

**FILE**

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**DEO EXHIBIT 2**

**BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

PAUL J. MAHOLTZ,	)	
	)	
Complainant,	)	
	)	Case No. 10-1411-GA-CSS
v.	)	
	)	
THE EAST OHIO GAS COMPANY D/B/A	)	
DOMINION EAST OHIO,	)	
	)	
Respondent.	)	

**DIRECT TESTIMONY OF  
CHARLES C. RESNIK  
ON BEHALF OF THE EAST OHIO GAS COMPANY  
D/B/A DOMINION EAST OHIO**

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1 **Direct Testimony of**

2 **Charles C. Resnik**

3 **I. INTRODUCTION**

4 **Q1. Please state your name, occupation and business address.**

5 A1. My name is Charles C. Resnik. I am employed by The East Ohio Gas Company d/b/a  
6 Dominion East Ohio ("DEO" or "Company") as a Technical Specialist 3. My business  
7 address is 1201 E. 55th Street, Cleveland, Ohio 44103.

8 **Q2. How long have you worked at DEO?**

9 A2. I have been employed by DEO for 19 years. I have been a Technical Specialist 3 since  
10 late 2006.

11 **Q4. Please describe your educational background and work experience.**

12 A4. I graduated from high school and have taken several college classes. While employed at  
13 DEO, I have taken numerous technical courses pertaining to DEO's operations. For  
14 example, I have attended several sessions of the Appalachian Gas Measurement Short  
15 Course. I also have earned a Six Sigma Black Belt certification. Prior to working as a  
16 Technical Specialist 3, I served as a business process analyst, responsible for  
17 investigating ways to improve DEO's business processes, and as a customer business  
18 technology analyst, focusing on the technology involved in meter reading. I also worked  
19 in DEO's gas meter shop for three years.

20 **Q5. What are your job responsibilities as Technical Specialist 3?**

21 A5. My main responsibility is to ensure the accuracy of the meter base population we have in  
22 the field, and I perform a variety of functions to accomplish this task. I oversee our

1 statistical change program, perform analyses involving complex meter measurements and  
2 analyze underperforming meters that are taken out of service.

3 **Q6. What is the purpose of your testimony?**

4 A6. My testimony explains the procedure followed by DEO in conducting a proof test of the  
5 gas meter formerly at Paul Maholtz's premises.

6 **Q7. What information have you reviewed to prepare your testimony?**

7 A7. I have reviewed the meter test results for Mr. Maholtz's meter, attached to my testimony  
8 as DEO Exhibit 2.1 and Mr. Maholtz's customer account information.

9 **II. METER PROOF TESTING**

10 **Q8. What is a meter proof test?**

11 A8. DEO performs meter proof tests to ensure that a gas meter is accurately measuring the  
12 gas that passes through the meter. DEO typically conducts meter proof tests in two  
13 scenarios. First, DEO tests meters when requested by the customer. I have performed  
14 approximately 5,000 such tests over the course of my career. Second, DEO maintains a  
15 statistical meter testing program, in which we analyze and pull meters from the field to  
16 ensure their accuracy on a routine basis. Although I no longer personally perform these  
17 tests, I review the process we follow in performing the meter tests and the resulting data  
18 on a regular basis. When I worked in the meter shop, I tested approximately 100,000  
19 meters as part of this program.

20 **Q9. Are meter tests commonly run in the ordinary course of business for DEO?**

21 A9. Yes, customers or the Company regularly tests its meters to ensure accuracy. DEO's  
22 tariff includes language discussing a customer's right to request a meter test. As I

1 explained above, DEO runs a statistical meter testing program to routinely test meters  
2 from the field.

3 **Q10. Are you familiar with DEO's procedures and equipment to test gas meters?**

4 A10. Yes. I have been training DEO personnel on the meter testing procedures and equipment  
5 for the past 13 years.

6 **Q11. What equipment does DEO use to conduct meter tests?**

7 A11. DEO currently uses the American Meter Sonic Nozzle Prover, Series III ("Sonic  
8 Prover"). In the past, we have used prior models of this machine to perform meter tests.

