

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

IN RE: APPLICATION OF TRANS-ALLEGHENY	:	
INTERSTATE LINE COMPANY FOR	:	
(I) A CERTIFICATE OF PUBLIC CONVENIENCE	:	
TO OFFER, RENDER, FURNISH AND/OR	:	
SUPPLY TRANSMISSION SERVICE IN THE	:	
COMMONWEALTH OF PENNSYLVANIA;	:	
(II) AUTHORIZATION AND CERTIFICATION	:	
TO LOCATE, CONSTRUCT, OPERATE AND	:	Dockets No. A-110172
MAINTAIN CERTAIN HIGH VOLTAGE ELECTRIC	:	A-110172F0002
TRANSMISSION LINES AND RELATED ELECTRIC	:	A-110172F0003
SUBSTATION FACILITIES; (III) AUTHORITY	:	A-110172F0004
TO EXERCISE THE POWER OF EMINENT	:	G-000721229
DOMAIN FOR THE CONSTRUCTION AND	:	
INSTALLATION OF AERIAL ELECTRIC	:	
TRANSMISSION FACILITIES ALONG THE	:	
PROPOSED TRANSMISSION LINE ROUTES	:	
IN PENNSYLVANIA; (IV) APPROVAL OF AN	:	
EXEMPTION FROM MUNICIPAL ZONING	:	
REGULATION WITH RESPECT TO THE	:	
CONSTRUCTION OF BUILDINGS; AND	:	
(V) APPROVAL OF CERTAIN RELATED	:	
AFFILIATED INTEREST ARRANGEMENTS	:	

**REJOINDER TESTIMONY OF
WILLIAM H. BAILEY, Ph.D.**

Re: Electro And Magnetic Fields and Related Public Health Effects

March 19, 2008

REJOINDER TESTIMONY OF WILLIAM H. BAILEY, Ph.D.

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

2 A. My name is William H. Bailey. My business address is Exponent, 420 Lexington
3 Avenue, Suite 1740, New York, New York 10170.

4

5 Q. WHAT IS YOUR POSITION AT EXPONENT, INC.?

6 A. I am a Principal Scientist in the Health Sciences practice and Director of
7 Exponent, Inc.'s New York office.

8

9 Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONIES IN THIS
10 PROCEEDING ON BEHALF OF THE TRANS-ALLEGHENY INTERSTATE
11 LINE COMPANY ("TRAILCO")?

12 A. Yes. My direct testimony was previously submitted in this proceeding as
13 TrAILCo Statement No. 8, and my rebuttal testimony was previously submitted
14 as TrAILCo Statement No. 8-R.

15

16 Q. WILL THE USE OF VARIOUS TERMS IN YOUR REJOINDER TESTIMONY
17 BE CONSISTENT WITH THE DEFINITIONS ASSIGNED TO THOSE TERMS
18 IN THE TABLE OF NOMENCLATURE ATTACHED TO TrAILCo WITNESS
19 FLITMAN'S DIRECT TESTIMONY AS TRAILCO EXHIBIT DEF-1?

1 A. Yes. In addition, I may define new terms in my rejoinder testimony.

2

3 Q. PLEASE DESCRIBE THE PURPOSE OF YOUR REJOINDER TESTIMONY.

4 A. The purpose of my rejoinder testimony is to respond to the surrebuttal testimony
5 of the Energy Conservation Council of Pennsylvania (“ECC”) witness Dr. Robert

6 Q. Hanham.

7

8 REJOINDER TO ECC WITNESS DR. ROBERT Q. HANHAM

9 Q. DO THE THREE STUDIES CITED BY ECC WITNESS HANHAM ON PAGES
10 7-8 OF HIS SURREBUTTAL TESTIMONY CONTRADICT OR OTHERWISE
11 REBUT THE EVALUATIONS AND SUMMARIES PRESENTED IN THE
12 HEALTH RISK ASSESSMENTS OF MAGNETIC FIELDS THAT YOU HAVE
13 PRESENTED IN YOUR DIRECT AND REBUTTAL TESTIMONIES?

14 A. No. The three studies cited on pp. 7-8 of Dr. Hanham’s surrebuttal testimony as
15 “examples of studies that discuss the heightened risk of childhood leukemia posed
16 by exposure to EMFs” are among the numerous epidemiology studies of
17 childhood leukemia and magnetic fields in the literature. “Cherry picking”
18 studies from the literature to support a particular conclusion is not a valid
19 scientific method and does not rebut comprehensive evaluations of the research
20 literature that considered the weight of the evidence from *all* of the epidemiology
21 studies, as well as *in vivo* and *in vitro* experimental studies, as I have previously
22 described in my testimony. Because of the high visibility of the Draper, *et al.*
23 study, I specifically addressed it at pp. 24-25 of my rebuttal testimony, where I

1 stated that the study was limited by the fact that no measurements or calculations
2 of EMF were conducted. I noted, at page 24 of my rebuttal testimony, that the
3 study's authors commented that:

4 "There is no accepted biological mechanism to explain the
5 epidemiological results; indeed, the relation may be due to chance
6 or confounding" (p. 1290) and concluded "We have no satisfactory
7 explanation for our results in terms of causation by magnetic
8 fields, and the findings are not supported by convincing laboratory
9 data or any accepted biological mechanism." (p. 1291)

10
11 I also stated that the Draper study, when considered alone, may seem concerning,
12 but that a statistical association reported from one study cannot be used as the basis
13 for a conclusion about causation. The Task Group of the World Health
14 Organization ("WHO"), which I referenced in my rebuttal testimony, considered
15 the Draper study, as well as the numerous other epidemiology, *in vivo* and *in vitro*,
16 studies in the literature, and concluded that the cumulative body of evidence
17 supports the classification of "possible carcinogen," but does not support the
18 conclusion that magnetic fields are a cause of childhood leukemia.

