

PENNSYLVANIA PUBLIC UTILITY COMMISSION
Uniform Cover and Calendar Sheet

1. REPORT DATE:	:	2. BUREAU AGENDA NO.
November 4, 1993	:	
	:	NOV-93-OSA-238* (3rdRev.)
3. BUREAU: Office of Special Assistants	:	
4. SECTION(S):	:	5. PUBLIC MEETING DATE
	:	
6. APPROVED BY:	:	
Director: C.W. Davis 7-1827	:	
Supervisor:	:	
	:	November 10, 1993
7. PERSON IN CHARGE:	:	
A. Arnold 7-8032	:	
8. DOCKET NO.:	:	FEB 24 1994
A-110550F055	:	

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9. (a) CAPTION (abbreviate if more than 4 lines)
 (b) Short summary of history & facts, documents & briefs
 (c) Recommendation
 (a) Letter of Notification of Philadelphia Electric Company Relative to Reconductoring and Rebuilding of the Existing 138 kV Line to Operate as the Woodbourne-Heaton 230 kV line.

(b) By Order entered March 26, 1993, the Commission, inter alia, directed a limited remand of the August 19, 1992 Initial Decision ("I.D.") of Administrative Law Judge ("ALJ") Smolen to consider recent studies of the scientific research concerning potential adverse human health effects of exposure to electric magnetic fields (EMFs). That I.D. considered the merits of certain protestants' claims that reconductoring of a line from 138kv to 230kv, which line had not been operative since on or about 1986, but did exist within a pre-existing utility corridor which corridor uses an active freight rail line, would adversely affect them through exposure to EMF, and diminish the property values of adjacent homeowners. On July 23, 1993, ALJ Smolen issued his I.D. on remand, which affirms the Commission's February 9, 1990 ruling which grants Philadelphia Electric Company's application and permits energization of said line. Exceptions and replies were filed.

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PENNSYLVANIA PUBLIC UTILITY COMMISSION
Harrisburg, PA 17105-3265

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

Public Meeting
November 10, 1993
Docket No. A-110550F055
NOV-93-OSA-238*

STATEMENT OF COMMISSIONER JOSEPH RHODES, JR.

Before us for consideration is the July 23, 1993, Initial Decision of Administrative Law Judge ("ALJ") Herbert Smolen. The central issue of this decision is the effect of electromagnetic fields ("EMF") on human health. An extensive record was developed during which all parties were given more than ample opportunity to place on the record whatever evidence would support their positions. According to the ALJ, this record, when viewed in totality, establishes that there is no proven causal connection between EMF and adverse human health effects. I concur with the ALJ's findings.

If we decide to affirm the ALJ's central recommendation, the Commission still faces a difficult decision. We can pretend that this decision only has relevance for the instant case, the 13 miles of the Woodbourne-Heaton line, or we can let this decision stand as the current and controlling position of the Commission on this most troublesome issue. The Office of Trial Staff ("OTS") wants us to adopt the former position and other parties urge us to embrace the latter.

In many ways the path of least resistance beckons us to confine this finding to the thirteen miles of Woodbourne-Heaton. Such a conclusion seems to offer the Commission the best of all worlds. It is the politically correct decision. We would affirm that the on record examination of this alleged link between power line EMF and adverse health effects resulted in a negative result, but this negative result is confined to the four corners of this instant case. To those who assert a causal connection we would hold out the hope that this decision is confined to Woodbourne-Heaton. And to those who want us to find that no causal connection exists, we could answer that is exactly what we found in this case, but only in this case and no other. We could please everyone.

Unfortunately, the mission of this Commission is not to please but to reach judgement in the public interest. We cannot pass the buck; we cannot even pass it to ourselves. Two years ago we decided that we would make EMF policy with this case when we decided not to launch a generic investigation into this issue. That is water over the dam and we cannot turn back the clock. Therefore I support the position that a generic investigation into

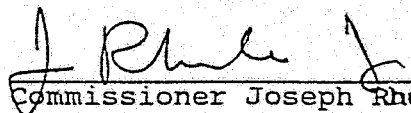
EMF effects and powerline regulations is not timely.

We, however, cannot seek refuge in the other extreme either. The electrons and photons just won't obey us. If the laws of physics dictate the negative finding on the question of EMF hazard for Woodbourne-Heaton, nothing we do today can confine those laws to this thirteen mile stretch of right-of-way. After review of the evidence of record the Judge found that there is no conclusive causal link between powerline EMF and health hazards. If this is true for Woodbourne-Heaton then it is certainly true for the rest of the Commonwealth. And if it is not true for the rest of the Commonwealth then we should not allow PECO to energize Woodbourne-Heaton.

Therefore, as long as the majority of this Commission finds it necessary to sustain the OTS exception on the "Limitations of the Findings and Conclusions" in this case, I must dissent on this result and concur in the remainder of the proposed order.

11-10-93

Date


Commissioner Joseph Rhodes, Jr.

PENNSYLVANIA PUBLIC UTILITY COMMISSION
Harrisburg, Pennsylvania 17105-3265

LETTER OF NOTIFICATION OF
PECO RE: WOODBOURNE-HEATON
230 kV LINE

PUBLIC MEETING-
NOVEMBER 10, 1993
NOV-93-OSA-238*
DOCKET NO. A-110550F055

STATEMENT OF COMMISSIONER JOHN HANGER

In March, 1993, the Commission remanded the August, 1992 Initial Decision of ALJ Smolen for additional hearings. These hearings were limited to recent scientific evidence and comment concerning potentially adverse health effects which might result from exposure to electric and magnetic fields (EMF). Protestants have argued that energization of PECO's Woodbourne-Heaton 230 kV line could generate harmful health consequences. In the March, 1993 Order, the Commission also directed the ALJ to consider whether the Commission should adopt any standards for the width of the right of way in light of the findings concerning the potential health effects of EMF exposure.

