FILE

PUCO EXHIBIT FILING

Date of Hearing: September 6, 2018

Case No. 18-496-EL-CSS

PUCO Case Caption: IMO:

Gregory McKinney

vs

OHIO Edison Company

List of exhibits being filed:

Complainant Exhibit

1A Letter from Mr. James P. Manges, Jr.

1B Letter from Mr. Dan Brewster

1C Invoice from Your Pool Boy

- - -

Company Exhibit

1 Direct Testimony of Jason Horst on Behalf of Ohio Edison Company

Reporter's Signature:

Date Submitted:

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Technician MN Date Processed SEP 18 2018

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

- - -

In the Matter of the Complaint of:	:	
Gregory McKinney,	:	
Complainant,	:	
vs.	:	Case No. 18-496-EL-CSS
Ohio Edison Company,	:	
Respondent.	:	

- - -

PROCEEDINGS

before Mr. Kerry K. Sheets, Attorney Examiner, at the Public Utilities Commission of Ohio, 180 East Broad Street, Room 11-D, Columbus, Ohio, called at 10:30 a.m. on Thursday, September 6, 2018.

- - -

ARMSTRONG & OKEY, INC.
222 East Town Street, Second Floor
Columbus, Ohio 43215-5201
(614) 224-9481 - (800) 223-9481

- - -

Manges Electric Company

328 Eastern Heights Blvd.
Elyria, Ohio 44035
E-Mail jmanges1957@gmail.com
Cell Phone (216)-990-5089

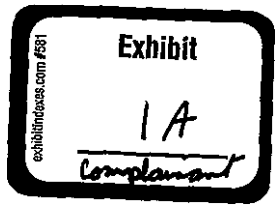
To whom this may concern

On February 3 2018 I came out to 264 Ashland Ave. In Elyria, Ohio 44035 for the owner a Mr. Greg McKinney was concerned about a almost $1,400.00 electric bill and how fast the meter was running.

Upon inspection of both his panel, meter and all the circuits in the home I could not find any problem with the electrical system in the house.

I even turned off the breakers and the meter still ran. So after seeing this I informed the owner that there was a problem with the meter and he should have the electric company come and test there meter

Sincerely
James P Manges Jr.
Licensed Electrician



Proposal

1338

Brewster Construction
Remodeling & Home Improvement
Dan Brewster Owner/Operator
440-935-3627

PROPOSAL SUBMITTED TO: GREGORY MCKINNEY		PHONE	DATE: 6-20 18
STREET: 264 ASHLAND		JOB NAME	
CITY, STATE and ZIP CODE: ELYRIA OH 44035		JOB LOCATION	
ARCHITECT	DATE OF PLANS		JOB PHONE

We hereby submit specifications and estimates for:

TO WHOM IT MAY CONCERN,

BREWSTER CONSTRUCTION WORKED AT THE MCKINNEY RESIDENCE FROM APPROX BEGINNING OF NOVEMBER OF 2017 THRU JANUARY 2018. POWER TOOLS IN USE WHERE MOSTLY SKIL SAWS AND TILE SAWS, AND CHARGING BATTERIES FOR CORDLESS TOOLS. 2-3 PEOPLE WORKED 4-5 DAYS PER WEEK. NO OUTSTANDING POWER CONSUMPTION NEEDED.

THANK YOU.

DAN BREWSTER

Exhibit
1B
Complaint
exhibitindexes.com #531

We Propose hereby to furnish material and labor — complete in accordance with above specifications, for the sum o

_____ dollars ($ _____

Payment to be made as follows:

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workman's Compensation Insurance.

Authorized Signature _____

Note: This proposal may be withdrawn by us if not accepted within _____ day

Acceptance of Proposal — The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Signature _____

Date of Acceptance: _____

Signature _____

Your Pool Boy

Payable to: Your Pool Boy LLC
5278 Mills Creek Lane
N. Ridgeville, Ohio 44039
216.403 6073

Invoice

INVOICE NO.
INVOICE DATE: April 28, 2018
CUSTOMER ORDER NUMBER

SOLD TO:	SHIP TO:
Greg McKenney	25,000 K
269 Ashland Ave.	
Elyria, OH 216 903 1504	

SALESPERSON	SHIPPED VIA	TERMS	F.O.B.

