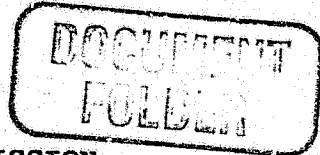


PENNSYLVANIA PUBLIC UTILITY COMMISSION
Uniform Cover and Calendar Sheet



1. REPORT DATE: March 5, 1993

2. BUREAU AGENDA NO. FEB-93-OSA-23*(Rev.)

3. BUREAU: Office of Special Assistants

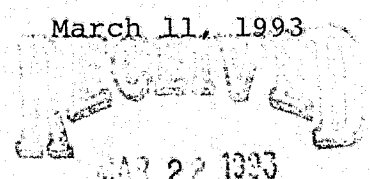
4. SECTION(S):

5. PUBLIC MEETING DATE March 11, 1993

6. APPROVED BY: Director: C.W. Davis 7-1827

7. PERSON IN CHARGE: A. Arnold 7-8032

8. DOCKET NO.: A-110550, F.055



C.W. Davis, Jr.

9. (a) CAPTION (abbreviate if more than 4 lines)
(b) Short summary of history & facts, documents & briefs
(c) Recommendation

- (a) Letter Notification of Philadelphia Electric Company Relative to Reconductoring of the Existing 138 kv line to operate as a Woodbourne-Heaton 230 kv Line in Montgomery and Bucks Counties.
- (b) On November 27, 1989, Philadelphia Electric Company ("PECO") filed a Letter Notification pursuant to 52 Pa. Code §57.72(d)(1) proposing to reconductor and reconstruct a former 138 kv transmission line previously owned by Consolidated Rail Corporation as the Woodbourne-Heaton 230 kv transmission line. On September 14, 1990, certain property owners who live along the corridor filed an Emergency Petition alleging, inter alia, that they did not receive notice, were entitled to notice and requested that the proceeding be reopened so that they could raise issues of zoning, diminution of property values and adverse health effects from electromagnetic fields ("EMF"). The Commission denied the request and the Commonwealth Court, in a Memorandum Opinion, ordered a remand on the question of whether the Petitioners will be adversely affected by the line. On August 12, 1992, Administrative Law Judge Smolen issued his Initial Decision ("I.D."). The I.D. recommends, inter alia, that the line not be energized pending the Commission's consideration of EMF standards.
- (c) The Office of Special Assistants recommends that the Commission adopt the attached draft Opinion and Order which directs a remand limited solely to consideration of a study entitled "Magnetic Fields and Cancer in People Residing Near Swedish High Voltage Power Lines", ("The Swedish Study") and denies the request to intervene by Duquesne Light Company, Metropolitan Edison Company, Pennsylvania Electric Company, West Penn Power Company, and UGI Utilities, Inc.

DOCKETED
MAR 30 1993

10. MOTION BY: Commissioner Chm. Rolka
 SECONDED: Commissioner Rhodes
 Commissioner Holland -
 Commissioner Yes
 Commissioner

CONTENT OF MOTION: 1) This matter be remanded to the Office of Administrative Law Judge for the purpose of: a) receiving evidence and comment regarding studies of the health effects of magnetic fields which are available on or before the hearings on that evidence commence; and b) determining, in

CONTINUED

CONTENT OF MOTION: light of findings regarding health effects, what, if any, standards should exist for right-of-way width for the Woodbourne-Heaton 230kv line.; 2) no other matters are to be considered; 3) the presiding Administrative Law Judge shall issue a supplemental decision concerning these additional studies and appropriate right-of-way standards for the Woodbourne-Heaton 230 kv line within 120 days of the entry of this Order; and 4) the Office of Special Assistants should prepare the appropriate Order.

DOCKETED
MAR 30 1993

**DOCUMENT
FOLDER**



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
P.O. BOX 3265, HARRISBURG, PA 17105-3265

March 26, 1993

IN REPLY PLEASE
REFER TO OUR FILE

A-110550
F055

To All Parties

DOCUMENT
FOLDER

Letter of Notification of Philadelphia Electric Company Relative to
Reconstructing and Rebuilding of the Existing 138 kV Line to Operate
as the Woodbourne-Heaton 230 kV Line in Montgomery and Bucks Counties.

To Whom It May Concern:

This is to advise you that the Commission at Public Meeting held
March 11, 1993 adopted an Opinion and Order in connection with the above
entitled proceeding.

A copy of the Opinion and Order is enclosed for your records.

Very truly yours,

John G. Alford, Secretary

JZ
Encls.
Certified Mail
Receipt Requested

Copy of Opinion and Order to: See Initial Decision letter dated
August 19, 1993 for parties of records.

DOCKETED

APR 26 1993

NVL

PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17105-3265

DOCUMENT
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Public Meeting held March 11, 1993

Commissioners Present:

David W. Rolka, Chairman
Joseph Rhodes, Jr., Vice-Chairman
Wendell F. Holland, Commissioner

Letter of Notification of
Philadelphia Electric Company
Relative to Reconstructing and
Rebuilding of the Existing 138
kV Line to Operate as the
Woodbourne-Heaton 230 kV Line
in Montgomery and Bucks Counties

A-110550F055

DOCKETED

OPINION AND ORDER APR 26 1993

BY THE COMMISSION:

Before this Commission for consideration is the Initial Decision ("I.D.") of Administrative Law Judge Herbert Smolen issued August 19, 1992. Exceptions thereto have been filed by Philadelphia Electric Company ("PECO"), the Commission's Law Bureau, the Commission's Office of Trial Staff,^{1/} the Office of Consumer Advocate, and Pennsylvania Power and Light Company. Protestants^{2/} and the parties to this proceeding filed Replies to Exceptions.

History of the Proceedings

We reprint the pertinent history of the proceedings from the I.D., pages 1 through 7.

^{1/} The Commission's Office of Trial Staff did not appear as a party but filed Exceptions based on the view that our acceptance of certain findings could be interpreted as "prejudging" of certain issues in another docket, No. A-110300F051.

^{2/} Protestants are several property owners within proximity to the route of the proposed Woodbourne-Heaton line.

On November 21, 1989, Philadelphia Electric Company (PECO), in lieu of a formal siting application, filed a Letter of Notification to the Pennsylvania Public Utility Commission (Commission) pursuant to 52 Pa. Code 57.72(d)(1) proposing to reconstruct and reconductor, as the Woodbourne-Heaton 230 kV transmission Line, a former railroad 138 kV transmission Line owned by Consolidated Rail Line known as the Trenton Cut-off branch freight line. PECO had purchased an easement from Conrail along this rail line together with the structures supporting the former 138 kV line, and proposed to construct an approximate right of way to connect the Woodbourne and Heaton substations.

* * *

PECO duly served copies of the Letter of Notification in accordance with 52 Pa. Code 57.72(d) (3) upon the governmental parties entitled to notice. Thereafter, by Order entered February 9, 1990, the Commission approved the Letter of Notification.

Subsequently, on September 14, 1990, certain property owners who live along the railroad corridor (Petitioners or Protestants) filed an Emergency Petition of Non-Noticed Property Owners to Intervene, for Reopening and To Suspend Approval (Emergency Petition) of PECO's Letter of Notification for the Woodbourne-Heaton transmission line. In the Emergency Petition, Petitioner alleged, inter alia, that they did not receive notice of the proposed reconstruction of the transmission line and that they were entitled to notice because they owned air space adjacent to the right of way through which electromagnetic fields (EMF) from the line could be dispersed. Petitioners, further asserted that one of them owned property within PECO's right of way, and that PECO had improperly used the Letter of Notification Procedure. Petitioners requested that the proceeding be reopened so that they might address issues of local zoning, diminution of property values, aesthetics, increased risk of fires, and the risk of EMF from the line causing cancer. Petitioners are members of the group PAUSE (Parents Against an Unsafe Environment) which was an additional Petitioner.

On September 18, 1990, PECO filed an Answer to the Emergency Petition, denying all allegations therein, and asserting, inter alia, that it was in compliance with all Commission regulations; and that if there was a taking of property rights as alleged, it was a matter for the courts; and that construction of the line had to continue or else the public's electric service would be in serious jeopardy. On December 27, 1990, Petitioners filed a letter supplementing the original Emergency Petition. Thereafter, on January 2, 1991, the Office of Consumer Advocate ("OCA") filed a Notice of Intervention and a Statement in Support of the Emergency Petition (Statement in Support), but took no position on the merits of PECO's request, nor upon the merits of the Petitioner's objections to the Letter Notification.

