direction. So Rider
17		RRS does not necessarily stabilize customers' bills as energy prices change.
18		Furthermore, any impact Rider RRS may have on price stability is small
19		compared to its anticipated cost to customers.

1 *037*. WHAT IS THE EVIDENCE THAT CUSTOMERS DESIRE THIS TYPE OF 2 **RATE STABILITY?** 3 A37. While the FE Companies repeatedly claim customers desire the alleged rate 4 stabilizing impacts of Rider RRS (for example, Mikkelsen testimony, p. 12), they have never provided any customer surveys or other evidence. I note that parties 5 6 representing customer interests - OCC, NOPEC, NOAC, and OMA - have 7 consistently opposed Rider RRS. 8 WOULD THE MODIFIED RIDER RRS HAVE THE EFFECT OF 9 *Q38*. 10 **"STABILIZING OR PROVIDING CERTAINTY REGARDING RETAIL** ELECTRIC SERVICE", AS MS. MIKKELSEN CLAIMS? 11 12 *A38*. No. Due to the inefficient dispatch assumptions described earlier in my testimony, Modified Rider RRS would have even less impact on rate stability than 13 the prior Rider RRS approach. 14 15 In my direct testimony (pp. 12-13, 49-51), I concluded that for customers served 16 17 under the FE Companies' Standard Service Offer (with prices based on laddered, 18 three-year contracts), rates would be fairly stable. I concluded that the potential impact of Rider RRS on price stability was doubtful, and any incremental impact 19 20 of Rider RRS as a hedge would be unimportant to customers compared to the cost 21 impact. The Modified Rider RRS would remove the risk of cost increases, but the

1 inefficient dispatch assumptions would expose customers to additional, 2 unwarranted costs. 3 4 *Q39*. CAN YOU GIVE AN EXAMPLE OF HOW MODIFIED RIDER RRS MAY **PROVIDE LESS OF A HEDGE FOR CUSTOMERS?** 5 6 *A39*. Yes. Take for example a period such as the 2014 "polar vortex," a period 7 mentioned by the FE Companies' witnesses as an example of the potential 8 benefits of the Rider RRS proposal. Strah Direct Testimony, pp. 8-11. During such a period of extended extreme cold, electric demand will be higher and some 9 10 power plants may have operational difficulties. This could result in high energy 11 prices and more hours of operation for available plants than would normally occur during winter. Under the original Rider RRS proposal, such a period would result 12 13 in substantial market revenues that offset the plant costs and are flowed through to customers. 14 15 However, normally a plant such as Sammis would have relatively few hours of 16 operation during many days in the winter when electric demand and prices are 17 18 usually low. Under the Modified RRS proposal, the generation quantities are fixed, so should such a period of extended cold occur, the Rider RRS calculation 19 would assume the Sammis plant continued to operate relatively infrequently, as if 20 the operators had not noticed the extreme cold weather and high market prices. 21

1		This would result in calculating less revenue to offset the costs than would likely
2		have actually occurred in such an event.
3		
4	Q40.	DOES THIS COMPLETE YOUR THIRD SUPPLEMENTAL TESTIMONY?
5	<i>A40</i> .	Yes it does. However, I understand that I may be asked to update or supplement
6		my testimony based on new information that may become available.

#### **CERTIFICATE OF SERVICE**

I hereby certify that a true copy of the foregoing *Rehearing Direct Testimony of* James F. Wilson on Behalf of the Office of the Ohio Consumers' Counsel and Northwest Ohio Aggregation Coalition, Public Version, was served via electronic transmission this 22nd day of June, 2016 upon the parties below.