9 **Q12. Describe the procedure for testing a meter using the Sonic Prover.**

10 A12. The operator logs into the machine and sets it to the proper specifications, based on the  
11 size and type of the meter that is being tested. The operator then mounts the meter to the  
12 Sonic Prover, enters the serial number of the meter, and initiates the test. To determine  
13 the accuracy of the meter, the Sonic Prover draws air through the meter at a pre-set  
14 volume and flow rate, and compares the actual volume of air with the volume registered  
15 by the meter. For a single meter we typically run two or three tests at different volumes  
16 and flow rates to ensure consistency in the results.

17 **Q13. What do you mean by standardized volume and flow rate?**

18 A13. "Volume" refers to the volume of air drawn through the meter. The standard volume in  
19 gas meter tests is 0.5 cf. "Flow rate" refers to the speed at which the particular volume of  
20 air is drawn through the meter. There are two standard flow rates used in meter testing:  
21 the "open load," in which air is drawn at 100% of the meter's capacity (250 acfh) and the  
22 "check load," in which air is drawn at 20% of the meter's capacity (50 acfh). Other  
23 volumes and flow rates can be used if necessary.

1 **Q14. How are the results of a meter test determined?**

2 A14. The machine calculates the percent variability between the pre-set volume of air sent  
3 through the meter and the amount measured by the meter. For example, if the actual  
4 volume drawn through the meter is 0.5 cf, and the meter measures 0.5025 cf, then the  
5 percent variability is 0.5% (*i.e.*, 0.5025 is 0.5% greater than 0.5). These figures are  
6 automatically displayed on the machine at the conclusion of each test.

7 **III. DEO'S TEST OF MR. MAHOLTZ'S METER**

8 **Q15. Did DEO test Mr. Maholtz's meter?**

9 A15. Yes. DEO removed Mr. Maholtz's meter on January 19, 2011, and tested it on February  
10 15, 2011 and March 25, 2011. The results from these meter tests are attached to my  
11 testimony as DEO Exhibit 2.1 and 2.2.

12 **Q16. What were the results of the test conducted on February 15, 2011?**

13 A16. The average variability of the tests at the open load was -0.8%. This means the meter  
14 was running slow by 0.80% at the meter's full volumetric capacity. The average  
15 variability of the check load was -0.20%. This means the meter was running slow by  
16 0.2% when the pre-set volume was lessened to a more typical customer load. The  
17 average of these figures is -0.50%. This means, on average, Mr. Maholtz's meter was  
18 running *slow* by 0.50%.

19 **Q17. What were the results of the tested conducted on March 25, 2011?**

20 A17. The average variability of the tests at the open load was -0.96%. This means the meter  
21 was running slow by 0.96% at the meter's full volumetric capacity. The average  
22 variability of the check load was -0.32%. This means the meter was running slow by  
23 0.3% when the pre-set volume was lessened to a more typical customer load. The

1 average of these figures is -0.64%. This means, on average, Mr. Maholtz's meter was  
2 running *slow* by 0.64%.

3 **Q18. If a meter tests slow, how does that impact a customer?**

4 A18. A meter which tests slow is actually not measuring the full quantity of gas being billed to  
5 a customer. Instead, the customer is receiving some gas for free.

6 **Q19. Since Mr. Maholtz's meter tested slow, did he receive natural gas not  
7 measured by his meter?**

8 A19. Yes. Because the meter tested slow, Mr. Maholtz received approximately 0.274 Mcf of  
9 natural gas annually that was not registered by the meter. To calculate this amount, I  
10 pulled Mr. Maholtz's usage from May 2009 to May 2010, and multiplied his usage by the  
11 check rate percent error of 0.3%. By using the check rate, I was using a more  
12 conservative estimate of the additional gas received by Mr. Maholtz. This analysis is  
13 contained in DEO Exhibit 2.3 attached to my testimony.