The ALJ found that the record does not provide a current scientific basis for a finding that the EMF exposures generated by the power line are unsafe and that it is not possible at this time to set health-based standards for rights of way. PECO, the Office of the Consumer Advocate, the Law Bureau, and PP&L all agreed with the basic result as well, although each had somewhat different recommendations on how the Commission should proceed to develop a policy in the future.

This case is very troubling, because the issues involve the health of people. Protestants argue that there is reason to believe that they, their families, and children would be at increased risk of cancer and other health problems if this line is energized. Their health and safety is of vital concern.

This case is also very troubling, because the state of scientific knowledge and the resources of this agency, which do not include expertise about carcinogens or other public health threats, make it very hard to resolve questions which the scientific community itself is just beginning to ask. Put simply, this Commission does not have environmental or health expertise.

I urge other Departments of the State and Federal Government that do have such expertise to help decide, what, if any, health threats EMF exposure poses. Protestants and the public at large desire a definitive answer as soon as possible to the question of whether EMF exposure is a health threat. The PUC cannot give such a definitive answer one way or the other, and it is frustrating that our decision must focus on a "scientific" truth which

scientists admittedly have not found themselves.

Even though, in my view, this agency is ill-equipped to answer the questions that are at the heart of Protestants case, we must now render a decision. Despite this agency's limitations in this area, we cannot pass the buck.

I concur in the result reached today, because in my judgement the record in this case does not support a conclusion that energization of the line will create unhealthy conditions or that any alternative is preferable. I write a separate concurrence, because it does not fully reflect my reasoning or my remaining concerns.

As the Initial Decision clearly indicates, the result in this case is specifically limited to the facts and circumstances of the Woodbourne-Heaton line and the record in this proceeding. The Woodbourne-Heaton line is a 12.8 mile reconstruction of an existing 138kV line. It is located within an existing 60 foot wide utility right of way that is located within a wider Conrail right of way which ranges from 100 to 995 feet in width and averages 310 feet wide. Twelve out of the 238 poles of the line are located such that the utility right of way coincides with the edge of the Conrail right of way. The power line itself, which is deep within the Conrail right of way for most of its length, is about 30 feet from the nearest property line in its most outlying position. The remainder of the line is located between 40 and 740 feet from the nearest property line. The nearest residence is 125 feet from the center of the right of way.

EMF exposures vary by distance from the EMF source and the use of the line at any point in time. At the edge of the right of way, exposure will be less than 26 mg 90% of the time. At emergency maximum operating conditions, which is not expected to exceed 4 hours annually, EMF levels will be 70 mg at the edge of the right of way. EMF levels will be between 0.5mg and 19 mg at the edge of the Conrail right of way under normal operating conditions.

EMF levels fall rapidly as one moves further away from the EMF source. Consequently, the actual homes of the Protestants will in many cases have little or no exposure to EMF from this line and always significantly less than that experienced at the edge of the right of way.

These exposures must be kept in perspective. New York and Florida, the first two states to adopt specific EMF exposure regulations, require that exposures be below 200 mg and 150 mg respectively at the edge of the right of way. These limits are not based on health standards but on average exposures on comparable lines. The Woodbourne-Heaton line will create EMF levels far below these recommended maximums.

Additionally, the EMF exposures that will be created by the line are similar to many EMF exposures that residents will experience simply as a result of day-to-day living in their homes. For example, at 12 inches, the magnetic field from a television is 0.4 to 20 mg; from a microwave it is 40 to 80 mg; from a hair dryer it is 1 to 70 mg; from an electric range it is 4 to 40 mg. All of these exposures are dramatically higher at closer range and dramatically lower at greater distances. The Protestants, however, accurately point out that microwaves or hairdryers are not used 24 hours per day while the transmission line will operate continuously and cannot be avoided. Protestants' homes, as do all homes that are served by electric lines, do not have continuous EMF sources other than the transmission line.

While I hesitate to discuss cost when the primary concern is about health, cost cannot be ignored, especially when no authoritative health body in the United States has concluded that EMF poses a threat to health. Remedies to achieve lower EMF levels would be extremely expensive and would be paid for by all ratepayers. It would cost \$38.5 million and take two years to place the line underground. Protestants have proposed that PECO purchase all properties along the line, any portion of which would be exposed to magnetic field levels above 1 mg for more than 5% of the time. PECO has estimated that this would require a 500 foot right of way and would cost at least \$160 million.

These costs are enormous and would cause the price of electricity to skyrocket if such remedies were to be extended to all transmission and distribution lines. If appropriate medical and scientific bodies conclude that EMF does endanger health, such costs may have to be incurred and our whole existing way of life will have to be altered. A gain, the prospect of incurring these large costs is another reason why we all need an authoritative answer about EMF's health effects, if any, as soon as possible.

Thus, given that the record of current scientific understanding does not now, in my judgment, support a conclusion that the Woodbourne-Heaton EMF exposures are unsafe, I reluctantly accept the recommendation of the ALJ in this case. While I am deeply concerned about EMF exposure, I cannot now say that the EMF exposures that will result from this line are so fundamentally different than those that we encounter in everyday life that we should either spend large sums to achieve an uncertain result or refuse to energize the line.

The issues raised in this case are not limited to the facts of whether or not EMFs cause health problems. Fear of health problems and their impact on property values are realities that must be addressed as well. Some have suggested that the concerns of Protestants in this case should somehow be taken less seriously because they voluntarily chose to live near an existing power line and railroad right of way. Such suggestions are nonsensical.

Nobody knew a few years ago that EMFs would generate the health questions and controversies that now exist. Nearly all Protestants bought their homes before EMF exposure became the subject of wide public discussion.

Probably, because of the EMF issues, people are less willing to live near power lines and less willing to pay as much money for a similar home in a location without an adjacent power line. If it can be demonstrated that property values in fact decrease because of a line, such losses should be compensated. The regulated community must approach issues of compensation fairly and reasonably. The perception of potential adverse health effects of EMF are appropriate considerations in property appraisals in utility condemnation proceedings. See, In Re Appeal of Geisler, 622 A.2d 408 (Cmwlth Ct. 1993). Several other states have reached similar legal conclusions when this question has been decided by their courts.