1 Q. DO YOU AGREE WITH ECC WITNESS HANHAM'S CONTENTION AT
2 PAGE 8 OF HIS SURREBUTTAL TESTIMONY THAT YOU HAVE NOT
3 CONDUCTED "AN INDEPENDENT AND NEUTRAL" ASSESSMENT OF
4 THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES ("CDHS")
5 REPORT ON MAGNETIC FIELDS?

6 A. No, I do not agree with his contention. My review of the CDHS report was
7 independent and my criticisms were based on standard scientific procedures for
8 conducting reviews of research. My description of the limitations of the CDHS
9 report are mirrored in the independent critiques of the report by the Minnesota
10 Department of Health, the National Radiation Protection Board ("NRPB") and the
11 Health Council of the Netherlands ("HCN") that I cited in my rebuttal testimony
12 at pages 15-16.

13
14 Dr. Hanham contends that my appearance in this proceeding on behalf of
15 TrAILCo has rendered me incapable of independently assessing EMF research
16 and health risk assessments. I will be certifying my direct and rebuttal
17 testimonies under oath and, accordingly, they constitute my sworn evidence in
18 this proceeding. My assessment of the current status of research in the area of
19 EMF is based on the extensive background and experience that I have in the field,
20 all of which I have brought to bear in my testimony, and my conclusions were
21 formed independently and in a completely objective fashion. The fact that I
22 appear in this proceeding on behalf of TrAILCo had no bearing on the assessment

1 and, indeed, the conclusions that I presented to TrAILCo are those of multiple
2 independent reviews and evaluations performed for scientific and health agencies.

3

4 Q. ECC WITNESS HANHAM CONTENDS THAT YOUR “DIRECT
5 PARTICIPATION AND THE POWER INDUSTRIES’ OVERALL
6 PARTICIPATION” PLACES THE VALIDITY OF THE REVIEW PROCESSES
7 OF WHO, IARC, AND ICNIRP IN QUESTION. DO YOU AGREE?

8 A. Again, I absolutely cannot agree. Dr. Hanham and the author he cites, Maisch
9 (2006), raise unsubstantiated allegations that the WHO Task Force “must have
10 been tainted” by industry participation. It appears that, because Hanham and
11 Maisch disagree with the conclusions of WHO and other agencies whose
12 conclusions I presented, they raise *ad hominum* arguments. Neither Dr. Hanham
13 nor Maisch (2006) present credible evidence to support the claim that the interests
14 of industry biased the conclusions reached by the WHO Task Force. Because of
15 my knowledge and expertise, I have been asked to advise a wide variety of
16 organizations, including the electric utility industry and many government and
17 scientific agencies, about research in this field. Neither Hanham nor Maisch can
18 explain why ALL of the independent national and international scientific and
19 regulatory agencies reach similar conclusions. Hanham and Maisch express
20 concern about the WHO, and Hanham about ICNIRP and IARC as well, but their
21 premise would also require that all other organizations that reached similar
22 conclusions, including the panels who reviewed research for the U.S. National
23 Academy of Sciences, the National Institute of Environmental Health Sciences,

1 the National Radiation Protection Board and Health Protection Agency of Great
2 Britain, the Health Council of the Netherlands, the Swedish Radiation Protection
3 Authority, and Health Canada, etc. are also biased.

4

5 Q. AT PAGE 10 OF HIS REBUTTAL TESTIMONY, ECC WITNESS HANHAM
6 DISPUTES YOUR EARLIER REBUTTAL STATEMENT THAT
7 INTERVENING TREES AND SHRUBBERY WOULD LARGELY SHIELD
8 PERSONS FROM ELECTRIC FIELDS BY RESPONDING THAT PEOPLE
9 WILL NOT BE SHIELDED BECAUSE A TRANSMISSION LINE RIGHT-OF-
10 WAY WILL BE TOTALLY CLEARED OF TREES. WOULD YOU PLEASE
11 RESPOND?

12 A. I continue to stand by my direct and rebuttal testimony in this regard. While the
13 TrAILCo rights-of-way will be cleared of tall trees that could pose a line
14 clearance danger in advance of construction, any such clearing would not
15 necessarily remove vegetation, which presents no clearance danger, that would
16 attenuate the electric field. Existing trees or other shrubbery or vegetation left
17 outside of the rights-of-way would provide an additional opportunity for shielding
18 or blocking the electric field from the TrAILCo line. Furthermore, “Following a
19 standard health risk assessment process, the Task Group [of the WHO] concluded
20 that there are no substantive health issues related to electric fields at levels
21 generally encountered by members of the public.” So the degree of shielding by
22 vegetation does not diminish or increase a health risk to the public.

23

1 Q. DOES THIS CONCLUDE YOUR REJOINDER TESTIMONY?

2 A. Yes. However, I reserve the right to file such additional testimony as may be
3 necessary or appropriate.