14 **Q20. Are you familiar with Ohio Revised Code Section 4933.09?**

15 A20. Yes. That provision requires gas meters to have a percent variability of no greater than  
16 three percent.

17 **Q21. Based on the tests you described, did Mr. Maholtz's meter meet this standard?**

18 A21. Yes, Mr. Maholtz's meter easily met this standard. Mr. Maholtz's meter tested well  
19 within the 3% threshold, by testing a variability of -0.2 to -0.9%. Based on these results,  
20 Mr. Maholtz's meter is in compliance with that provision.

21 **Q22. Does this conclude your testimony?**

22 A22. Yes.

## CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Direct Testimony of Charles C. Resnik on behalf of The East Ohio Gas Company d/b/a Dominion East Ohio was served by regular U.S. mail to the following person on this 29th day of March, 2011:

Paul J. Maholtz  
9 Blueberry Lane, S.W.  
Warren, Ohio 44485-4205

  
Melissa L. Thompson

Attorney for The East Ohio Gas Company  
d/b/a Dominion East Ohio

860-009/276616



**DEO EXHIBIT 2.1**

**METER TEST RESULTS**  
**February 15, 2011**

**Equipment Maintenance -**

Meter Inventory | ViewMeters | **TestHistory**

Equipment Type: GAS | Equipment Id: 7210

Manufacturer Description: AMERICAN METER | Installed: 09/08/1988

Kind and Size: 328 - AMERICAN 250 | Removed: 01/19/2011

**Test Information**

Register Type	Reason	Date	Employee Initials	Location	Unit of Measure
MCF	CUST REQUEST	03/25/2011	CCR	TEST SHOP	MCF
MCF	CUST REQUEST	02/15/2011	ES	TEST SHOP	MCF

**Test Results**

Open Load | Check Load | Fast/Slow | Meter State

As Found: -80 | -20 | -50 | 97.8 | Spin Time: .00

As Left: .00 | .00 | .00 | | Differential: 0.00

**DIAPHRAGM** | Line Pressure: 0.00 psig

Test Status: COMPLETED

**DEO EXHIBIT 2.2**

**METER TEST RESULTS**

**March 25, 2011**

**Equipment Maintenance -** \_ □ X

Equipment Type  Equipment Id

Manufacturer Description  Installed

Kind and Size  Removed

**Test Information**

Register Type	Reason	Date	Employee Initials	Location	Unit of Measure
MCF	<input type="text" value="CUST REQUEST"/>	03/25/2011	CCR	TEST SHOP	MCF
MCF	CUST REQUEST	02/15/2011	ES	TEST SHOP	MCF

Test Results

	Open Load	Check Load	Fest/Slow	Meter State	Spin Time	Differential	Line Pressure	Test Status
As Found	<input type="text" value="-96"/>	<input type="text" value="-32"/>	<input type="text" value="-64"/>	<input type="text" value="97.8"/>	<input type="text" value=".00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00 psig"/>	<input type="text" value="COMPLETED"/>
As Left	<input type="text" value=".00"/>	<input type="text" value=".00"/>	<input type="text" value=".00"/>					

**DIAPHRAGM**

**DEO EXHIBIT 2.3**

**Chart of Gas Received**

Chart of Gas Received by Mr. Maholtz

<b>Bill Month</b>	<b>Billed Volume (Mcf)</b>	<b>Gas Received (Check Rate of .3%)</b>	<b>Additional Gas (Mcf)</b>
May 2010	3.300	3.310	0.010
Apr 2010	6.200	6.219	0.019
March 2010	11.100	11.133	0.033
February 2010	17.000	17.051	0.051
January 2010	18.000	18.054	0.054
December 2009	17.800	17.853	0.053
November 2009	6.700	6.720	0.020
October 2009	6.000	6.018	0.018
September 2009	1.200	1.204	0.004
August 2009	0.200	0.201	0.001
July 2009	0.300	0.301	0.001
June 2009	0.600	0.602	0.002
May 2009	3.100	3.109	0.009
<b>Total Gas Not Billed</b>			<b>0.274</b>