Lastly, I note that these issues are far from resolved. The proposed rulemaking will require the participation of many different parties. As scientific evidence changes, it is possible that our siting standards will change dramatically or that wider rights of way will be found to be useless. Public education will continue. The effect on property values will both become more certain and vary over time. Certainly, however, this Commission must focus on this important issue for years to come.

November 10, 1993

DATED

John Hanger

JOHN HANGER, COMMISSIONER

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

November 12, 1993

IN REPLY PLEASE
REFER TO OUR FILE

A-110550F055

PAUL R BONNEY ESQUIRE
PHILADELPHIA ELECTRIC COMPANY
2301 MARKET STREET
PO BOX 8699
PHILADELPHIA PA 19101

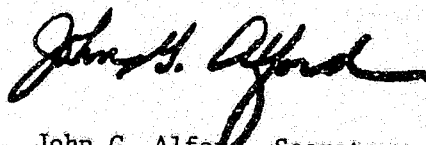
Letter Notification of Philadelphia Electric Company Relative
to Reconductoring and Rebuilding of the Existing 138 kV Line to
operate as the Woodbourne-Heaton 230 kV Line in Montgomery and
Bucks Counties.

To Whom It May Concern:

This is to advise you that an Opinion and Order has been
adopted by the Commission in Public Meeting on November 10, 1993
in the above entitled proceeding.

An Opinion and Order has been enclosed for your records.

Very truly yours,



John G. Alford, Secretary

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PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17105-3265

Public Meeting held November 10, 1993

Commissioners Present:

David W. Rolka, Chairman, Concurring in result
Joseph Rhodes, Jr., Vice-Chairman, Concurring and Dissenting
John M. Quain in part - Statement attached
Lisa Crutchfield
John Hanger, Concurring in result - Statement attached

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

Docket No.
A-110550F055

OPINION AND ORDER

BY THE COMMISSION:

Before us for consideration is the July 23, 1993 Initial Decision of Administrative Law Judge ("ALJ") Herbert Smolen. This matter was before ALJ Smolen on remand pursuant to our Order of March 26, 1993, wherein we directed as follows:

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.

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

Pursuant to our direction for a limited remand of this matter, a telephonic prehearing conference was held on March 31, 1993. By Order dated April 9, 1993, the presiding ALJ established a procedural schedule. Pursuant thereto, additional direct testimony was submitted on May 12, 1993 by the Philadelphia Electric Company ("PECO" or alternately "Applicant") and the Office of Consumer Advocate ("OCA").

Protestants¹, Pennsylvania Power & Light Company ("PP&L") and the Prosecutory Staff of the Commission's Law Bureau submitted written position statements pursuant to the ALJ's Order of May 6, 1993. The Commission's Office of Trial Staff ("OTS") submitted a letter explaining, inter alia, that it could not prepare and serve testimony within the procedural schedule established. See Order denying reconsideration, (Order entered June 10, 1993).

Hearings for the introduction of written direct and rebuttal testimony and cross-examination thereon were held in Philadelphia on May 27, 28, and June 1, 1993. All parties were present there and the OTS indicated that it would monitor the proceedings. The record, on remand, consists of 234 pages of transcript and various exhibits. Briefs and Reply Briefs were filed by PECO, the Commission's Law Bureau, OCA and PP&L. Protestants filed Proposed Findings of Fact and Conclusions of Law. The OTS, upon indication to the ALJ that it reserved such right, did not file a brief, but did file a reply brief.

¹ Protestants are certain property owners within proximity to the route of the proposed Woodbourne-Heaton 230kV line.

On conclusion of the parties' cases on remand, the ALJ made 53 findings of fact. Unless noted otherwise, we shall adopt said findings and incorporate them by reference.

Background of the Proceedings

An extensive background of the proceedings has been set forth in our March 26, 1993 Opinion and Order. Pursuant to the Memorandum Opinion and Order of the Commonwealth Court dated May 24, 1991, No. 761 C.D. 1991, per the Honorable Madaline Palladino, this Commission, after approval of the Letter Notification of PECO to reconstruct a 138 kV transmission line, previously owned by Conrail, as the Woodbourne-Heaton 230 kV Line, was directed to conduct hearings on the question of whether they [Protestants] will be adversely affected by the reconductoring of the line at issue. Protestants are property owners in proximity to the proposed Woodbourne-Heaton 230 kV Line.²

We have previously considered the findings of ALJ Smolen in his Initial Decision issued August 19, 1992, wherein it was determined, inter alia, that: (1) the proposed Woodbourne-Heaton Line is located within an existing utility corridor and will use a "compact delta" configuration which produces lower readings of electric and magnetic fields as compared to other possible engineering design alternatives. See Findings of Fact Nos. 32; 56, 57. March 26, 1993 Order³; (2) that the record in this proceeding does not establish an adverse human health effect resulting from exposure to EMF. See Findings of Fact Nos. 36-43, Id.; and (3) determination of matters involving the diminution of property values of adjacent property owners, although such alleged diminution of value is based on a rational perception of fear and

² The Woodbourne-Heaton 230 kV Line is 12.8 miles in length and has several existing or recent public utility uses, including, inter alia, an active Conrail single track freight rail system.

³ The use of the compact delta configuration was not based on any pre-construction calculation of the electric and magnetic fields by PECO, but appears to be more the result of coincidence. See Finding of Fact No. 45, March 26, 1993 Order.

apprehension of the potential adverse health effects of exposure to EMF, was not within the jurisdiction of the Commission. See March 26, 1993 Order, Slip Op. pp. 16-17.

In our March 26, 1993 Order, we were motivated by a compelling sense of fairness to fully consider all recent data from the scientific community which would, in our view, tip a so far balanced scale in either direction concerning the potential for adverse health effects from exposure to Electro-Magnetic Fields (EMF). Further, if one were to assume such an adverse correlation could be established, we were concerned as to whether there could be any guidance furnished to this Commission as to the preservation of the safety of the public and mitigation of potential adverse health effects concerning EMFs.⁴

Discussion

Upon the conclusion of the cases on remand, the ALJ reached the following Conclusions of Law:

1. The Commission has jurisdiction over the parties and subject matter of this proceeding.
2. The record evidence presented of record in this remanded proceeding, when viewed in totality, does not support a finding or conclusion that there is a causal connection between exposure to EMFs and adverse human health effects because of the continued inconclusiveness of the scientific research and studies.