On January 2, 1991, PECO filed a response to Petitioners' supplemental letter, and on January 10, 1991, PECO filed a Reply to the OCA's Statement in Support, asserting therein, inter alia, that there was no legal basis for reopening the proceeding; that PECO had followed the Commission regulations at 52 Pa. Code §57.71; and that the Commission had already "adequately considered" all elements of safety in approving the Letter of Notification.

By Order entered March 8, 1991, the Commission denied the Emergency Petition and the request for stay of construction, concluding that the Petitioners had failed to prove sufficient grounds for reopening the record, and had not met the standard for the granting of a stay.^{3/}

^{3/} Commissioner (now Chairman) Rolka dissented from the Opinion to the extent that the Petitioners had adequately raised new and novel issues warranting reconsideration of the Order approving the line, but agreeing as to the decision on the request for stay. Dissenting Opinion of Commissioner David W. Rolka at 1. m

On April 2, 1991, the Petitioners filed with Commonwealth Court a Petition for Review of the Commission's March 8, 1991 Order. Robert Small, et al. v. Pa. P.U.C., No. 761 C.D. 1991. On or about April 8, 1991, the Petitioners filed with the Commission the Petition of Small, et al., for Stay Pending Appeal to which PECO replied on April 15, 1991. On May 8, 1991, the Commission denied the Petition.

On April 26, 1991, the Petitioners filed with Commonwealth Court a Petition for Stay Pending Review of the Commission's March 8, 1991 Order. The OCA intervened in the Commonwealth Court Appeal on April 26, 1991 (No. 761 C.D. 1991). On May 13, 1991, the Commission filed its Answer to the Petition of Small, et al. for Stay Pending Review.

On May 22, 1991, the Commonwealth Court heard argument and on May 24, 1991, issued a Memorandum Opinion and Order wherein the Court, by the Honorable Madaline Palladino, ordered a remand to the Commission for a hearing within 90 days upon the question of whether "they (the Petitioners) will be adversely affected by the reconductoring of the high tension line at issue in this case." Commonwealth Court Order of May 24, 1991 at 2. On May 29, 1991, Judge Palladio issued a Supplemental Order relinquishing jurisdiction over the Appeal.

By Order of June 14, 1991, the Commission reopened the case for hearing and determination on the sole issue of whether Petitioners will be adversely affected by the reconductoring of the line; granted the Petition for Hearing filed by Petitioners June 3, 1991 to that extent; and ordered a hearing for not later than August 22, 1991 on that issue. On June 26, 1991, the Prosecutory Staff entered its appearance in the case. (I.D., pp. 1-5)

Discussion

The issues presented in the Initial Decision may be distilled into 4 major topics: (1) Whether Petitioners have been adversely affected by reason of the potential for exposure to electric and magnetic fields (EMF) as a result of the proposed reconductoring of the Woodbourne-Heaton line; (2) Whether Petitioners will be adversely affected by adverse land-use impacts; (3) Whether the letter-notification procedure was properly used in this case; and (4) Whether the Commission's regulations are constitutionally or legally infirm. Because we shall order a limited remand, we address primarily the alleged adverse affect by reason of exposure to EMF consideration.

(1) Whether Petitioners have been adversely affected by reason of the potential for exposure to electric and magnetic fields (EMF) as a result of the reconductoring of the Woodbourne-Heaton line?

The ALJ has provided a thorough analysis of the complex and often contradictory testimony concerning EMF in this proceeding. Based on the testimony, he reached the following conclusion:

In view of all of the foregoing conflicting expert scientific studies, testimony and conclusions on the issue presented, i.e., whether exposure to EMFs causes adverse human health effects, the evidence of record in this proceeding, taken as a whole, leads to the ultimate finding and conclusion that the scientific studies at present are inconclusive; and therefore, the record evidence does not support a finding and/or conclusion that such exposure is harmful to human health. That is to say, that there has been no clear and convincing demonstration of such causality, nor is the preponderance of the evidence sufficient to support such a finding and/or conclusion. Thus, within the framework of the issue framed by the Commonwealth Court and the Commission in this case, it cannot be said that the record evidence supports a finding and/or conclusion that exposure

to EMFs causes adverse human health effects. The scientific evidence of record is inconclusive at this point in time.

(I.D., pp. 178-179)

We begin our review of the ALJ's conclusion regarding EMF by consideration of the following findings of fact.

17. Electric fields are the fields associated with the voltage on the conductors of an electric power line or device. The fields decrease with distance from the source and are easily shielded by objects such as trees (PECO Rebuttal Statement No. 6 [Silva] at 9).
18. Electric fields are detectable by humans and animals in laboratory settings (OCA Statement No. 1 [James] at 6).
19. Electric and magnetic fields exist whenever electricity is present; power line, appliances and internal home and business wiring all generate EMF (PECO Statement No. 2 [Boeggeman] at 4-5).
20. Fields associated with electric transmission lines are sinusoidal in nature (PECO Rebuttal Statement No. 4 [Rosenberg] at 6, 16; N.T. 769-770).
21. Electromagnetic fields from electric transmission and distribution lines are non-ionizing because they have energies which are too small to produce ionization; the process by which fields of higher energy remove electrons from the atoms and molecules of biological cells and tissues (OCA Statement No. 2 [Rosenbaum] at 6).
22. Ionizing radiation is at the extremely high end of the electromagnetic spectrum and this type of field is capable of transmitting very large amounts of energy sufficient to break chemical bonds in the molecules of the cell. This type of radiation can kill or damage a cell (PECO Rebuttal Statement No. 4 [Rosenberg] at 10).
23. The energy in power frequency fields (60 Hz fields) is much less than one-trillionth of that found in ionizing radiation, which is not enough

to break chemical bonds in the cells like ionizing radiation (PECO Rebuttal Statement No. 4 [Rosenberg] at 10).

24. People are exposed to appliances for a relatively short period of time while they are in use. People move from one activity to the next and from one location to another, each having their own sources of electric and magnetic fields. People are exposed to a continuous or almost continuous range of exposures in a typical day (PECO Rebuttal Exhibit No. 6 at 12).
25. At 1.2 inches, a microwave oven generates magnetic fields from 750 to 2,000 milligauss; at 12 inches, the magnetic field drops to 40 to 80 milligauss and at 39 inches, the magnetic field is 3 to 8 milligauss. The magnetic field from an electric range at 1.2 inches is 60 to 2,000 milligauss; at 12 inches, 4 to 40 milligauss; and at 39 inches, 0.1 to 1 milligauss; at 12 inches, 4 to 40 milligauss; and at 39 inches, .1 to 1 milligauss. For a hair dryer, the magnetic field at 1.2 inches is 60 to 20,000 milligauss; at 12 inches, 1 to 70 milligauss and at 39 inches, the field drops to 0.1 to 3 milligauss. For a television, the magnetic field at 1.2 inches is 25 to 500 milligauss; at 12 inches the field is 0.4 to 20 milligauss and at 39 inches is 0.1 to 2 milligauss (PECO Statement No. 1 [Oedemann] at 5).
26. "Phase rolls," an engineering technique to reduce the interference between transmission facilities and nearby communication facilities, were incorporated into the design of the line at various locations and will result in lower magnetic field exposure (PECO Statement No. 1 [Oedeman], at 6-7; PECO Rebuttal Statement No. 6 [Silva] at 17).
27. The electric fields expected to be generated by the Woodbourne-Heaton 230 Kv line using the compact delta configuration would be 1.87 kV/M in the middle of the right-of-way; 1.2 kV/m at the edge of the right-of-way and continues to decrease further away from the line; at 300 feet from the right-of way centerline, the electric field is 0.013 kV/m (PEO Statement No. 1 [Oedemann] at 7).
28. Magnetic fields from the Woodbourne-Heaton 230 kv Line will be dependent on loading on the line:

- (a) at emergency minimum loading when the line is de-energized for an emergency or maintenance reasons and expected current flow is 0 amperes, there is no magnetic field because there is no current on the line;
 - (b) at "light" loading where the expected current flow is 180 amperes, maximum magnetic field at the middle of the right-of-way would be 21 milligauss, and at the edge of the right-of-way would be 13 milligauss;
 - (c) at "normal" loading when the expected current flow is 360 amperes, maximum magnetic fields expected at the middle of the right-of-way is approximately 42 milligauss and at the edge of the right-of-way would be 25 milligauss;
 - (d) at "heavy" loading when the expected current is 600 amperes, the magnetic field at the middle of the right-of-way is expected to be 70 milligauss and at the edge of the right-of-way approximately 42 milligauss; and
 - (e) at the "emergency maximum" loading, conditions (where another transmission line in the PECO system would be de-energized because of emergency situation and the expected current flow would be 1000 amperes), the maximum magnetic field at the middle of the right-of-way is expected to be 117 milligauss and at the edge of the right-of-way approximately 70 milligauss (PECO Statement No. 2 [Boeggeman] at 8-9).
29. "Light" and "normal" loading of the line would represent 90% of the expected loading on the line according to PECO's system planners (N.T. 71).
 30. "Emergency maximum" loading on the line is not expected to exceed four hours per year (PECO Statement No. 2 [Boeggeman] at 8).
 31. The Woodbourne-Heaton 230 kV Line has been designed and constructed and will be maintained in accordance with the National Electrical Safety Code (PECO Statement No. 1 [Oedemann] at 8).
 32. The compact delta design used for the Woodbourne-Heaton 230 kV transmission line will result in the lowest levels of 60 Hz electric and magnetic

fields levels that could be achieved on the existing right-of-way using technologically available designs for 230 kV transmission lines (PECO Statement No. 2 [Boeggeman] at 12-13).

