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Complainant Late Filed Exhibit D

January 23, 2021

Via E-Mail: *dheep@pa.gov*
Administrative Law Judge Darlene Heep
Commonwealth of Pennsylvania
Pennsylvania Public Utility Commission
801 Market Street, Suite 4063
Philadelphia, PA 19107

RE: Karen Lynne Sabrina Payonk v. PECO Energy Company
In re: C-2020-3021202

Dear Judge Heep:

As you may recall, this matter had a hearing on December 17, 2020. PECO counsel submitted a "late-filed" exhibit showing photos of the newly installed transformer.

PECO then received my late-filed exhibit which emphasized the National Electric Code (NEC) – Article 450 - Transformers and Transformer Vaults and regulations which highlighted some requirements for oil labeled transformers as being:

1. A concrete pad used under a transformer
(It is my understanding a concrete pad is for safety reasons against environmental contamination. Should the transformer leak oil (+++), any potential contaminants would encounter the concrete pad BEFORE earth and thus be absorbed.
"Fiberglass" as mentioned by Atty Scott via their Sr Engineer is an IMPERVIOUS surface = oil leaked would roll off the surface and into the ground. Fiberglass pads are generally used for pad mount transformers to allow for airflow but the surface beneath the fiberglass pad is concrete, which would absorb oils/contaminants before they have a chance to leech into the ground. I do not have a pad mount transformer.)

2. Concrete vault code
(It is my understanding this is required primarily to create a safe barrier between the transformer and its surroundings (including people), should it explode.
My well is 11' from the transformer & similar distance to the building structure (1856 barn *made of stones & wood) & closest windows.*

The transformer is also submersed into the ground on the banked end of the barn structure, putting it between 10-13' feet away from the closest interior wall and entire first ground floor.

PECO's counsel objected to my submitted NEC codes as being "irrelevant" under Pennsylvania law stating:

Pennsylvania Public Utility Commission Regulations, 52 Pa Code §57.28(b), Electric Safety Standards:

(b) Safety code. An electric utility shall comply with the minimum safety standards established by theNational Electric Safety Code pursuant to its terms of applicability.

Paraphrasing: 52 Pa Code 57.28, part 2 (b) states the electric utility shall comply with the minimum NESC safety standards.

My response:

52 Pa Code 57.28, part 2 (b) In no way relinquishes the utility company from having to abide by any applicable or relevant NEC codes.

1. PECO's own public document repositories frequently requires it's own personnel to abide by NEC requirements such as:

https://www.peco.com/SiteCollectionDocuments/Section8Metering.pdf
See pages 6, 8, 9 (section 8.10.2 stating some NEC single-phase transformer requirements), etc....

https://www.peco.com/SiteCollectionDocuments/Yellow%20Book%202013-07-31.pdf
Though not specifically relevant to transformers, page 5 of 6 provides a succinct overview of what PECO code adherence expectations: "installation must meet all local municipality building codes, the National Electrical Code, and the National Electrical Safety Code, and shall be inspected by an electrical underwriter listed in PECO's Electric Service Requirements handbook."

2. PECOs internal procedures defines NEC CODE compliance as NOT intended for untrained persons

This contradicts Atty Scott's statement in her objection,

"*The National Electric Code (NEC) controls how a customer should install and maintain his own equipment and wiring.Customers are required to follow the NEC for the facilities that they own, not a public utility.* "

*According to PECO's own documents found here, NEC is defined differently.
https://www.peco.com/SiteCollectionDocuments/02DefinitionsRev2200202.pdf

"2.22 NEC, NATIONAL ELECTRICAL CODE

(ANSI C1,NFPA No. 70). ***This code contains basic minimum provisions considered necessary for safety in specified electrical installations****. It is* ***not intended*** *as a design specification or an instruction manual* ***for untrained persons****. Copies of this publication are obtainable from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269."*

It may be safe to assume most customers tend to fall in the "untrained persons" category and henceforth is in direct contradiction with Atty Scott's statement,"*NEC controls how a customer should install and maintain his own equipment"*

3. NEC vs NESC clarification

Additionally, the attached article provides a brief synopsis for us untrained persons as to the differences between NEC & NESC as well as highlighting additional information public utilities are responsible for.

"The purpose of the NEC is the practical safeguarding of persons and property from hazards arising from the use of electricity (Section 90.1). Refer to Section 90.2 of the NEC for a listing of which installations are covered and those that are not." (See attached image of covered installations)

"The purpose of the NESC is the practical safeguarding of persons, utility facilities, and affected property during the installation, operation, or maintenance of electric supply and communication facilities, under specified conditions. "

"In terms of the electric utility industry, the NEC does not cover installations in utility substation electrical equipment enclosures (sometimes referred to as control buildings) and is not usually subject to electrical inspections. Design considerations of the NEC, specifically low-voltage applications, are defined more completely in the NEC than in the NESC.