⁴ We were particularly concerned with a study performed in Sweden, the Feychting and Ahlbom 1992 residential study, whose results were released on or about the time of our consideration of ALJ Smolen's August 19, 1992 decision. In the I.D. on remand, ALJ Smolen has made the following finding of fact:

34. Based on the evidence presented of record in this proceeding, the Swedish residential study does not appear to support a conclusive finding that EMF is a cause of childhood cancer (PECO Direct on Remand No. 4, p. 7).

3. Establishment of specific numerical edge of right-of-way standards as to the Woodbourne-Heaton transmission line is not supported by the evidence of record in this proceeding.

4. The Commission does not have jurisdiction to award attorney's fees and costs. Pa. P.U.C. v. Duquesne Light Co., 61 Pa. P.U.C. 485 (1986); Pa. P.U.C. v. National Fuel Gas Distribution Corp., 63 Pa. P.U.C. 68, 71 (1987).

5. The Commission has no jurisdiction to award condemnation damages. Commission's March 8, 1991 Order, p. 10, n.9 and p. 13, n. 11.

Based on the foregoing, ALJ Smolen Ordered as follows:

1. That by reason of the fact that the additional scientific research and studies presented of record at the hearing in the remanded proceeding do not support a finding or conclusion that there is a conclusive causal connection between exposure to EMFs and adverse human health effects because of the inconclusive nature of said research and studies, when viewed in totality, the Commission's February 9, 1990 Order approving the Letter of Notification filed by the Philadelphia Electric Company for the Woodbourne-Heaton Line is hereby, affirmed; provided however that should a conclusive causal connection between exposure to EMFs and adverse human health effects be scientifically established in the future, the Commission may require the Philadelphia Electric Company to make such changes, modifications and/or alterations to the Woodbourne-Heaton Line and/or its operation as the Commission may deem just and reasonable in the public interest; and further provided that the Woodbourne-Heaton Line must be operated and maintained in compliance with the National Electrical Safety Code and with all applicable statutes, regulations and codes for the protection of the public and the natural resources of the Commonwealth of Pennsylvania.

(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.

What has become clear from the record developed on remand, is that there is no conclusive evidence that EMF presents a known hazard to human health. The Law Bureau accepts the position that "[a] a review of the record reveals that the evidence, although getting stronger on the side of there being no adverse human health effects from EMF, still remains inconclusive." See I.D. at 66, referencing Law Bureau Main Brief, p. 43.

Likewise, the OCA states, "[s]tudies available since the close of the initial record do not resolve the uncertainty

concerning a connection between exposure to EMF and effects upon human health." Id., referencing OCA Main Brief, p. 10).

PECO's position, summarized by the ALJ is that:

..."[r]ecent scientific developments have provided additional evidence that EMF does not cause adverse human health effects. The recently released Swedish residential study does not support a conclusion that EMF is a cause of cancer." Finally, PECO asserts that "[f]rom the scientific studies taken as a whole, it can be fairly stated that, after extensive scientific investigation, it has not been demonstrated that EMF causes adverse human health effects" (PECO Main Brief, p. 19).

The ALJ, on consideration of the evidence, also was persuaded that the scientific studies, testimony and evidence presented of record in the proceeding were inconclusive on the issue of whether exposure to EMFs causes adverse health effects. See I.D., pp. 67-68.

With regard to whether this Commission should adopt any right-of-way EMF standard for the Woodbourne-Heaton 230kv Line, the ALJ noted that the Law Bureau, the OCA, PECO and PP&L, were in accord that a health based right-of-way standard was not merited by reference to the record in this proceeding. Therefore, a numerical edge of right-of-way standard was not recommended.

Therefore, upon consideration of the testimony and evidence presented at the hearing in this remanded proceeding and the arguments of the parties, the Administrative Law Judge concludes that the testimony and evidence presented of record in this case are not sufficient to support a finding or conclusion that a right-of-way width health-based standard should be developed or adopted for the Woodbourne-Heaton 230 kV line at this time.

(I.D., p. 79).

Notwithstanding the conclusion that the record does not support a causal relationship between exposure to EMF and adverse human health, the ALJ entertained the proposals of the parties concerning the future course of action which this Commission should undertake as a matter of policy.

The Commission's Law Bureau recommended that the Commission continue to monitor literature and new studies involving EMF by appointing a committee or contracting with an outside consultant/source to produce yearly updates on EMF research for release to the public. It was suggested that the electric utility industry may be willing to finance such activity. Law Bureau, however, favored the "prudent avoidance" concept, to be applied on a case by case basis. It did not support the establishment of an EMF standard for electric transmission lines, but did see the value in comparing EMF from a specific line with those from typical lines in the same voltage class so that individual efforts at exercising prudent avoidance can be evaluated in the context of a typical line.

Significantly, the Law Bureau proposed that the Commission establish a data registry of expected and actual electric and magnetic fields for all future lines, and the Commission could require utilities to include in future transmission line filings a statement of the expected EMF level from a line and each alternative of the line considered, under normal operational loading. The Law Bureau also suggested that within thirty days of a line's actual service date, the utility could be required to report the actual reading at standard distances of 0, 50, 150, and 250 feet from the right-of-way centerline. Finally, it is suggested that the Commission's Bureau of Conservation Economics and Energy Planning be given the responsibility for maintaining this data registry. It is emphasized that such a data registry would enable the Commission to evaluate compliance with prudent avoidance and to promulgate right-of-way

standards should a scientific causal relationship be established. I.D., pp. 83-84.