33. The magnetic field levels that will be associated with the Woodbourne-Heaton 230 kV transmission line are within the levels adopted by the State of New York in its magnetic field regulations (PECO Rebuttal Statement No. 6 [Silva] at 18).
34. The magnetic field levels that will be associated with the Woodbourne-Heaton 230 kV transmission line are within the levels adopted by the State of Florida in its magnetic field regulations (PECO Rebuttal Statement No. 6 [Silva] at 18).
35. The electric and magnetic field levels that will be associated with the Woodbourne-Heaton 230 Kv transmission line are in the same range as electric and magnetic field levels from other 230 Kv transmission lines in Pennsylvania and elsewhere in the United States (PECO Rebuttal Statement No. 6 [Silva] at 18).
36. There is not enough sufficient conclusive information to know whether very low frequency electromagnetic fields are dangerous to people and which of their characteristics might be dangerous (N.T. 360; PECO Rebuttal Statement No. 2 [Cole] at 28; PECO Rebuttal Statement No. 3 [Germann] at 23; PECO Rebuttal Statement No. 4 [Rosenberg] at 21).
37. Although biological effects are observed to be associated with EMF exposure, no connection between EMF exposure and human cancer has been conclusively demonstrated (N.T. 368; OCA Statement No. 1 [Janes] at 10).
38. A causal connection between the biological effects of electric and magnetic fields and harm to human health has not been scientifically proven, nor has a causal connection been disproved (OCA Statement No. 1 [Janes] t 10).
39. Epidemiological studies are inconclusive, i.e., some show associations between surrogates for long-term average field strength and various types of cancer; sometimes there is no apparent correlation when actual measured (short-term) field

strength is used instead of the surrogate; other studies have reported either no significant correlation or no relationship between fields or field surrogates and cancer; authors of one study have observed negative correlations between exposure to high magnetic fields and cancer; another study reports increased cancer, but low total death rates (due to less cardiovascular disease for those exposed to high fields); one study reports higher cancer incidence for people farther from a power line than for people closer to a power line (OCA Statement No. 2 [Rosenbaum] at 3; OCA Statement No. 2A [Rosenbaum] at 2; Protestants' Statement No. 1 [Turner] at 3-4; PECO Rebuttal Statement No. 2 [Cole] at 18).

40. Taken together, the epidemiologic reports are inconclusive with respect to an association/effect relationship between EMF and cancer among human beings. Therefore, to date, no demonstrated relationship between EMF and cancer in human beings is established (PECO Rebuttal Statement No. 2 [Cole] at 28; OCA Statement No. 2 [Rosenbaum] at 3-4, line 11 to p. 5, line 11).
41. The biophysical and biological mechanisms giving rise to the effects of EMF exposure are either not known or are poorly understood at the present time (OCA Statement No. 1 [Janes] at 10).
42. Effects of EMF observed through cellular studies cannot be directly extrapolated to animals (OCA Statement No. 1 [Janes] at 10).
43. The nature and extent of risks to human health posed by exposure to EMFs are uncertain (OCA Statement No. 2 [Rosenbaum] at 8).
44. Prior to construction, the Senior Engineer in charge of design and construction of the Woodbourne-Heaton Line did not consider EMF a safety issue to be considered (PECO Statement No. 1 [Oedemann] at 7-11; N.T. 35-36).
45. PECO did not conduct any calculations of the electric and magnetic fields resulting from its design choice until after the construction of the Woodbourne-Heaton Line was substantially completed (OCA Statement No. 2 [Rosenbaum] at 7; OCA Cross-Exh. 1; N.T. 12-13).

46. Taking into consideration the absence of promulgated electric and magnetic field line standards in the Commonwealth of Pennsylvania, the line design and routing of the Woodbourne-Heaton Line are factually consistent with the concept of prudent avoidance on hindsight review (PECO Rebuttal Statement No. 6 [Silva] at 16-17; N.T. 315-316).
47. On hindsight review, the electric and magnetic field levels that will be associated with the Woodbourne-Heaton 230 kV transmission line are consistent with the "similarity-based" approach to the concept of prudent avoidance (PECO Rebuttal Statement No. 6 [Silva] at 18).
48. Prudent avoidance is a concept which was described by researchers at Carnegie-Mellon University in a 1989 report sponsored by the Congressional Office of Technology Assessment (OTS) and a brochure distributed by Carnegie-Mellon University (PECO Rebuttal Statement No. 6, [Silva] at 14).
49. The concept of prudent avoidance suggests modest efforts to reduce field exposure. Prudent avoidance is a concept that recognizes that a scientific determination cannot be made that changes in EMF levels will have any effect on health, and thus prudent avoidance advocates only a modest effort in making such changes (PECO Rebuttal Statement No. 6 [Silva] at 15-16, 18).
50. Mitigative measures that should be considered in practicing prudent avoidance may include: (a) avoiding heavily populated areas; (b) avoiding parks, schools and other public facilities; (c) widening rights-of-way; (d) limiting public use of rights-of-way; (e) using higher ground clearances; and (f) designing the power lines to reduce fields (OCA Statement No. 2 [Rosenbaum] at 7).
51. One approach to prudent avoidance is known as the "similarity-based" approach where levels of EMF from specific transmission lines are kept similar to levels of EMF from other transmission lines in the same voltage category. This approach was used in New York and Florida (PECO Rebuttal Statement No. 6 [Silva] at 18).
52. The "similarity-based" approach recognizes the assumption that the aspect of EMF exposure which

may be important in regard to health is not known (PECO Rebuttal Statement No. 6 [Silva] at 18).

53. Typical high voltage transmission lines have a maximum electric field strength on the right-of-way from approximately 1 to 12 km per meter and fields at the edge of the right-of-way from 0.3 to 3 kilovolts per meter (OCA Statement No. 1 ([Janes] at 3).
54. Typical high voltage transmission lines have magnetic fields in the range of 20 to 140 milligauss and maximum values which do not exceed 350 milligauss (OCA Statement No. 1 [Janes] at 3).
55. The electric and magnetic fields that will be associated with the Woodburne-Heaton Line are in the same levels as other typical 230 kV transmission lines (PECO Rebuttal Statement No. 6 [Silva] at 19).
56. The line design is a compact delta (or triangular) configuration which produces lower fields than other typical configurations. Phase rolls used to mitigate induction effects on railroad tracks and Conrail communication systems will also result in lower magnetic fields (PECO Rebuttal Statement No. 6 [Silva] at 17).
57. The use of an existing utility corridor previously used for an electrified railroad and currently used by a diesel railroad avoids creation of a new utility corridor. As to cost, the near linear route and the re-use of existing Conrail electric structures which are conducive to the compact delta configuration for line design with phase rolls, are consistent with principles of prudent avoidance (PECO Rebuttal Statement No. 6 [Silva] at 16-17).

No party, in Exceptions, or Replies to Exceptions, has disputed the ALJ's determination with regard to the inconclusive nature of the evidence of potential adverse effects of EMF in this proceeding.

Protestants, in their Replies to the Exception of PECO argue that the lack of existing standards pertaining to EMF and the silence of the Commission's regulations regarding EMF is

unwise public policy and, therefore, counsels against permitting, this line to be energized absent such standards and further developmental research in the matter.

Protestants have argued throughout this proceeding, notably in their Reply Brief, that the existing standards for approving a transmission line do not factor in EMF consideration. The NESC standards, the "similarity-based" approach, and "everyday exposure" consideration, in this vein, do not supply adequate guidance or instruction for determining the health and safety questions surrounding transmission lines and the EMF issue (See Reply Brief of Protestants, 2-6). PECO may assert again and again that this line meets existing safety standards; but so long as the existing standards do not deal with all of the existing risks, dangers and uncertainties, compliance with those standards offers us no assurances that the line is in compliance with standards that stand in need of being enacted.

