



The Public Utilities  
Commission of Ohio

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09-682-EL-CSS  
Case Number

Public Utilities Commission of Ohio  
Attn: Docketing  
180 E. Broad St.  
Columbus, OH 43215

PUCO  
Formal Complaint Form

THOMAS & DERRELL WILKES  
Customer Name

8230 Gardenwood Place  
Customer Address

Boardman OH 44512  
City State Zip

Against

Account Number

Customer Service Address (if different from above)

OHIO EDISON COMPANY  
Utility Company Name

City State Zip

Please describe your complaint. (Attach additional sheets if necessary)

Ohio Edison currently operates a 69kV transmission line that runs through the backyard of my clients' property. In 1993 my clients constructed a storage shed and swimming pool and have used it continuously since that then without any objection or safety issue being raised. All County and Township permits were pulled prior to construction. However, Ohio Edison claims that the location of the 69kV electric lines are not in compliance with the National Electrical Safety Code. See, Affidavit of David Kozy attached hereto as **Exhibit A**. Mr. Kozy has testified the swimming pool distance from the conductors is approximately 20.7 feet. Mr. Kozy testified that according to the NESC the distance needs to be at least 25.7 feet. See, Kozy Affidavit, ¶ 9&10. In addition, Mr. Kozy testified that the distance from the roof of the storage shed to the conductors is approximately 10 feet. Mr. Kozy testified the roof of the storage shed needs to be at least 13.2 feet. See, Kozy Affidavit, ¶ 11.

Therefore, we request the Public Utilities Commission of Ohio require Ohio Edison to move their transmission lines to a distance that complies with the National Electrical Safety Code; or, in the alternative, determine whether or not Ohio Edison's 69kV lines are at a safe distance and that do not present a risk to the reliable transmission of electricity along these lines.

Signature  
BRETT M. MANCINO (0071148)  
Attorney for Thomas & Derrell Wilkes  
1360 East Ninth Street  
1000 IMG Center  
Cleveland, Ohio 44114  
Phone: (216) 241-8333  
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Technician                      Date Processed 8-5-09 Customer Telephone Number

IN THE COURT OF COMMON PLEAS  
MAHONING COUNTY, OHIO

OHIO EDISON COMPANY  
76 South Main St.  
Akron, Ohio 44308

Plaintiff,

vs.

THOMAS E. WILKES and  
DERRELL C. WILKES,  
8230 Gardenwood Place  
Youngstown, Ohio 44512-5809

Defendants.

AFFIDAVIT OF DAVID R. KOZY,  
PROFESSIONAL ENGINEER

STATE OF OHIO       )  
                              )  
COUNTY OF SUMMIT   )

ss:

I, DAVID R. KOZY, having been duly cautioned and sworn, hereby aver and state as follows:

1. I am the Manger of Transmission Engineering for FirstEnergy Service Company, a corporate affiliate of Ohio Edison Company ("Ohio Edison"). In this capacity, I am in charge of the transmission engineering relating to the safe use and operation of all high voltage transmission lines use to transmit electricity to the customers of the public utilities owned and operated by FirstEnergy Corp. ("FirstEnergy"), including Ohio Edison. I have personal knowledge of the facts stated herein and am competent to testify thereto.

2. I am a Professional Engineer licensed by the State of Ohio. I have a Bachelor of Science in Civil Engineering from the University of Akron and have been working in the area of transmission engineering for the FirstEnergy Service Company and Ohio Edison Company for

over 17 years. In this capacity, I have acquired the requisite background, training, knowledge, experience, and specialized expertise on all engineering matters relating to the design, construction, installation, maintenance, and operation of electrical transmission lines, poles, wires, conductors, and other related equipment. I also have acquired the requisite background, training, knowledge, experience, and specialized expertise on all matters relating to the National Electric Safety Code ("NESC"), which provides the applicable safety standards and clearances for the installation, maintenance and operation of electrical transmission lines throughout the United States.

3. The National Electric Safety Code has established a number of safety standards that govern the minimum clearances of overhead transmission wires and conductors from buildings and other structures. Any encroachment that violates the NESC creates an unsafe and hazardous condition that can result in property damage or serious bodily injury, including death, if not remedied. Consistent with the minimum safety standards established by the NESC, therefore, FirstEnergy has adopted certain right-of-way restrictions for high-voltage transmission lines, which, among other things, prohibit any buildings, signs, billboards, swimming pools, decks, flag posts, sheds, barns, garages, playgrounds, fences or other structures within the utility's right-of-way.