The OCA did not advocate that the Commission set a numerical edge of right-of-way standard in this proceeding. The OCA suggested that we open another docket to fully and thoroughly address the standards issue. Through its witness, Dr. Janes, the OCA preferred a similarity based and prudence concept which would, essentially, make one's exposure to transmission line fields as similar as possible to the exposures we receive from all the other fields in our day-to-day lives. The benefits of the approach suggested by the OCA witness, is acceptability; i.e. by making transmission line field exposure similar to exposure from other sources, we bring it in line with a socially acceptable risk; and equity, i.e., we do not ask residents along the transmission line to bear field risks different from those borne by all members of modern society.

To incorporate concepts of prudence into the regulatory process, the OCA advocates the following:

(1) Research into the effects of electric and magnetic fields should be continued and the government and the industry should be aggressive in periodically informing the public as to the latest information.

(2) Involve the public in the decision making process before critical decisions are made.

(3) Companies considering power line projects should consider the cost and effects of mitigative measures before any construction is decided upon. Such measures should include avoiding heavily populated areas, avoiding parks, schools and other public facilities, widening right-of-ways, using higher ground clearances, designing power lines to reduce fields.

Concerning the possible adoption of a numerical standard for electric and magnetic fields, the OCA witness observed that any

such standard (1) should be interim because of the unsettled state of research, (2) should be line-specific only; and (3) would not be based on avoidance of health effects. I.D., pp. 79-83.

The Protestants herein proposed that PECO should purchase all properties any portion of which would be within levels above one milligauss more than 5% of the time. See I.D. referencing Protestants May 14, 1993 position statement.

PECO strenuously objected to the Protestant's request arguing: (1) it is based on the assumption that adverse human health effects from exposure to EMF has been demonstrated; (2) the proposal would cost over \$160 million; (3) the proposal is not consistent with the concept of prudent avoidance, advocated by PECO herein. Prudent avoidance stresses small or modest costs to ameliorate exposure to EMF; and (4) PECO would not be able to exercise eminent domain due to the statutory restrictions on condemnation of residences and land within a 100 meter curtilage. Id.

Protestants also proposed that the Commission allow hearings on the need for the line as well as alternative locations. This is a position opposed by the Law Bureau which points out that evidence of need for the line was submitted by PECO and considered by this Commission in our February 3, 1990 Order.

Additionally, Protestants assert that the case should be reopened under Judge Palladino's 1991 Memorandum Opinion and Order. Again, this is a position opposed by the Law Bureau as unsupported through reference to Judge Palladino's Order.

Finally, the Protestants argue that the Commission should direct that PECO compensate them in the amount of \$100,000 for the development and prosecution of their case to date, and to be drawn upon for future participation, including legal and counsel fees.

The Law Bureau, appropriately citing Feingold v. Bell Telephone Company of Pennsylvania, 477 Pa. 1, 383 A.2d 791 (1977); Elkin v. Bell Telephone Company of Pennsylvania, 49 Pa. 123, 420 A.2d 371 (1980); the Judicial Code, 42 Pa. C.S. §2503; Duquesne Light Company v. Pennsylvania Public Utility Commission, 117 Pa. Commonwealth Ct. 28, 543 A.2d 196 (1988), appeal granted, 521 Pa. 632, 558 A.2d 533 (1989); and Pleasant Valley School District v. Department of Community Affairs, 127 Pa. Commonwealth Ct. 85, 560 A.2d 935 (1980), points out that this Commission is without authority to award damages, and to impose counsel fees and fees in the nature of costs, on participants before it.

PP&L, intervenor, supports authorization to energize the instant Woodbourne-Heaton line. PP&L, as it did in the previous proceedings, offers several salient policy alternatives that this Commission could pursue upon conclusion of this matter. They are: (1) institute either a policy statement proceeding or rulemaking proceeding to mandate that all electric utilities in the Commonwealth adopt a comprehensive EMF policy including such features as (i) support for EMF research, (ii) dissemination of EMF information; (iii) provision of EMF measurements; (iv) establishment of a magnetic field management plan; and (v) involvement of the public in the transmission line siting process. I.D. referencing PP&L's position, pp. 87-88.

In conclusion, PP&L's position is consistent with the principle of prudent avoidance, and it would advocate that no pending or filed projects be delayed before the final promulgation of such a policy statement, rulemaking or regulation. I.D., p. 89.

The Exceptions

By submittal dated September 6, 1993, the Commission received the Exceptions of Dorothy A. English to the I.D. In her Exceptions, Dorothy A. English raises three contentions, which are to a great degree, echoed by other individual protestants. First,

Ms. English asserts that this Commission did not hear all of the testimony. The basis of this claim is the assertion that Ms. English identified qualified epidemiologists who might serve as witnesses on the consumers' behalf in this matter and discovered that most eminent epidemiologists were conducting research funded by the Electric Power Research Institute (EPRI). It is asserted that no matter what these scientists might believe privately and individually, they [the qualified epidemiologists] felt strongly that testifying for consumers would jeopardize current or future funding. In particular, Ms. English states that there was only one epidemiologist, Dr. Milham, who would testify on their behalf. When speaking with Dr. Milham in May of this year, Ms. English relates that he informed her that he was already under oral contract to the Commission's Office of Trial Staff to represent consumers. They were not advised until the first day of hearing, May 27, 1993, that Dr. Milham was unable to appear as a witness sponsored by the OTS because of the OTS' difficulty in processing contracts.⁵ Dr. Milham was then unable to appear on such short notice as an agent for Ms. English and the consumer interest she represents.

In consideration of the first exception of Ms. English, we are constrained to note that the same reasoning which applied to the OTS in our disposition of its request for reconsideration is applicable to her.⁶ We do not discern that the experts presented herein have, in any way, overlooked any available literature, studies or works, generally available to the scientific community, for inclusion in the record here.⁷ We, therefore, come to the conclusion that Ms. English, while not able to have this particular

⁵ See Order entered June 10, 1993 in this matter.

⁶ Ms. English, as a Protestant, joined the OTS request for reconsideration.

⁷ Ms. English states that Dr. Milham is adamant in his views on the effects of EMFs and advised her that he would testify that EMF emissions above one milligauss are harmful.

witnesses' view presented, has not established that the record is incomplete concerning the potential adverse health effects of EMF.