In other words, the NESC provides criteria for what is to be executed, but not how it is to be accomplished, whereas the **NEC defines both a standard for and methods of implementation.**

This article & information supports PECO's internal public document procedures as to why NEC codes are continuously referenced and also my NEC code reference.

4. 52 Pa Code §57.28 does NOT relinquish utility companies from following National Electric Codes.

https://www.pacodeandbulletin.gov/Display/pacode?file=/secure/pacode/data/052/chapter57/s57.28.html&d=reduce

52 Pa Code §57.28 , as found in the above link, states:

(1) An electric utility shall use reasonable effort to properly warn and protect the public from danger, and **shall exercise reasonable care to reduce the hazards** to which employees, customers, **the public** and others **may be subjected to by reason of its** provision of electric utility service and its **associated equipment and facilities.**

(2) An electric utility is not responsible for the *ownership and maintenance* of the customer's facilities beyond the service point.

(b) *Safety code*. An electric utility shall comply with the minimum safety standards established by the National Electric Safety Code pursuant to its terms of applicability.

PECO inferred they are not required to follow the NEC yet I am unable to substantiate that statement.

5. Did PECO install grounding rods or verify that grounding rounds are there?
Atty Scott mentioned their senior engineer, Stephen Reilly, the same individual who, during the hearing, admittingly did not know the codes for transformer installation, infers standards are for a "fiberglass base" and there are supposed to be "grounding rods penetrating the earth".

6. Transformer manufacturing label
Can PECO please send a photo of the transformer manufacturing label?
I can also verify more requirements per the manufacturer, but do not have the labelling information.

Thank you in advance for hearing this case.

Very truly yours,
Sabrina Payonk

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NFPA 70® - National Electrical Code® Scope

90.2 Scope.

(A) Covered. This Code covers the installation and removal of electrical conductors, equipment, and raceways; signaling and communications conductors, equipment, and raceways; and optical fiber cables and raceways for the following:

(1) Public and private premises, including buildings, structures, mobile homes, recreational vehicles, and floating buildings

(2) Yards, lots, parking lots, carnivals, and industrial substations

(3) Installations of conductors and equipment that connect to the supply of electricity

(4) Installations used by the electric utility, such as office buildings, warehouses, garages, machine shops, and recreational buildings, that are not an integral part of a generating plant, substation, or control center

(B) Not Covered. This Code does not cover the following:

(1) Installations in ships, watercraft other than floating buildings, railway rolling stock, aircraft, or automotive vehicles other than mobile homes and recreational vehicles

Informational Note: Although the scope of this Code indicates that the Code does not cover installations in ships, portions of this Code are incorporated by reference into Title 46, Code of Federal Regulations, Parts 110–113.

(2) Installations underground in mines and self-propelled mobile surface mining machinery and its attendant electrical trailing cable

(3) Installations of railways for generation, transformation, transmission, energy storage, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communications purposes

(4) Installations of communications equipment under the exclusive control of communications utilities located outdoors or in building spaces used exclusively for such installations

(5) Installations under the exclusive control of an electric utility where such installations

a. Consist of service drops or service laterals, and associated metering, or

b. Are on property owned or leased by the electric utility for the purpose of communications, metering, generation, control, transformation, transmission, energy storage, or distribution of electric energy, or

c. Are located in legally established easements or rights-of-way, or

d. Are located by other written agreements either designated by or recognized by public service commissions, utility commissions, or other regulatory agencies having jurisdiction for such installations. These written agreements shall be limited to installations for the purpose of communications, metering, generation, control, transformation, transmission, energy storage, or distribution of electric energy where legally established easements or rights-of-way cannot be obtained. These installations shall be limited to federal lands, Native American reservations through the U.S. Department of the Interior Bureau of Indian Affairs, military bases, lands controlled by port authorities and state agencies and departments, and lands owned by railroads.

Informational Note to (4) and (5): Examples of utilities may include those entities that are typically designated or recognized by governmental law or regulation by public service/utility commissions and that install, operate, and maintain electric supply (such as generation, transmission, or distribution

systems) or communications systems (such as telephone, CATV, Internet, satellite, or data services). Utilities may be subject to compliance with codes and standards covering their regulated activities as adopted under governmental law or regulation.

Additional information can be found through consultation with the appropriate governmental bodies, such as state regulatory commissions, the Federal Energy Regulatory Commission, and the Federal Communications Commission.

https://www.cce.umn.edu/documents/cpe-conferences/mipsycon-papers/2011/applyingthenationalelectricalcodeinsubstations.pdf