4. FirstEnergy, by and through its public utility, Ohio Edison, currently operates a high voltage transmission line in Mahoning County, known as the Boardman-Pidgeon South 69kV transmission line. This line has also been known as the Boardman-Salem 69kV transmission line. This electrical transmission line is a critical part of the electrical infrastructure relied upon by Ohio Edison to provide electricity to its customers in Mahoning County.

5. The Boardman-Pidgeon South 69kV transmission line contains live, energized wires and electrical conductors that are designed to operate at temperatures not to exceed 212 degrees Fahrenheit. The actual distances between the transmission lines and other buildings or structures can vary depending on the temperature. Thus, in calculating the minimum distances required by the National Electric Safety Code, FirstEnergy must calculate the minimum distances from the live transmission wires and conductors if operated at 212° F.

6. Defendant Thomas and Derrell Wilkes are the owners of certain property located in Boardman Township along the existing Boardman-Pidgeon South 69kV transmission line. In this regard, I am aware that the Wilkes have constructed a storage shed and an above-ground swimming pool underneath and immediately adjacent to the Boardman-Pidgeon South 69kV transmission lines within Ohio Edison's right-of-way. A picture of the storage shed is attached as Exhibit "A" and a picture of the swimming pool is attached as Exhibit "B."

7. In order to determine whether the two structures present an unsafe and hazardous condition in violation of the National Electric Safety Code, Ohio Edison sent a professional surveying crew, led by a registered professional surveyor, Donald G. Vardon, Jr., P.S., to measure the exact distances in the field between the 69kV transmission line and the two encroaching structures. Such field calculations and measurements were then reviewed and analyzed by me, as a professional engineer, to determine whether a National Electric Safety Code violation exists.

8. Based upon my expert engineering review and analysis of the field data as applied to the National Electric Safety Code, I have determined that the minimum clearances required for both encroaching structures violate the National Electric Safety Code. As such, both structures

create an unsafe and hazardous condition that must be remedied by either removing the structures or moving them to a safer location.

9. In particular, I have determined, based on my expert review and engineering analysis, that the distance from the swimming pool to the conductors operating at 212° F is approximately 20.7 feet. Under Section 234(E) and Table 234-3 of the National Electric Safety Code, any wires, conductors, cables or unguarded rigid live parts must be a minimum distance of 25.7 feet in any direction from the water edge, edge of pool, base or diving platform, or anchored raft from any live wires, conductors, cables or unguarded rigid live parts. The Wilkes swimming pool violates this NESC standard.

10. A true and correct copy of the relevant sections of the NESC for above-ground swimming pools is attached hereto as Exhibit "C." Table 234-3 establishes a 25 ft. minimum clearance for transmission lines over 750 V to 22 kV (phase to ground). An additional 0.7 ft. clearance is required because the NESC requires additional clearances if the transmission lines are greater than 22kV. A 69kV transmission line is measured as phase to phase. When measured phase to ground, the 69kV transmission line is 41.83kV (including a 5% overvoltage margin). Thus, the minimum distance from the 69kV transmission line must be greater than 25.7 feet.

11. With respect to the storage shed, I have determined, based on my expert review and engineering analysis, that the distance from the transmission lines operating at 212° F to the peak of the storage shed's roof is approximately 10 feet. Under Section 234(C) and Table 234-1 of the National Electric Safety Code, any wires, conductors, cables or unguarded rigid live parts shall be a minimum distance of 13.2 feet from the roof of any building or structure that is not readily accessible to pedestrians. The Wilkes storage shed violates this standard.

12. A true and correct copy of the relevant sections of the NESC is attached hereto as Exhibit "D." Table 234-1 establishes a 12.5 ft. minimum clearance for transmission lines over 750 V to 22 kV (phase to ground). An additional 0.7 ft. clearance is required because the National Electric Safety Code requires additional clearances if the transmission lines are greater than 22kV. A 69kV transmission line is measured as phase to phase. When measured phase to ground, the 69kV transmission line is 41.83kV (including a 5% overvoltage margin). Thus, the minimum distance from the 69kV lines must be greater than 13.2 feet.

13. It is my expert and professional engineering opinion that the above-ground swimming pool and storage shed on the Wilkes property have created an unsafe and hazardous condition that present an imminent and ongoing risk of injury that unduly interferes with the safe and efficient operation of the 69kV transmission lines.

  
\_\_\_\_\_  
DAVID R. KOZY, P.E.

SIGNED AND SWORN BEFORE ME ON THIS \_\_\_\_ DAY OF APRIL, 2009.

  
\_\_\_\_\_  
Notary Public

Michael R. Betting, Attorney  
Notary Public, State of Ohio  
My Commission has no Expiration Date  
Section 147-03 O.R.C.