* * *

Peco continues in its first exception to assert that the line does not cause an unreasonable risk of danger to the safety and health of the public (Exceptions of PECO, 5). But there is an unreasonable risk of danger. There is a risk first for the reasons above; i.e., the line has not complied with EMF safety standards because none are in place yet. In the light of the serious concerns of adverse health effects caused by EMF, to proceed with a line that complies with no EMF standards is unreasonable; that is a dictate of sound policy. There is also a risk because there are scientific studies that indicate adverse health effects of EMF exposure and many scientists who back these findings. And there are both scientists who back these findings and those who dispute them who are jointly advocating continued research. There need not be conclusive evidence of a "causal connection" for there to be conclusive evidence that there is a risk. There is still, for instance, much scientific uncertainty about the connection between cigarette smoking and diseases such as lung cancer. Yet almost no one

denies that health risks and manufacturers are required to post warnings.

(Protestants Reply Exceptions pp. 1-3.)

Protestants further elucidate their position on EMF, as discussed in the context of the perception of adverse health consequences from EMF in the following text:

Protestants object to the simple characterization that they are thwarting a needed project simply by claiming they are afraid of EMF and will change their land use. The Protestants are fearful and they will change their behavior. Hence, they will be adversely affected by the Woodbourne-Heaton line. It was this assertion that the ALJ did not simply accept that Protestants said they were afraid as proof of adverse effect. The ALJ made a good faith and extremely thorough effort to examine all of the medical and scientific testimony in addition to Protestants' testimony. In the course of his investigation, the ALJ concluded that Protestants may indeed have relied upon one-sided information as to EMF. But the ALJ did not rely only on this information only. In numerous findings of fact the ALJ found that there were no conclusive proofs of causality between EMF and adverse health effects. The ALJ also understood that causality is a very difficult thing to understand, let alone prove, and that the lack of conclusive proof does not at all rule out relationships and connections between EMF and adverse health effects. In light of this distinction, and in light of studies which link EMF to certain diseases, the call in the scientific community for continuing research, and the attention that the EMF issue is receiving from governing bodies concerned with transmission line safety, one must conclude that fear of EMF is quite reasonable. This conclusion is the one that the ALJ wisely reached.

(Id., pp. 4-5)

Protestants, in reply to PECO's third exception further articulate their EMF position in the following text:

Whether or not approval of the ALJ's recommendation for delay would represent a de facto moratorium may or may not be true. The proponents of energization of the Woodbourne-Heaton line, including two utilities, obviously seek to show the ALJ's decision in its worst possible light in this context, by constructing a worst case scenario. The fact is that there were unique factors involved in this proceeding such as proximity of Protestants to line, the land use patterns of the area, the use of an existing corridor through a residential area, the organization of an informed citizens group, etc... This case proceeded on its own merits. It is true that the state of research on EMF exposure and adverse health effects played a major role; and it is true that state of research will be a common component in similar cases. However, research may yield new results in the near future which may have a small or great effect on the manner in which the next like case will be viewed.

(Protestant Exc., pp. 7-8)d

In reply to the Exceptions of the Law Bureau, the Protestants address the contention that the fears of the surrounding property owners are not rational in the following discourse:

The Law Bureau does not recognize the distinction between proving conclusively a causal relationship and uncovering a relationship between something like EMF exposure and adverse health effects; the ALJ does. In the second section of its first exception, the Law Bureau cites a number of sections in the Initial Decision where the ALJ asserts that the evidence does not support conclusive statements about cause and effect (See Exceptions of Law Bureau, 9-11). The ALJ again and again asserts that causality has not been conclusively demonstrated with respect to several sub-issues of EMF-adverse health effect research, but he maintains that the overall picture is inconclusive as may studies and researchers have posited and shown a relationship between EMF exposure and adverse health effects. Thus the ALJ did not recognize that Protestants' fears had no basis as the Law Bureau suggests (Id., 8-9). On the contrary, he

has found a sound foundation in the totality of scientific evidence for reasonable fear both because and in spite of the inconclusive nature of the evidence to date.

The reasoning that leads the ALJ to determine that Protestants' fear is reasonable is in fact sound...

(Id., p. 11)

Thus, we conclude that Protestants do not, on the basis of this record, maintain that they have demonstrated by a preponderance of the evidence, adverse health effects from exposure to EMF. We discern that the record is inconclusive, and that the state of scientific debate is not in accord. It is this inconclusiveness which forms the basis of Protestant's concern, and the basis of their adherence to the view that energization of the Woodbourne-Heaton line should be delayed.

(2) Whether Petitioners will be affected by adverse land use impacts?

The ALJ has rejected the contention of the Protestants that the presence and energization of the line will decrease property values and cause a disinvestment.

Thus, in the March 8, 1991 remand Order, the Commission stated at page 10, footnote 9,

9/ The Petitioners contend that they would have also raised the issue of depreciation of their property values caused by the electric transmission line, and that in fact their properties were taken by "inverse condemnation." However, these issues are outside the Commission's jurisdiction. Thus, the desire of the Petitioners to raise this issue at a hearing is irrelevant and does not support their request to reopen the record.

Moreover, the authority of the Commission to consider "land use" and "landscape" impacts, under 52 Pa. Code §§57.72(c)(7), 57.75(e)(3)(i) and (e)(3)(vi), cannot and does not operate to expand the Commission's jurisdictional authority so as to permit it to consider alleged damages to private property. Additionally, as Staff argues, the Commission has not been given authority under any other statute to assess damage to private property value caused by the activities of a public utility.

Thus, in eminent domain proceedings, assessment of damages caused by the taking is to be made by the Court of Common Pleas and not the Public utility Commission under the Eminent Domain Code, see 15 Pa. C.S. §1511(g); and 26 P.S. §§1-101, et seq. The foregoing is also consistent with applicable case law where claimants against public utilities have sought an award of damages for alleged notations of 66 Pa. C.S. §1501. Thus, the Courts have determined that the Commission has no authority to award damages. Feingold v. Bell Tel. Co. of Pa., 477 Pa. 1, 383 A.2d 791 (1977); Elkin v. Bell Tel. Co. of Pa., 49 Pa. 123, 420 A.2d 371 (1980). Moreover, the Commission has recognized that the assessment of damages resulting from a line's impact or individual land use was properly adjudicable in another forum. Re Philadelphia Electric Company, 52 Pa. P.U.C. 198, 203, 206, 207 and 209 (1978). See also, Re West Penn Power Company, 68 Pa. P.U.C. 262, 268 (1988) and Re Pennsylvania Power & Light Company, 70 Pa. P.U.C. 164, 181 (1989). Accordingly, for all of the foregoing reasons, determination of damages due to alleged decreases in market value is not within the Commission's jurisdiction to hear and determine.

The ALJ, however, went on to focus upon the testimony of the surrounding property owners themselves to conclude "By reason of the foregoing, it appears that energization of the line will impact on land use because of this fear of potential adverse health effects." ALJ Smolen further concluded that the fear of EMF, as testified to by the Protestants is reasonable in view of the current uncertainty of the scientific research in the area. (I.D., p. 197)

It was pursuant to the ALJ's discussion of the significant public policy issues, namely that this Commission consider a "prudent avoidance" approach as regards siting and EMF, a "similarity based approach, or a general moratorium while EMF standards are developed that delay in energization of the line was recommended. (I.D., pp. 197-208).

In Exceptions to the ALJ's conclusion that energization of the subject line should be delayed pending development of reasonable regulations that set EMF standards, the Law Bureau Prosecutorial Staff presents extensive discussion concerning whether the ALJ conclusion that Protestant's fear of adverse health effects from EMF is reasonable and is, therefore, legally sufficient to afford them any relief in the nature of postponement of construction and/or energization of the subject line.

The Law Bureau's argument can be summarized in the following way:

- (a) The relationship between EMF and adverse health effects are inconclusive and, therefore, unknown;
- (b) Fear of that which is not known lacks a reasonable basis;
- (c) Pennsylvania case law concerning fear, as a basis for legally compensable injury is that it be reasonable.^{4/}

^{4/} The Law Bureau argues, inter alia, that the Commission is without jurisdiction to make a determination concerning fear (a subjective emotional state). Also, they attack the motive of Protestants for their participation in the proceedings, characterizing their interest as purely monetary. Given the testimony of Protestant's concerning their apprehensions about the potential health effects of EMF, we find no basis on which to so criticize their advocacy herein.