> <u>/s/ Larry Sauer</u> Larry Sauer Deputy Consumers' Counsel

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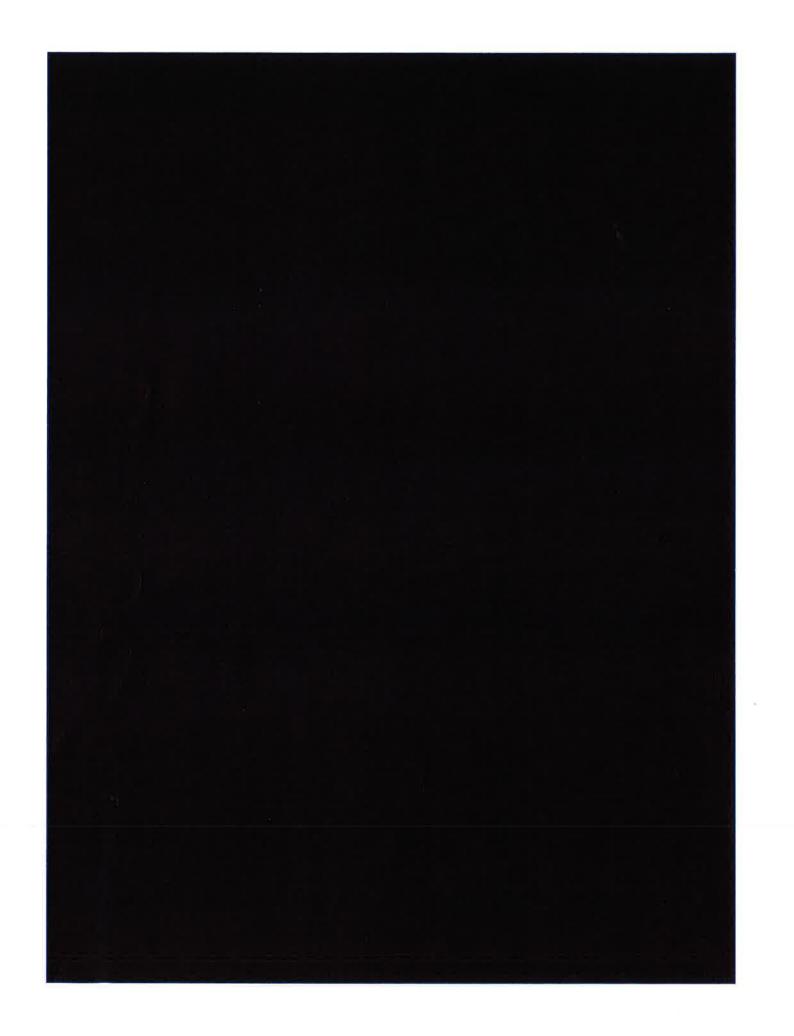
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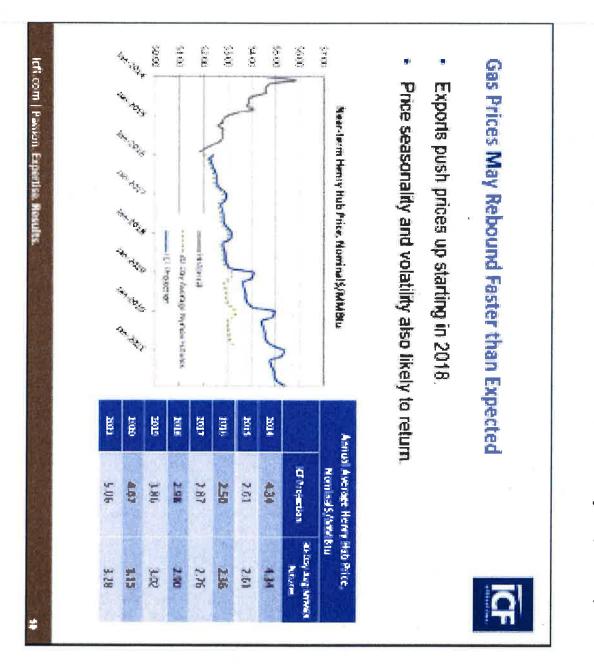
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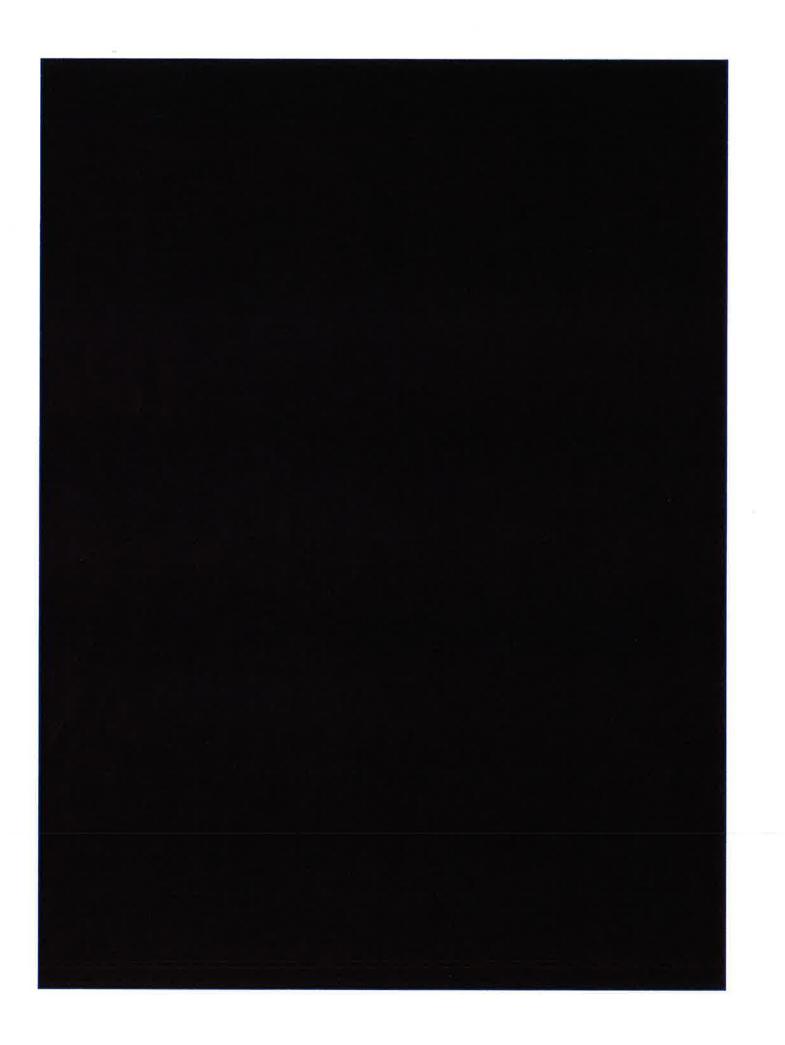
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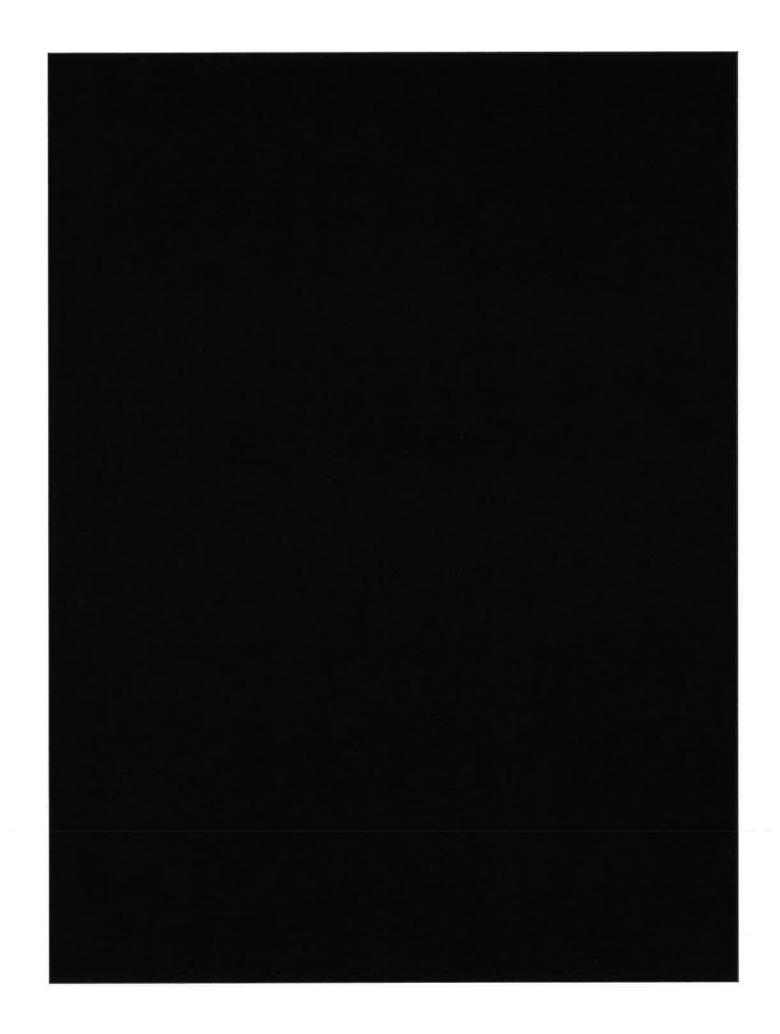
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# Exhibit JFW-2: ICF 2016 Fuel Outlook Webinar, February 17, 2016, slide 10







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Summary: Testimony Rehearing Direct Testimony of James F. Wilson on Behalf of the Office of the Ohio Consumers' Counsel and Northwest Ohio Aggregation Coalition (Public Version) electronically filed by Ms. Deb J. Bingham on behalf of Sauer, Larry S.