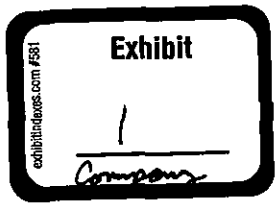
QTY ORDERED	QTY SHIPPED	DESCRIPTION	UNIT	AMOUNT
Sat 3/31/18 3:00		Inspection / Quote / Go		
		Pump		40 00
	-	Opening -		300 00
		- Drain & Filter Back into Pool Kids Leaves		
		- Bags		50 00
		- Assemble & Install all Equipment		200 00
	(1)	- Cord 115 V		
	(1)	- Rig Parts		590 00
	(1)	- Chlorination		100 00
	(4)	- Sand Mosaic S 210 T		
		Chemicals - Chlorine		
		PH		?
		Alkalinity		
	-	(4) Bags Pool Sand		40 00
	-	PVC / Supplies 344		130 00
	-	25# Chlor Tabs 590		49 00
	-	Ladder Bumper 934		15 00
	-	2# Chlor Shock Sausstop 54 988		34 00

Exhibit 1C Complaint
exhibitindexes.com #581

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

GREGORY MCKINNEY	)	
	)	
Complainant,	)	
	)	**Case No. 18-496-EL-CSS**
v.	)	
	)	
OHIO EDISON COMPANY,	)	
	)	
Respondent.	)	
	)	

DIRECT TESTIMONY OF JASON HORST ON BEHALF OF
OHIO EDISON COMPANY



INTRODUCTION

Q. PLEASE INTRODUCE YOURSELF.

A. My name is Jason Horst and I am employed with FirstEnergy Service Company as Supervisor, Meter Testing and Rubber Goods. Meter Testing and Rubber Goods is the department responsible for testing of the accuracy of meters for the FirstEnergy Ohio electric distribution utilities, including Ohio Edison Company ("Ohio Edison" or "Company").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. I received an Associates of Applied Science Electronic Engineering degree from Stark State College, and a Bachelor of Science in Technical Management degree from Devry University.

Q. WHAT ARE YOUR CURRENT JOB RESPONSIBILITIES?

A. My job responsibilities include supervising the testing and calibration of meters. All meter testing for the FirstEnergy Ohio electric distribution utilities is performed in the Meter Lab, including both for new meters before installation as well as meter investigations. The Meter Lab also has responsibility for testing and calibration of approximately one-third of our Pennsylvania operating companies' service territories as well. I have performed or supervised performance of tens of thousands of meter tests during my career at FirstEnergy.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?

A. Not in Ohio. I have testified in other jurisdictions, primarily in Pennsylvania.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THE PRESENT CASE?

1 A. My testimony addresses several aspects of the Complaint pertaining to the electric service
2 provided by Ohio Edison to Gregory McKinney at 264 Ashland Avenue, Elyria, OH
3 44035(the "Property"). Specifically, my testimony addresses the circumstances
4 surrounding the testing of the meter accuracy requested by Mr. McKinney as well as other
5 issues related to his high-bill complaint.

6 **Q. WHAT DID YOU DO TO PREPARE FOR YOUR TESTIMONY IN THIS**
7 **PROCEEDING?**

8 A. I have reviewed the Complaint submitted by Mr. McKinney, as well as his responses to
9 discovery questions. I also reviewed business records related to this case maintained and
10 preserved within FirstEnergy's SAP System. These records, all of which were kept in the
11 course of regularly conducted business activity, include customer contact notes and
12 account summary, and Ohio Edison's Commission-approved tariff. It is the regular
13 practice of FirstEnergy and Ohio Edison to make and preserve these business records, and
14 I rely upon such documents in accordance with my duties at FirstEnergy Service Company.
15 I also personally witnessed the testing of the Company's meter that was in operation at the
16 Property during the period of disputed consumption.

17 **TERMINATION OF SERVICE**

18 **Q. CAN YOU PLEASE BRIEFLY DESCRIBE THE CIRCUMSTANCES OF THE**
19 **METER TEST?**

20 A. Yes. Mr. McKinney contacted the Staff of the Public Utilities Commission of Ohio
21 ("Commission") about his perceived high consumption over several months and requested
22 of them that his meter be tested. Staff relayed this request to the Company's Customer
23 Services Compliance Specialist, who created a customer request work order for the meter

to be exchanged and tested. To fulfill this request, I arranged for Ohio Edison personnel to have the meter removed from service and sent to me at the Meter Lab in Akron, Ohio for testing. The Meter Lab conducted the standard tests on the meter, which measured well within the accuracy thresholds established by the Commission. I then contacted Mr. McKinney by telephone with the results and offered to allow him or his electrician to witness further testing. Mr. McKinney declined to do so.