The Commission's Office of Trial Staff,^{5/} in replies to the Law Bureau's Exceptions, asserts that none of the cases cited by the Law Bureau provides the proper guidance in the present situation. According to the OTS' research, there is no precedent in Pennsylvania concerning the appropriate evidentiary standard to be used in determining the sufficiency of record evidence on fear resulting from EMF. (OTS R.E., p. 2)

The cases cited by the Law Bureau are well-taken. They are helpful, although not dispositive, for the very reason criticized by the OTS. That is, there is no clear Pennsylvania precedent concerning EMF. Also, there do not appear to be any cases wherein EMF exposure has been successfully pursued as a theory of tort liability for adverse health effects.

In general, however, we cannot conclude as does the Law Bureau, that Protestant's concern, if not fear, is unfounded. We shall accept the ALJ's conclusion as to the reasonableness of Protestant's fear concerning potential adverse health effects from EMF, generally, and to a lesser degree their fear of EMF from the subject line. However, by accepting the ALJ's conclusions on this issue, we do not endorse his ultimate recommendation as to the delay in energization of the line at this juncture.

The major issue in this matter may well concern the development of a prudent policy concerning the mitigative effects

^{5/} PP&L refers to 52 Pa. Code §5.533(a) to conclude that the OTS' exceptions are improper in that OTS was not a participant. Also, it raises the specter that OTS is statutorily prohibited from participation in this matter by virtue of 66 Pa. C.S. §306(b)(1). We have recently had occasion to address the OTS and the Law Bureau's concurrent representation of the public interest in Docket A-110300F051. We shall, as in that case, enter an Order granting OTS participant status nunc pro tunc.

of EMF exposure given the scientific uncertainty in the area. The ALJ extensively discussed these mitigative measures under the following headings:

Prudent avoidance - This concept initially appeared in a report produced by researchers at Carnegie-Mellon University for the U.S. Office of Technology Assessment in 1989. (I.D. p. 198 citing PECO Rebuttal Statement No. 5.) It is a concept which has not been codified, and connotes "modest" efforts to reduce field exposure. It allows transmission lines to go forward while research continues in the area of EMF and health consequences therefrom.

Similarity Based Approach - An insightful view of this approach is set forth in the Exceptions of PP&L to the I.D. Under this approach, right-of-way standards are set based on the highest EMF recordings from other existing transmission lines. The states of Florida and New York have apparently opted for similarity based approach with regard to EMF.

The ALJ has opted for an approach more consistent with prudent avoidance in this proceeding. PP&L would propose a field management approach consistent with principles of prudent avoidance. PECO argues that it is a proponent of the prudent avoidance approach, has met such a standard in this proceeding and therefore, the line should not be further delayed. (See PECO Exceptions).

Prior to the adoption by this Commission of the I.D. recommendations concerning some of the mitigative measures which are suggested prior to construction, we are greatly concerned that the parties to this proceeding have not addressed a recent

study concerning the potential effects of cancer in persons residing near Swedish high voltage power lines. See "Magnetic fields and cancer in people residing near Swedish high voltage power lines", Institutet for Miljomedecin, Karolinska Institutet (1992).

This document is not a part of the record in this proceeding. It has been brought to the attention of the Commission in Docket No. A-1105050. F. 067, In re: Application of Philadelphia Electric Company for a Finding of Necessity for the situation of three buildings on a site in Springfield Township, Delaware County, Pennsylvania, containing 8.0 acres located north of the Septa right-of-way...^{6/}

We note that the record concerning EMF has been extensively developed, but prior to our disposition of the instant matter we shall direct a limited remand. Our reopening of the record to secure an important price of information appeals to our sense of fairness. However, we cannot go on forever in hope that the next piece of evidence or study will resolve the EMF question once and for all. While we shall direct the remand of this case to consider new evidence, it is only the unique and extremely contentious nature of this case which leads to this position.

Because the justification for remand is that additional hearings will allow us to consider better information, we would not restrict the scope of the hearings on remand to the only new study about which we happen to be aware. Other studies may have become public since the close of the record in this case. We would, therefore, direct the ALJ to consider all of these studies which the parties feel are relevant.

^{6/} We rely upon the City of Erie v. Pennsylvania Public Utility Commission, 41 Pa. Commonwealth Ct. 194, 398 A.2d 1084 (1979) for the proposition that, after notice, we may consider the record of other cases.

On September 15, 1992, Duquesne Light Company, Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, West Penn Power Company, and UGI Utilities, Inc., jointly filed a petition seeking intervention in this matter. All of the Joint petitioners are members of regional councils of the North American Electric Reliability Council ("NERC"), an organization which coordinates and promotes reliability of electric utility generation and transmission systems throughout the United States and Canada. The Joint petitioners aver that they have not previously sought to intervene in the proceeding because of their understanding that the sole issue was the narrow issue of notice. The joint petitioners request intervention so as to place of record their specific concerns, namely the enhanced scope of land use issues, the causal connection between EMF and adverse health effects, and the impact of a moratorium on transmission line construction.

On consideration of the Joint petition to intervene, we will deny intervention. In balancing the interests of the Joint petitioners and the efficient administration of the proceeding, we conclude that the Joint petitioners' interests are adequately represented by the existing participants. 52 Pa. Code §5.72(a)(2); **THEREFORE,**

IT IS ORDERED:

1. This matter be remanded to the Office of Administrative Law Judge for the purpose of:
 - a. receiving evidence and comment regarding all studies of the health effects of magnetic fields which are available on or before the hearings on that evidence commence; and

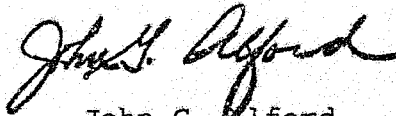
- b. determining, in light of findings regarding health effects, what, if any, standards should exist for right-of-way width for the Woodbourne-Heaton 230kv line.

2. That no other matters are to be considered, and the presiding Administrative Law Judge shall issue a supplemental decision concerning these additional studies and appropriate right-of-way standards within 120 days of the entry of this Opinion and Order.

3. That the petition to intervene of Duquesne Light Company, et al. is denied.

4. That the Commission's Office of Trial Staff is granted leave to participate, nunc pro tunc .

BY THE COMMISSION



John G. Alford
Secretary

(SEAL)

ORDER ADOPTED: March 11, 1993

ORDER ENTERED: March 26, 1993

RECEIVED

MAR 17 1993

Public Utility Commission
SECRETARY'S BUREAU
Information Control Division

PENNSYLVANIA PUBLIC UTILITY COMMISSION
Harrisburg, Pennsylvania 17105-3265

LETTER NOTIFICATION OF
PHILADELPHIA ELECTRIC COMPANY
RELATIVE TO RECONDUCTORING AND
REBUILDING OF THE EXISTING
138KV LINE TO OPERATE AS THE
WOODBOURNE-HEATON 230KV LINE

PUBLIC MEETING - MARCH 11, 1993
MAR-93-OSA-23(Rev.)*
DOCKET NO. A-110550.F.055

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MOTION OF CHAIRMAN DAVID W. ROLKA

Society generally responds by creating controls where we recognize that something is dangerous. For example, we know that radiation from nuclear reactors is dangerous. As a result, standards have been established to require that nuclear reactors must be encased in steel and concrete and must be turned off as soon as their operations deviate from strict technical limits. Also, we know that smoking tobacco is dangerous. This has produced a substantially different response, and we have warned smokers about the dangers of smoke and, in many public areas, forbidden smoking to protect those who do not smoke. I could give dozens of other examples ranging from controls on how we drive and maintain our cars to who can drink alcohol and under what circumstances. However, we are confronted in this case with a danger which is suspected by some people but not established as a scientific fact.

This case turns on the issue of the impact of electric transmission lines on human health. The protestants argue that magnetic fields from power lines may endanger their health and the health of their families. They conclude from the scientific uncertainty regarding this effect that the line should not be energized until standards for human exposure to magnetic fields have been put into place. To simplify, their position is "better safe than sorry".

This presents us with a very difficult problem. Basically, we are asked to judge between two divergent sets of scientific conclusions on the effect of magnetic fields on human health. One of the critical obstacles to making this judgement is embodied in the point, raised by several of the parties, that knowledge in this area continues to evolve. In Replies to Exceptions the Protestants hold forth the hope that "...research may yield new results in the near future which may have a small or great effect on the manner in which the next like case will be viewed." The concern that other, important information may be soon be available is validated by the presence of a new study in another case which is before the Commission, namely, In re: Application of Philadelphia Electric Company For a Finding of Necessity for the situation of three buildings on a site in Springfield Township, Delaware County Pennsylvania, Docket No. A-1105050.F.067.