Second, Ms. English asserts that it is grossly unfair for any entity, the Commission or a utility, to impose financial loss on citizens through the imposition of a new high voltage line that has a measurable impact on property value.⁸ On consideration of this Exception, we acknowledge that the perception of potential adverse health effects resulting from exposure to EMF is an apprehension that may be considered in the valuation of property. See In re Appeal of Giesler, ___ Pa. Commonwealth Ct. ___, 622 A.2d 408 (1993) citing United States v. Easement and Right-of-Way, 249 F. Supp. 747, 750 (W.D. Kentucky, 1965).

However, we agree with the conclusions of ALJ Smolen, that jurisdictional authority to award Protestants compensation in the nature of attorney's fees and/or costs does not lie in this matter.⁹

Also, by strong implication, Protestants appear to raise the question of whether a "taking" is in fact occurring as a result of the diminished property value occasioned by energization of the Woodbourne-Heaton Line. See, generally, Espy v. Butler Area Sewer Authority, 63 Pa. Commonwealth Ct. 95, 437 A.2d 1269 (1981); Harborcreek Twp. v. Ring, 48 Pa. Commonwealth Ct. 542, 410 A.2d 917 (1980); and Beckman v. Redevelopment Authority of the City of McKeesport, 30 Pa. Commonwealth Ct. 576, 74 A.2d 985 (1977) discussing the requisites for establishing a de facto taking. The

⁸ Ms. English goes on to detail the effects that she undertook to sell her home. She eventually sold her home at a significant reduced price from a 1990 appraisal.

⁹ We, parenthetically, note our observation that the discussion of the question of money damages stated at page 16, note 4 of the Law Bureau's Replies to Exceptions is highly speculative and without legal support.

success of this position may well depend upon Protestant's satisfaction of the alleged harm resulting from the perception of adverse health effects of EMF.

More important to the question of the alleged diminution of property values, is that there is no cognizable basis for us to conclude that a taking has occurred, or that an eminent domain question is raised within our limited purview of such procedures.¹⁰

Third, Ms. English presents her concern that although evidence is not yet conclusive to connect EMF and cancer, the evidence does, in her view, establish a relationship between exposure to EMF and some biological processes involving cell division. In conclusion, she urges this Commission to extend hearings and allow "consumer side evidence" in the decision.

On consideration of the position of Ms. English, we are of the view that we have exhausted the representative scientific views concerning the possible adverse health effects of EMFs to the fullest extent of our administrative resources in the instant proceeding. Due to the current state of scientific information, we must refer to our comments in the March 26, 1993 Order where we observed that we "cannot go on forever in hope that the next piece of evidence or study will resolve the EMF question once and for all".

¹⁰ A public utility may condemn property using either the Eminent Domain Code, 1964 Sp. Sess., P.L. 84, as amended, 26 P.S. §§1-101 - 1-903, or the alternate provisions of the Business Corporation Law, 15 Pa. C.S. §1511(g)(2). See In Re Carnegie Gas Company, ___ Pa. Commonwealth Ct. ___, 629 A.2d 256 (1993). Also see Application of Wellsboro Electric Company, Docket No. A-11200 (Order entered February 23, 1993), wherein we discussed, generally, the standards considered and procedure followed in a application for a certificate of public convenience to exercise the power of eminent domain. Slip Op., pp. 99-14.

On July 30, 1993, we received the Exceptions of William J. and Barbara Harley. The Harleys also request the Commission to extend the hearings until "all the evidence" can be heard. Again, they reference the OTS' position and the attempt to secure Dr. Milham as an expert witness. This is a position previously considered in connection with the OTS request for reconsideration. They also attached a recent Bucks County Courier Times article¹¹, and suggested possible lawsuits. For reasons addressed in connection with our disposition of the Exceptions of Ms. English, we shall deny, in pertinent part, these Exceptions.

Protestant Edward F. Koerper, Jr. has lodged Exceptions primarily addressed to the fact that, in his view, PECO represented the line as being a "back-up" line at the outset. He states that this line has been used as a back-up line at varying times in 1992 and 1993, and can, apparently, be energized relatively quickly. Based on the foregoing, he argues that because the need for the line was not allowed to be challenged, that we direct that the line be used as a back-up line. This, in his opinion, would be the best possible scenario.

Mr. Koerper presents a request which has superficial appeal as a basis of compromise in this matter. However, we view the prospect of directing that this line be used as a back-up line inconsistent with the record. Therefore, we shall, on consideration, deny it.

Kenneth F. Glathorn and Barbara J. Glathorn filed Exceptions also raising the objection that they were treated unfairly by not having Dr. Milham testify in the proceedings on remand. Consequently, they argue for a reopening and/or extension

¹¹ One article would analogize the situation presented herein with that pertaining to Agent Orange related issues of the Vietnam War era.

of hearings in this matter. For the reasons delineated, above, we shall deny these Exceptions.

John F. and Carol A. Dempsey also filed Exceptions raising the matter of the abortive attempt to present Dr. Milham as a witness in this matter. Additionally, the Dempseys except to the apparent lack of independence on the part of the Commission's Law Bureau, a participant in the proceedings. The Commission's Law Bureau, in a reply to the exceptions of Small, et al., and Middletown Township, there address the allegation that due process implications were involved as a result of the positions advocated by the Law Bureau in this proceeding. The Law Bureau defends its representation of the public interest in this proceeding by correctly noting that pursuant to Section 308(b) and 334(c) of the Public Utility Code, 66 Pa. C.S. §§308(b) and 334(c), the Prosecutory Staff is independent of the Commission and is treated as any other participant herein. Therefore, we shall deny this exception.

Additional Hearings Regarding Need

The OCA filed exceptions, most notably advocating that Protestants should have been afforded appropriate notice and an opportunity to be heard on all issues relevant to a determination as to the siting, construction, operation and maintenance of this transmission line. (OCA R.E., p. 2). The OCA alleges that no evidentiary record has been established on the threshold issue of the need for the transmission line, as the issue was excluded from consideration in the instant proceeding. The OCA requests that the Commission amend its Letter of Notification regulations and publish them in the Pennsylvania Bulletin for comment. Also, it would support a Commission effort to establish guidelines and approaches to the concerns raised by the uncertainty surrounding EMF.