Q. PLEASE DESCRIBE THE PROCESS OF METER TESTING?

A. When a meter arrives for testing, it is marked and logged for identification purposes. Attachment JTH-1 is a picture of the meter in question. The basic meter function measures a well-known relationship of current and voltage commonly referred to as "load" which is reflected as kilowatts over time ("kilowatt hours" or "kWh"). As installed in the field, the meter measures the kWh being drawn from the Company's service line through the meter and into the premise by the electricity-using devices such as electronics, lights, fans, and motors. The testing consists of putting a known voltage and amperage through the meter and comparing the measured result with the known quantity. The result can be expressed as a percentage of measured load to known load. In this case, the meter in question tested at 99.88%. The tolerance allowed by Commission rules is plus or minus 2.0% of 100%. Attachment JTH-2 is a screenshot of the results of the meter test.

Q. DID YOU PERFORM ADDITIONAL TESTS OF THE METER ACCURACY?

A. Yes. In addition to the standard accuracy test, I also performed a high-load condition test, a low-load condition test, and a 24-hour duration test. In the high-load (and high power factor) condition and 24-hour duration tests the meter accuracy was within the Company's

standards (-0.5% to +0.3% of 100%). In the low-load condition test, the meter ran "slow" by Company standards, but still well within the Commission's allowed tolerance.

Q. WHAT DOES IT MEAN FOR A METER TO RUN "SLOW?"

A. Running "slow" means the meter registered less kWh than it should have under the low-load condition. In combination with the other test results, this means that any discrepancy between the measured and actual electricity consumption for this meter, if any, was likely to be registering *less* kWh than the customer actually consumed.

Q. IN YOUR OPINION, IS IT POSSIBLE THAT THIS METER REGISTERED MORE ELECTRICITY THAN THE CUSTOMER ACTUALLY USED DURING THE MONTHS IN QUESTION?

A. No, it is not. First, the meter test uses exactly the same delivery-side electrical connections and measurement relationships as in the field, and, of course, the internal workings of the meter itself are the same. In other words, there is no difference in result between testing in the field and testing in the lab. That's why our lab is able to verify meter accuracy as required by law. I would note that the Commission Staff inspects our Meter Lab annually for compliance.

Second, there were no reports of meter inaccuracy or high bill complaints prior to Mr. McKinney's occupancy of the home, nor for his first bill received in September 2017. Given the test results, it is clear the meter registered accurately before October 2017 and after its removal in February 2018.[1] Meters do not temporarily "go haywire" for a few months and then revert to normal. When they break—which is relatively rare—they stay broken.

[1] Mr. McKinney's electricity consumption was estimated for the months of October, November, and December due to a locked gate preventing access to the meter. Thus, there are no actual readings for that three-month period.

Third, the Company cannot "push" electricity through a meter—it can only be drawn through or "pulled" by electric-consuming devices on the customer's side of the meter. For example, a new meter installed at a planned construction site will continue to register zero kWh until the first wire is connected on the customer's side. After that, the amount of kWh flowing through the meter is exclusively determined by the customer's load. Electricity, somewhat like pushing on a rope, doesn't go anywhere until it is pulled.

Q. MR. MCKINNEY ALLEGES HE COULD NOT POSSIBLY HAVE USED THE AMOUNT OF ELECTRICITY REGISTERED ON THE METER DURING THAT TIME. HOW DO YOU RESPOND?

A. I believe that it is not only possible that he used the registered amount, but that it is certain. I recognize that Mr. McKinney may not fully understand the reasons his load increased during this time; however, he describes in his Complaint and in response to discovery several things which could cause increased electricity consumption. First, Mr. McKinney was having his newly-purchased home remodeled, coinciding almost perfectly with the time period of high consumption. While it would be difficult to assess the magnitude, it is certainly possible that there was some impact from the remodeling construction activity.

Second, the Property has a fairly large in-ground pool in the back yard, and pool equipment can be a source of high electricity consumption. In response to discovery, Mr. McKinney indicated that he replaced all of the pool equipment coincidentally shortly after his meter was sent for testing. It is certainly possible that a ground in a pump motor or some other irregularity in that old equipment, even as simple as a switch unknowingly left on by a real estate agent or prospective buyer, was drawing current and causing high consumption.

1 Third, it is possible that in the process of checking the wiring or electrical
2 equipment that Mr. McKinney's electrician cured some defect condition without having
3 first been aware of the problem. Unfortunately, each of these conditions no longer exists
4 and likely cannot be replicated to gain a complete understanding of the source(s) of Mr.
5 McKinney's electricity usage that was higher than he had expected.