NVL

For my part, I hope that we always have access to the best available information in deciding the cases before us. The notion of reopening the record to secure a critical piece of information appeals to my sense of fairness and to my desire for justice. However, we cannot go on forever in hope that the next piece of evidence will resolve the EMF question once and for all. I doubt that the Protestants or most of the other parties have the financial resources to fight this case through repeated remands. I also wonder at what point in a prolonged search for the deciding study on magnetic fields the Company will cut their losses and abandon a line which we decided years ago is necessary. Even if money and other resources were not obstacles, it is unfair, illogical and unjust to subject these parties to a proceeding which has no end. In other words, while I support the remand of this case to consider new evidence, it is only the unique and extremely contentious nature of this case which leads me to this position. Therefore, I say "once and done."

Nothing in this case is clearer than disputes over the accuracy and value of a number of the studies which are already in the record. The only justification for remand is that additional hearings will allow us to consider better information. I would not, therefore, restrict the scope of the hearings on remand to the consideration of the only new study about which we happen to be aware. I am sure that other studies have become public since the close of the record in this case. We should consider all of these which the parties feel are relevant.

Clearly, if there is a need in this instanced for a right-of-way standard regarding magnetic fields, then we should move as quickly as possible to set that standards. In light of the substantial record already accumulated under this docket, it makes sense for the Office of Administrative Law Judge to use that information, along with any supplementary information which may be collected, to establish a standard. This will allow the Company to know how it can bring the line into operation in a way which is consistent with existing scientific knowledge regarding health effects of EMF. This procedure should also satisfy the concerns of the Protestants that there be a public forum, in an on-the-record proceeding, within which these standards can be developed.

I THEREFORE MOVE THAT:

1. This matter be remanded to the Office of Administrative Law Judge for the purpose of:
 - a. receiving evidence and comment regarding all studies of the health effects of magnetic fields which are available on or before the hearings on that evidence commence; and

- b. determining, in light of findings regarding health effects, what, if any, standards should exist for right-of-way width for the Woodbourne-Heaton 230kv line.
2. No other matters are to be considered, and
3. The presiding Administrative Law Judge shall issue a supplemental decision concerning these additional studies and appropriate right-of-way standards within 120 days of the entry of this Order.

March 13, 1993
DATED

David W. Rolka
DAVID W. ROLKA, CHAIRMAN

PHILADELPHIA ELECTRIC COMPANY

LEGAL DEPARTMENT

James W. Durham
Senior Vice President
and General Counsel

2301 MARKET STREET, BOX 8699
PHILADELPHIA, PA 19101
(215) 841-5544 FAX: 568-3389
Direct Dial: 841-4252

Bjarnie R. Anderson
Legal Administrator

March 26, 1993

Paul R. Bonney
Ellen M. Cavanaugh
Rudolph A. Chillemi
Edward J. Cullen, Jr.
Todd D. Cutler
Katherine K. Dadd
Aubra S. Gaston
Dawn R. Getty
Gregory Golazeski
John C. Halderman
Elizabeth P. Harris
Mary McFall Hopper
Assistant General Counsel

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APR 01 1993

Stephen L. Huntoon
Thomas G. Jackson
J. Lindsay Johnston
Conrad O. Kattner
Kimberly Lewis
Stephanie Whitton Lewis
Jeffrey J. Norton
Christine A. Reuther
Wendy Schermer
Jenny P. Shulbank
Ward L. Smith
Noel H. Trask
Assistant General Counsel

BY TELECOPY AND FIRST CLASS MAIL

Honorable Herbert S. Smolen
Administrative Law Judge
Pennsylvania Public Utility Commission
1302 Philadelphia State Office Building
Broad & Spring Garden Streets
Philadelphia, PA 19130

RECEIVED

MAR 29 1993

SECRETARY'S OFFICE
Public Utility Commission

Re: Letter of Notification of Philadelphia Electric Company Relative to Reconstructing and Rebuilding of the Existing 138 KV Line to Operate as a Woodbourne-Heaton 230 KV Line in Montgomery and Bucks Counties; Docket No. A-110550, F.055

Dear Judge Smolen:

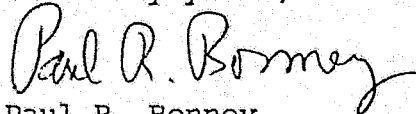
As you are probably aware, the Commission has issued an Order remanding this case to the Office of Administrative Law Judge. That Order requires that you receive additional evidence, hold hearings and issue a Supplemental Initial Decision within 120 days, or by July 24, 1993.

Given that time frame and the need to proceed expeditiously with the remand, Philadelphia Electric Company requests that you hold a pre-hearing conference in this matter as soon as possible, preferably within a week. We are available any date and time that your schedule permits. We would be happy to call counsel for other parties to communicate your available dates, if that would be of assistance. Also, we have no objection to the

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parties located outside of the Philadelphia area participating by telephone, if that would be more convenient for them.

Sincerely yours,


Paul R. Bonney

PRB/meb

cc: John G. Alford, Secretary (By First Class Mail)
Robert J. Sugarman, Esq. (By Fax & First Class Mail)
Tanya J. McCloskey, Esq. (By Fax & First Class Mail)
Patricia Krise Burket, Esq. (By Fax & First Class Mail)
Jesse Dillon, Esq. (By Fax & First Class Mail)
Charles F. Hoffman, Esq. (By Fax & First Class Mail)
Thomas Watson, Esq. (By Fax & First Class Mail)



ORIGINAL COMMONWEALTH OF PENNSYLVANIA
 PENNSYLVANIA PUBLIC UTILITY COMMISSION
 P.O. BOX 3265, HARRISBURG, PA 17105-3265

March 30, 1993

IN REPLY PLEASE
 REFER TO OUR FILE

Honorable Herbert S. Smolen
 Administrative Law Judge
 Pennsylvania Public Utility Commission
 1302 Philadelphia State Office Building
 Broad & Spring Garden Streets
 Philadelphia, PA 19130

RECEIVED
 MAR 31 1993

Public Utility Commission
 SECRETARY'S OFFICE
 Information Control Division

BY TELECOPY AND FIRST CLASS MAIL

Re: Letter of Notification of Philadelphia Electric Company Relative to Reconstructing and Rebuilding of the Existing 138 kV Line to Operate as a Woodbourne-Heaton 230 kV Line in Montgomery and Bucks County, Docket No. A-110550,F.055

Dear Judge Smolen:

In regard to scheduling a prehearing conference in the remand of the above-captioned matter, please be advised that I am available for such a conference on March 30, 1993 to April 1, 1993 and on April 12 to April 15, 1993. Although I prefer to be present at the prehearing conference, I am willing to participate by telephone if necessary to facilitate scheduling.

Sincerely,

Patricia Krise Burket

Patricia Krise Burket
 Assistant Counsel

Law Bureau Prosecutory Staff

cc: All parties (except Charles F. Hoffman, Esq.)
 by FAX and First Class Mail

NVL

Charles F. Hoffman
 by hand delivery and interoffice mail

John G. Alford
 by hand delivery and interoffice mail

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DOCKETED

APR 02 1993

DATE: March 30, 1993

SUBJECT: Telephonic Prehearing Conference

TO: Aggie Brewster, Supervisor
Docket Section

FROM: Norma Lewis, Supervisor
OALJ Scheduling Unit

This is to inform you of the decision to hold a telephonic prehearing conference for the case docketed **A-1100550F055** (see below for caption information) on Wednesday, March 31, 1993 at 11:00 a.m. in the Philadelphia State Office Building. This was a previously unscheduled hearing and no hearing notice was sent advising the parties of this proceeding. The hearing was arranged by ALJ Smolen today and he notified all parties. Commonwealth Reporting will be covering the hearing and an expedited delivery on the transcript has been ordered.

Please consider this notification of the hearing. If you need any additional information, please call me at 7-1399.

A-110550F055

Letter of Notification of Philadelphia Electric Company relative to reconstructing and rebuilding of the existing 138 kv line to operate as a Woodbourne-Heaton 230 kv line in Montgomery and Bucks Counties.

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MAR 31 1993

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APR 8 1993

Public Utility Commission
SECRETARY'S BUREAU
Information Control Division

RRL

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
P.O. BOX 3265, HARRISBURG, PA 17105-3265
March 30, 1993

In Re: A-110550F055

(See letter of 1/24/92)

Letter of Notification of Philadelphia Electric Company

Relative to reconstructing and rebuilding of the existing 138 KV line to operate as a Woodbourne-Heaton 230 KV line in Montgomery and Bucks Counties.

NOTICE

This is to inform you that the prehearing conference on the above captioned case will be held Thursday, April 22, 1993 at 10:00 a.m. in Room 1306, Philadelphia State Office Building, Broad and Spring Garden Streets, Philadelphia, Pennsylvania.