Importantly, the OCA stresses the fact that the affirmation of our February 9, 1990 Order remains subject to

challenge since it was entered without prior notice to adjacent landowners. It goes on to note that the February 9, 1990 Order was based upon the assertions of the Company contained within a single fifteen-page filing. The OCA relies on the language of the Commonwealth Court Order of May 24, 1991, to suggest that due process rights were involved. Questions such as the potential balancing of issues involving the need for the line, possible alternative routes, potential health effects of EMFs, and land use concerns of the property owners resulting from EMF, and possible mitigative measures in the nature of the siting regulations were not meaningfully considered. (OCA Exc., pp. 4-5).

In reply to this exception, PECO notes that we have not, to date, acceded to the request for Protestants to be given hearings on the question of need. See PECO R.E., p. 9. Also, PECO cites cases wherein this Commission has approved applications for transmission lines based on information contained in the Letter of Notification. PECO would also find that the Commission implicitly conducted the requested balancing between adverse health effects and need in our March 26, 1993 Order. Id.

The Law Bureau, in a variation of PECO's approach, alleges that the lack of notice to adjacent property owners in PECO's original filing has been "cured" by the Commission's implementation of the remedy prescribed in the Commonwealth Court's order to remand. Because Protestants do not own property in the line's right-of-way, the only manner in which these Protestants have been adversely affected is through their alleged reasonable fear of EMF. On this basis, the Law Bureau opposes the position of the OCA concerning the necessity of having additional hearings concerning need.

On consideration of the Exceptions of the OCA, we would note that the matter of notice and opportunity to litigate the question of need poses the most troubling consideration for this

Commission. The issue evolves into the question of whether due process rights were, in the facts before us, implicated by our authorization for PECO to use of the Letter Notification procedures.¹²

Generally, procedural due process does not require notice and a hearing in every conceivable situation involving administrative action. Procedural safeguards are required where the administrative action is adjudicatory and involves substantial property rights. See Barasch v. Public Utility Commission, 119 Pa. Commonwealth Ct. 81, 546 A.2d 1296 (1988). In the present case, we are aware that PECO proceeded according to the Letter of Notification procedures of 52 Pa. Code §57.72(d). Previously, Protestants argued, inter alia, that they had a property interest in the property to be occupied by the Woodbourne-Heaton Line in the nature of a "fee simple title to a vertical portion of the right-of-way proposed to be used... and the air space intended to be occupied by the proposed facility for the dispersion of electromagnetic waves, and ownership of air space adjacent to the proposed transmission lines, ...which was used for the growth of tall trees in their air space outside the vertical dimensions of the proposed right-of-way". See Order adopted March 6, 1991.

The troublesome question presented here, is whether or not the Protestants have shown that they possess a substantial property interest sufficient to invoke due process considerations, irrespective of our notice provisions. Whether the nature of the property interest asserted by the Protestants is substantial has been inextricably bound to the question of the adverse human health

¹² Our concern is heightened by the fact that learned Judge Palladino expressed disfavor with the notice provisions of 52 Pa. Code §57.72(d) which provides for notice to persons owning property within the right of way. Judge Palladino accepted the notion that Protestants, as neighboring property owners, would be affected by the new use of the right-of-way, but reserved judgment as to whether the affect would be adverse.

effects of EMF. Because we cannot conclude, on the record before us, that Protestants' concerns regarding EMF are such that they have shown an adverse effect from the energization of the Woodbourne-Heaton line, we conclude that the notice provisions used here were not legally infirm.

Our conclusion here is further guided by the language of our regulation at 52 Pa. Code §57.72(d)(1)(i) which states:

(1) A letter of notification may be filed with the Commission in lieu of the application process set forth in §§57.71-57.76 for the following:

(i) An HV line which is proposed to be located entirely on an existing transmission line right-of-way, so long as the size, character design or configuration of the proposed HV line does not substantially alter the right-of-way.

* * *

(v) An HV line which is to be reconductored or reconstructed so long as the size, character, design or configuration of the proposed line does not substantially alter the right-of-way.

Early on in the litigation of this matter, opponents of PECO's application stressed that the Letter Notification procedure was improperly used herein, as the disparity between the previous 138 kV use of the line and the immediate 230 kV usage resulted in a substantial alteration of the right-of-way.

On consideration of the record here, we first note that our regulations providing for the Letter Notification procedures expressly contemplate lines where the voltage is proposed to be increased above present levels. 52 Pa. Code §57(d)(1)(iv). Therefore, the increased voltage, in and of itself, does not substantially alter the right-of-way here involved.

One of the most significant factors in our approval of the Letter Notification procedure here is the fact that the right-of-way lies exclusively within an existing corridor used by Conrail. We would agree with the statement made in PECO's application that, as a general rule, existing railroad corridors offer a natural highway for transmission lines, and are the least intrusive method to insure the distribution of electricity in highly urbanized service territories such as that served by PECO. Were it not for this fact, our determination could very well be different concerning the use of the Letter Notification procedures.

Further, the size, character, design and configuration of the Woodbourne-Heaton Line, in our view, comport with the Letter Notification objectives.¹³

In conclusion, we shall deny the Exception of the OCA and Protestants concerning the question of additional proceedings on the question of need.

Limitation of the Findings and Conclusions

In its Exceptions, the OTS urges us to limit the findings and conclusions regarding EMF to the evidence adduced in this proceeding. See OTS Exc., pp. 5-10. The OTS raises a substantial concern that this proceeding not be the definitive pronouncement of this Commission as to the potential adverse human health effects of EMF. It notes other, ongoing litigation involving transmission line siting matters wherein EMF is an important concern. See Docket No. A-110300F051, et al. and Docket No. G-900240, et al. (Order entered March 16, 1992).