6 **Q. MR. MCKINNEY ALLEGES IN HIS COMPLAINT THAT WHEN HIS**
7 **ELECTRICIAN TURNED OFF ALL THE BREAKERS, THE METER WAS STILL**
8 **SPINNING "1,000 MPH." HOW DO YOU RESPOND?**

9 A. Our customer contact center representatives advise customers calling with unexplained
10 high consumption to hire a licensed electrician to examine their property, and I commend
11 Mr. McKinney for taking this positive step to investigating his electricity consumption.
12 Ignoring the obvious hyperbole, there are several possible explanations for their
13 observation. Subject, as I mentioned above, to the fact that the Company cannot physically
14 push electricity through a meter—it must be pulled by a load occurrence on the customer's
15 side of the meter.

16 Preliminarily, I would note that the mechanical dial on an analog meter, such as
17 was installed at the Property, does not stop immediately when all load is removed. Instead,
18 the dial slows down first before stopping. If Mr. McKinney or his electrician didn't wait
19 long enough, that could explain the observation described. However, assuming sufficient
20 time had elapsed, there are at least four conditions that could have caused the dial to keep
21 spinning: 1) the electrician could have failed to shut off all of the breakers, leaving some
22 connected load still drawing current; 2) one or more of the breakers could be faulty,
23 allowing current to pass through even in an "off" position; 3) one or more load devices

could be connected such that the wiring did not pass through a breaker; and 4) there could be a ground condition in the customer's wiring, causing current not to flow through a breaker or even to any equipment or device. Any one of these conditions could cause electricity to flow through the meter and be properly measured as kWh consumed by the customer.

Q. IF THERE IS A GROUND CONDITION AND THE CUSTOMER IS NOT EVEN USING THE ELECTRICITY TO POWER DEVICES, WHY IS IT PROPER TO BILL THE KWH AS CONSUMPTION?

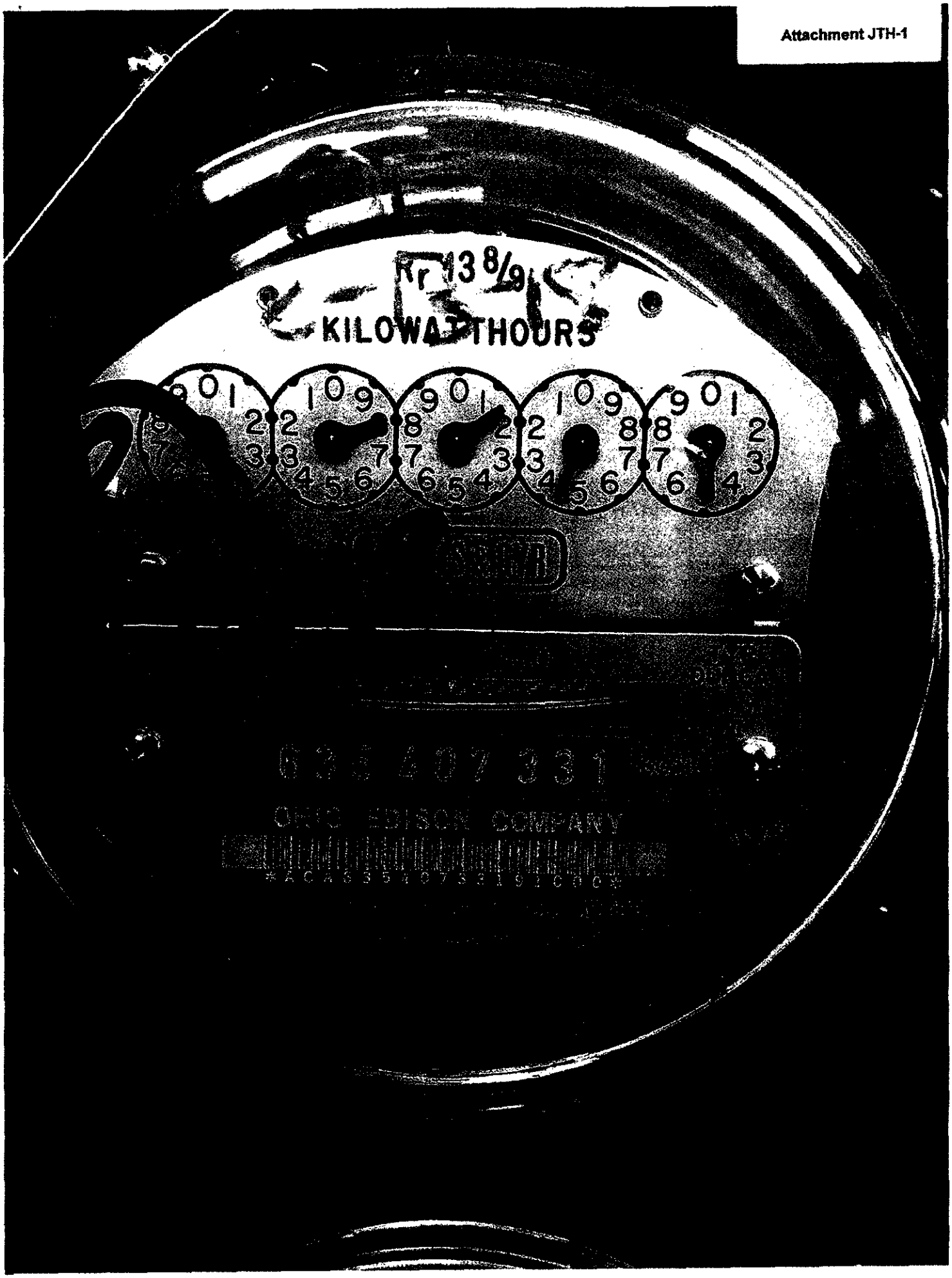
A. Pursuant to the Ohio Edison's Commission-approved tariff, customers are responsible for all equipment "behind the meter," including the wiring leading from the meter to any terminus on the premises. Thus, if a wire becomes grounded and draws current, it is the customer's responsibility and is treated no differently than, say, running an air conditioner. This is necessary because even a grounding condition requires generation to produce—and transmission and distribution circuits to deliver—the electricity. If the customer whose meter the electricity flows through doesn't pay for it, then other customers would be required to make up the difference.