The presiding officer in this proceeding is Administrative Law Judge Herbert Smolen. Judge Smolen can be contacted at 1302 Philadelphia State Office Building, Broad and Spring Garden Streets, Philadelphia, Pennsylvania 19130; telephone (215) 560-2105.

cc: Judge Smolen
John Frazier - PIO
Bur. of Safety/Compliance
Law Bureau
Consumer Advocate
Norma Lewis
Susan Licon
Beth Plantz
Docket Room

Certified Mail.
Receipt Requested

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MAY 5 1993

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PHILADELPHIA ELECTRIC COMPANY

LEGAL DEPARTMENT

ORIGINAL

James W. Durham
Senior Vice President
and General Counsel

2301 MARKET STREET, BOX 8699
PHILADELPHIA, PA 19101
(215) 841-5544 FAX: 568-3389
Direct Dial: 841-4256

Bjarnie R. Anderson
Legal Administrator

March 30, 1993

Paul R. Bonney
Ellen M. Cavanaugh
Rudolph A. Chillemi
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Jenny P. Shulbank
Ward L. Smith
Noel H. Trask
Assistant General Counsel

APR 1 1993

SECRETARY OF SERVICE
Public Utility Commission

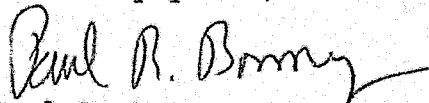
John G. Alford, Secretary
Pennsylvania Public Utility Commission
Room G-18, North Office Building
Harrisburg, PA 17105

Re: Letter of Notification of Philadelphia Electric
Company Relative to Reconstructing and Rebuilding
of the Existing 138 KV Line to Operate as a
Woodbourne-Heaton 230 KV Line in Montgomery and
Bucks Counties; Docket No. A-110550, F.055

Dear Secretary Alford:

Enclosed for filing in the above-captioned proceeding are an original and two copies of Philadelphia Electric Company's Prehearing Conference Memorandum On Remand. As indicated in the attached Certificate of Service, I have served copies of this filing upon Administrative Law Judge Smolen and all parties of record.

Sincerely yours,



Paul R. Bonney

PRB/meb

Enclosure

cc: See Certificate of Service

DOCUMENT
FOLDER

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

LETTER OF NOTIFICATION OF :
PHILADELPHIA ELECTRIC COMPANY :
RELATIVE TO RECONSTRUCTING AND :
REBUILDING OF THE EXISTING : DOCKET NO. A-110550, F.055
138 KV LINE TO OPERATE AS A :
WOODBOURNE-HEATON 230 KV LINE :
IN MONTGOMERY AND BUCKS COUNTIES :

REC'D
APR 1 1993
SECRETARY
Public Utility Commission

PREHEARING CONFERENCE MEMORANDUM ON REMAND

OF

PHILADELPHIA ELECTRIC COMPANY

BEFORE

ADMINISTRATIVE LAW JUDGE HERBERT SMOLEN

Counsel for Philadelphia Electric
Company

Paul R. Bonney
Ward L. Smith
Assistant General Counsel
Philadelphia Electric Company
2301 Market Street, S23-1
Philadelphia, PA 19101
(215) 841-4252

Tom Watson
Crowell & Moring
1001 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
(202) 624-2510

DATED: March 30, 1993

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APR 06 1993
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I. INTRODUCTION AND BRIEF HISTORY OF THE PROCEEDING

This case is before the Commission so that it can determine whether to reaffirm its February 9, 1990 approval for Philadelphia Electric Company ("PECO" or the "Company") to reconstruct and energize the 230 kV Woodbourne-Heaton transmission line ("the line"). The Commission has now remanded the case for further proceedings on limited issues (as described in part II of this prehearing memorandum). Administrative Law Judge Smolen's (the "ALJ") Initial Decision contained a thorough history of the proceeding. A brief history is provided here for context.

In early 1990, or over three years ago, the Commission approved the reconstruction and energization of the line. The line traverses approximately 12.3 miles within an existing Conrail right-of-way in Montgomery and Bucks Counties. Construction of the line was completed in July 1992 at a cost of approximately \$23.1 million (including AFUDC), and the line stands ready for service.

In 1991-92, at the request of certain local residents ("Protestants") and pursuant to an order by Judge Palladino of the Commonwealth Court, the Commission held hearings before the ALJ on "the sole issue of whether Protestants will be adversely affected" by the energization of the line. Twelve days of hearings were held over a seven-month period during which 22 individual Protestants and 10 expert witnesses provided testimony

on a range of health and land use questions, principally involving allegations about claimed effects from electric and magnetic fields ("EMF").

After submission of briefs, the ALJ issued his Initial Decision finding that: (1) ". . . the [EMF] scientific studies at present are inconclusive; and therefore, the record evidence does not support a finding and/or conclusion that such exposure is harmful to human health." I.D., p. 178, and that (2) ". . . with respect to routing, population density and design choice, even on the less desirable hindsight approach, and without State-mandated field standards, the actions of PECO, as far as they go, appear to factually support compliance with the concept of prudent avoidance because of the results obtained." I.D., p. 207. Exceptions and reply exceptions were filed by all parties.

On March 26, 1993, the Commission entered an Order remanding this case for further proceedings. The Commission's Order allows 120 days to hold hearings, submit briefs, and issue a Supplemental Initial Decision. The remaining sections of this prehearing memorandum set forth PECO's view of the most efficient way to satisfy the Commission's Order.

II. ISSUES AND SCOPE OF THE REMANDED PROCEEDING

The Commission's Order is clear that the remand in this case is limited to two areas: scientific studies on EMF and health which have become available since the record closed in this proceeding, and what, if any, EMF standards should exist for the Woodbourne-Heaton line.

First, with regard to the scientific studies on EMF and health, the Commission made certain findings:

- that an extensive record already has been developed regarding the science on EMF and health (p. 21);
- that based on that record, Protestants did not demonstrate, or even claim to have demonstrated, that they would experience adverse health effects from exposure to EMF from the Woodbourne-Heaton line (p. 16);
- that certain scientific studies have become available since that record closed (pp. 20-21); and,
- that the record should be re-opened to take evidence and comment on such studies (pp. 21-22).

The issue to be addressed in the remanded science hearings is, therefore, limited to whether Protestants and other parties asserting similar claims can satisfy their burden of proving that those new studies warrant any change in the ALJ's and Commission's findings on EMF and health.

With regard to what EMF standards, if any, should be applied to the Woodbourne-Heaton line, the Commission reached several conclusions that are relevant to the scope of this proceeding:

- that "inconclusiveness" in the science has lead to Protestants' fear and concern, and to their desire to delay energization of the line (p. 16);
- that delay in energization is not an appropriate policy to address Protestants' fears concerning potential adverse health effects from EMF or concerns (p. 19);
- that it has not been determined "if any" EMF standards should be enacted with regard to the Woodbourne-Heaton line (p. 23);
- that more recent scientific results should be addressed before a final decision is reached as to whether standards should be applied to the line (p. 21).

The parties have already provided extensive testimony on the EMF standards issue, and the ALJ already has made numerous findings of fact regarding the same, including that this line comports with prudent avoidance and all existing magnetic field standards in other states. The hearing in this remanded proceeding should not repeat that evidence or testimony. It should address the question of whether new scientific studies published since the close of the record in February 1992, taken into account with the previous studies, now warrant a specific EMF standard for this line.

III. BURDEN OF PROOF

In his July 18, 1991 Prehearing Order (pages 1-4) the ALJ concluded that PECO has the burden of proof "only . . . as to those items required to be submitted [under 52 Pa. Code § 57.72(d)(4)]." The ALJ also correctly concluded, on the other hand, that the Protestants and all other parties asserting similar claims "have the burden of proof and of going forward with the evidence in connection with their respective contentions concerning alleged adverse effects of the line, and particularly those regarding health effects from EMF." In his August 19, 1992 Initial Decision (pages 5-6), the ALJ restated these conclusions regarding burden of proof. PECO asks that the ALJ confirm that the Protestants (and other opposing parties) have the burden of proof and of going forward with respect to the limited issues to be addressed in this remanded proceeding, which, of course, continue to deal with the Protestant's allegations regarding "health effects from EMF."

IV. PECO WITNESSES

While Protestants and opposing parties have the burden of proof and the burden of going forward, PECO recognizes the tight time constraints under which this proceeding must now be conducted, and thus would like to provide preliminary information on expert testimony it intends to present.