¹³ The Letter Notification procedures require that notice be provided to those who would otherwise have received notice under 52 Pa. Code §57.74.

On consideration of the OTS's exception, and in light of our limitation of intervention sought by other representatives of the electric utility industry, i.e. Duquesne Light Company, we shall grant the OTS exception. We, unequivocally, state that the determinations concerning EMF are limited to the facts of this proceeding, and we do not consider this proceeding to be the vehicle for any definitive ruling on the potential adverse health impact of EMF.

Policy Concerns Regarding EMF

The OTS also expresses its support for amendments which would address the EMF concern through providing advance notice and opportunity for neighboring landowners.

The OTS shares the view held by the OCA, that existing regulations are not adequate to address emerging concerns regarding EMF. Therefore, it would support the initiation of a proposed rulemaking to consider amendments to the Commission's siting regulations. See OTS R.E., p. 11.

PECO, in its replies, counsels against the requests for a separately docketed proceeding. PECO views this request as clearly outside the scope of the remand. It emphasizes that the Commission should decide transmission line siting cases on a case by case basis until such time as a generic policy is in place. PECO R.E., pp. 10-12.

PP&L, in its replies, notes that, notwithstanding its view that PECO should be permitted to energize the Woodbourne-Heaton Line, the Commission should take immediate, concrete steps to address the public concern about possible adverse health effects from EMF.

In connection therewith, PP&L details several recommendations as to certain suggested elements of a comprehensive

EMF policy. PP&L suggests several considerations as a reasonable starting point for our consideration, notwithstanding they are imbued with a bias toward the "prudent avoidance" approach. See March 26, 1993 Order.

On consideration of the positions of the parties here, we shall defer implementation of the various policy proposals suggested by the parties. Specifically, we feel it inappropriate, at this time, to convene a separate docket for the development of a comprehensive policy regarding EMF and transmission siting.

By letter dated August 12, 1993, we received the Exceptions of Small, et al., and Middletown Township in this matter.

We first note, as the Commission's Law Bureau has observed, that the Exceptions are not in compliance with our regulations at 52 Pa. Code §5.533(b). The exceptions, in addition to their deficiency under our regulations, are utterly without substantive merit and add little to the development of the issues before us.¹⁴

The only statement of marginal consequence concerns the following at pages 3-4:

4. The ALJ erred in ignoring the witnesses' ignorance of the role of magnetites, which have been demonstrated to be present in the human body, and to have a role in the mechanism by which electromagnetic fields affect the body, although the witnesses were confronted with recent studies showing these effects.

¹⁴ The Exceptions contain no reference to the I.D. wherein the propositions complained of are discussed and contain no citations in support of any of its broad, sweeping averments.

In reply, the Law Bureau notes that there is no sworn testimony in the record to support any statement concerning the certainty of magnetite as a mechanism for alleged adverse health effects of EMF. Law Bureau R.E., p. 12.

The Exceptions of Small, et al. are denied.

The Borough of Langhorne, through its solicitor, Catherine Porter, Esquire, filed exceptions¹⁵ which, inter alia, allege that residents were prevented from presenting testimony on the dates scheduled for hearings. This allegation is lodged as a result of the alleged "failure to hold all publicized hearings". On review of the record, we have no indication that the Borough of Langhorne was prejudiced by the fact that hearings were concluded after the June 1, 1993 hearing date.¹⁶

The other exception argues against the ALJ's findings as to the lack of an adverse health effect concerning EMF. We shall deny this exception consistent with our discussion, above.

Conclusion

In our Order of March 26, 1993, we noted that this matter presented the following questions for our consideration, which we now answer in the order presented:

(1) Whether Petitioners have been adversely affected by reason of the potential for exposure to electric and magnetic field (EMF) as a result of the reconductoring of the Woodbourne-Heaton line? We answer this question in the negative.

¹⁵ We consider said exceptions although they were late-filed.

¹⁶ The considerations here are similar to those discussed at page 22 of the Law Bureau's replies to exceptions concerning the identical complaint of the Township of Lower Southampton. We concur in the result that no party was prejudiced by the failure to hold hearings on June 2, 3, 4 and 7.

(2) Whether Petitioners will be adversely affected by adverse land-use impacts? We answer this question consistent with our acknowledgement that the perception of potential adverse health effects of EMF is an apprehension that may be considered in the valuation of property. In re Appeal of Giesler, __ Pa. Commonwealth Ct. __, 622 A.2d 408 (1993) citing United States v. Easement and Right-of-Way, 249 F. Supp. 747, 750 (W.D. Kentucky, 1965).

(3) Whether the letter-notification procedure was properly used in this case? We answer this question in the affirmative.

(4) Whether the Commission regulations are constitutionally or legally infirm? We answer this question in the negative; **THEREFORE,**

IT IS ORDERED:

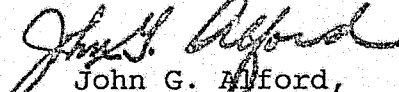
1. That the Initial Decision of Administrative Law Judge Herbert Smolen issued July 23, 1993, be, and is, hereby, adopted consistent with this Opinion and Order.

2. That the Exceptions to the Initial Decision are granted and denied consistent with the foregoing Opinion and Order.

3. That by reason of the fact that the additional scientific research and studies presented of record at the hearing in the remanded proceedings do not support a finding or conclusion that there is a conclusive causal connection between exposure to EMFs and adverse human health effects because of the inconclusive nature of said research and studies, when viewed in totality, the Commission's February 9, 1990 Order approving the Letter of Notification filed by the Philadelphia Electric Company for the Woodbourne-Heaton Line be and is, hereby, affirmed; And provided that the Woodbourne-Heaton Line must be operated and maintained in compliance with the National Electrical Safety Code and with all applicable statutes, regulations and codes for the protection of the public and the natural resources of the Commonwealth of Pennsylvania.

4. That this proceeding is, hereby, marked closed.

BY THE COMMISSION


John G. Alford,
Secretary

(SEAL)

ORDER ADOPTED: November 10, 1993

ORDER ENTERED: NOV 12 1993