CONCLUSION

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes; however, I reserve my right to supplement my testimony.

Attachment JTH-1



Display Results: Characteristic Overview

Inspection Method | Contro

Material 4300
Insp. Lot 70000803938
Oper./Act. 0010 MANUFAC

General | Summarized | Unit to

Insp. unit 635407331

Inspector, Inspection Date and Time

Char. 10 STANDARD TEST EQUIPMENT
Status 5 Processing is completed

Administrative data

Inspector EAILOGIN
Start date 02/13/2018 Insp. end date 02/13/2018
Insp.start time 09:59:19 Insp. end time 09:59:19

S..	Short text for the inspection charac.	Specifications	Inspect	Inspected	Result	Original Va...	V...
5	STANDARD TEST EQUIPMENT	STANDARD	1	1	STD STAND..		✔
5	AS FOUND INDEX	0.000 .. 99999.999	1	1	0.000	00000	✔
5	AS LEFT INDEX	0.000 .. 99999.999	1	1	0.000	00000	✔
5	TEST REASON	REASON FOR TEST C..	1	1	14 CUSTOM..		✔
5	AS FOUND 1 SERIES LIGHT LOAD	90.00 .. 110.00 %	1	1	99.41	99.410	✔
5	AS FOUND 1 SERIES FULL LOAD	90.00 .. 110.00 %	1	1	100.00	100.000	✔
5	AS FOUND 1 SERIES POWER FACTOR	90.00 .. 110.00 %	1	1	99.67	99.670	✔
5	AS FOUND 1 WEIGHTED AVERAGE	98.00 .. 102.00 %	1	1	99.88	99.880	✔
5	AS LEFT 1 SERIES LIGHT LOAD	99.50 .. 100.50 %	1	1	99.41	99.410	✘
5	AS LEFT 1 SERIES FULL LOAD	99.50 .. 100.50 %	1	1	100.00	100.000	✔
5	AS LEFT 1 SERIES POWER FACTOR	99.00 .. 101.00 %	1	1	99.67	99.670	✔
5	AS LEFT 1 WEIGHTED AVERAGE	99.50 .. 100.50 %	1	1	99.88	99.880	✔
5	COMMENT	COMMENT TEST	1	1	C COMMENT		✔

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8/30/2018 11:54:46 AM

in

Case No(s). 18-0496-EL-CSS

Summary: Testimony Direct Testimony of Jason T. Horst of Ohio Edison Company electronically filed by Mrs. Ashlee E Waite on behalf of Ohio Edison Company and Endris, Robert M Mr.