The Commission's decision to hold further hearings on recent scientific studies appears to have been driven, at least in part, by media publicity about and public attention to recent EMF epidemiology studies. Therefore, PECO intends to present scientific testimony by Dr. Phillip Cole, who provided his views of the epidemiologic research previously in this proceeding, on the epidemiology studies that have become available since the record in this proceeding previously closed (on February 7, 1992).

Of course, PECO reserves the right to supplement its witness list pursuant to the schedule proposed below once the Protestants and other opposing parties have submitted their written testimony.

V. PROPOSED SCHEDULE AND DISCOVERY

As noted, the scope of this proceeding on remand is limited. Set forth below is a proposed schedule for submitting testimony, holding hearings, and filing briefs on the limited issues in this remanded proceeding:

Prehearing Conference	March 31, 1993
Identification of Expert Witnesses by Protestants and Other Opposing Parties	April 8, 1993
In-Hand Receipt of Protestants' and Opposing Parties' Written Expert Witness Testimony	April 21, 1993
Identification of PECO Expert Witnesses	April 27, 1993
In-Hand Receipt of PECO Written Expert Witness Testimony	May 10, 1993
Hearings: Cross-Examination of All Witnesses and Oral Rebuttal Testimony	May 18-20, 1993
Close of Record	May 20, 1993
In-Hand Receipt of Initial Briefs	June 11, 1993
Filing of Reply Briefs	June 23, 1993
Supplemental Initial Decision Issued	July 23, 1993

The above schedule fully complies with the Commission's March 26, 1993 remand order, which requires that the ALJ issue a Supplemental Initial Decision within 120 days or by July 24,

1993. The Company asks that the ALJ adopt the above schedule and instruct the parties to strictly adhere to it.

As with the previous testimony presented in this case, PECO firmly believes that pre-filed written direct testimony is in order given the complexity of the issues to be addressed by expert witnesses and the need for expeditious handling of this remand. See ALJ Smolen's July 18, 1991 Prehearing Order in this proceeding (page 6) (requiring that expert testimony be written and pre-filed); see also 52 Pa. Code § 5.412(a) and (b) ("Use of written testimony in Commission proceedings is encouraged, especially in connection with the testimony of expert witnesses."). The schedule set forth above provides for reasonable periods of time for the preparation of written expert direct testimony, particularly considering the limited scope of the remanded proceeding. PECO requests that the ALJ direct that the direct testimony be prepared in writing and submitted in accordance with the above schedule.

PECO also asks that the ALJ direct the parties to identify by no later than the dates set forth above the witnesses they intend to present. See 52 Pa. Code § 5.324(a)(1). This identification will facilitate discovery and help to ensure that no delays are encountered in the remand proceeding.

In a related vein, the Company requests that the ALJ direct all parties to provide to other parties at the time of witness identification, for any witnesses that did not previously testify in this proceeding, the background information customarily requested of witnesses, namely:

1. For every "new" witness identified, state the witnesses' business address and employer.
2. For each witness identified, describe generally the subject matter and the facts and opinions about which the person is expected to testify.
3. For each new witness identified, describe the witness' educational background and professional credentials.
4. For each new witness identified, list every case or proceeding in which the person has testified, including (a) the date of the testimony, (b) the parties in the case or proceeding (including the party on whose behalf of the person testified), (c) the docket number and jurisdiction involved, and (d) the subject matter on which the person testified.
5. For each case or proceeding indicated in response to question 4, provide copies of all oral and written testimony given, including direct and cross-examination, that concerns or relates to the issues potentially raised in this proceeding and provide a copy of the final order issued in the case or proceeding.
6. For each new witness identified, list and provide a copy of every article, study or report prepared in whole or in part by that witness that concerns or relates to the issues potentially raised in this proceeding.

PECO notes that this witness background information has specifically been requested in interrogatories submitted earlier in this proceeding by it and the Protestants, to which supplemental responses are already required by 52 Pa. Code § 5.332. Thus, PECO asks that the above background information be updated not only to include the "new" witnesses, but also for the witnesses that previously testified. By confirming that such information must be provided in accordance with the above schedule, the ALJ will assist in ensuring that the remand proceeds in an orderly and timely fashion.

In addition, PECO requests that the ALJ shorten the normal discovery response periods in light of the fact, again, that the Commission has directed that the remand be handled in an expedited manner. In particular, PECO asks that the period of time for answering interrogatories and data requests under 52 Pa. Code §§ 5.342(d) and 5.349(d) be reduced from the 10 days previously ordered in this proceeding by the ALJ (see July 18, 1991 Prehearing Order at pages 5-6) to 5 days, and that the period of time for filing objections to discovery be reduced further from 5 days to 3 days.

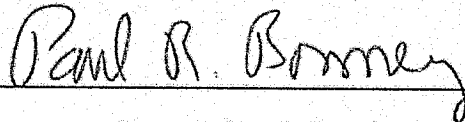
VI. LEGAL REPRESENTATION OF PECO

The Company wishes to bring to the attention of the ALJ and the parties that Ward Smith, previously with Crowell & Moring, has joined PECO as an Assistant General Counsel. Mr. Smith, along with Mr. Bonney, also an Assistant General Counsel with PECO, and Tom Watson of Crowell & Moring will continue to represent PECO in this matter. The Company requests that all communications and service be addressed to both Mr. Bonney and Mr. Watson.

VII. CONCLUSION

Philadelphia Electric Company requests that Administrative Law Judge Smolen issue an oral Bench Order at the Prehearing Conference adopting the positions and recommendations set forth above.

Respectfully submitted,



Counsel for Philadelphia Electric
Company

Paul R. Bonney
Ward L. Smith
Assistant General Counsel
Philadelphia Electric Company
2301 Market Street, S23-1
Philadelphia, PA 19101
(215) 841-4252

Tom Watson
Crowell & Moring
1001 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
(202) 624-2510

Dated: March 30, 1993

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the following parties and in the manner indicated below in accordance with the requirements of 52 Pa. Code § 1.54:

VIA HAND DELIVERY

Honorable Herbert Smolen
Administrative Law Judge
Pennsylvania Public Utility Commission
1302 Philadelphia State Office Building
Broad & Spring Garden Streets
Philadelphia, PA 19130

BY TELECOPY AND FIRST CLASS MAIL

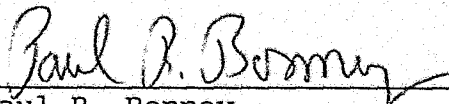
Patricia Krise Burket, Esquire
Pennsylvania Public Utility
Commission
G-28, North Office Building
P.O. Box 3265
Harrisburg, PA 17120

Jesse Dillon, Esquire
Pennsylvania Power & Light Co.
Two North Ninth Street
Allentown, PA 19101

Robert J. Sugarman, Esquire
Sugarman & Associates
16th Floor, City Place
101 North Broad Street
Philadelphia, PA 19107
(Counsel for Intervenors)

Tanya J. McCloskey, Esquire
Assistant Consumer Advocate
Office of Consumer Advocate
1425 Strawberry Square
Harrisburg, PA 17120

Charles F. Hoffman, Director
Office of Trial Staff
Pennsylvania Public Utility
Commission
P.O. Box 3265
Harrisburg, PA 17120


Paul R. Bonney
Assistant General Counsel
Philadelphia Electric Company
2301 Market Street
Philadelphia, PA 19101
(215) 841-4252

Dated: March 30, 1993

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
P.O. BOX 3265, HARRISBURG, PA 17105-3265
April 13, 1993

5013

In Re: A-110550F055

(See letter of 1/24/92)

Letter of Notification of Philadelphia Electric Company

Relative to reconstructing and rebuilding of the existing 138 KV line to operate as a Woodbourne-Heaton 230 KV line in Montgomery and Bucks Counties.

NOTICE

This is to inform you that further hearings on the above captioned case will be held Thursday, Friday, May 27-28, 1993 at 10:00 a.m., Tuesday-Friday, June 1-4, 1993 at 10:00 a.m. and Monday, June 7, 1993 at 10:00 a.m. in Room 1306, Philadelphia State Office Building, Broad and Spring Garden Streets, Philadelphia, Pennsylvania.

The presiding officer in this proceeding is Administrative Law Judge Herbert Smolen. Judge Smolen can be contacted at 1302 Philadelphia State Office Building, Broad and Spring Garden Streets, Philadelphia, Pennsylvania 19130; telephone (215) 560-2105.

cc: Judge Smolen
John Frazier - PIO
Bur. of Safety/Compliance
Law Bureau
Consumer Advocate
Norma Lewis
Susan Licon
Beth Plantz
Docket Room

Certified Mail
Receipt Requested

DOCUMENT
FOLDER

APR 23 1993