BEFORE THE COMMONWEALTH OF PENNSYLVANIA PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PECO Energy Company for a	:	
Finding of Necessity Pursuant to 53 P.S.	:	
§ 10619 that the Situation of Two Buildings	:	Docket No. P-2021-3024328
Associated with a Gas Reliability Station in	:	
Marple Township, Delaware County Is	:	
Reasonably Necessary for the Convenience	:	
and Welfare of the Public	:	
	:	

PECO ENERGY COMPANY'S EVIDENTIARY CHALLENGE TO EXCLUDE (1) THE REMAND DIRECT TESTIMONY OF BILL BECK, ROBERTA WINTERS, EDWARD KETYER, JAMES CAPUZZI, AND JAMES A. SCHMID, (2) THE REMAND REBUTTAL TESTIMONY OF JAMES CAPUZZI AND JAMES A. SCHMID AND (3) ALL EXPERT REPORTS THAT ARE OFFERED AS EXHIBITS BY INTERVENORS EXCEPT THE REPORTS OF DR. TIMOTHY MCAULEY AND JEFFREY MARX

Pursuant to the Pennsylvania Public Utility Commission's ("Commission") regulations at 52 Pa. Code § 5.103, 5.401, and § 1.38, and Administrative Law Judge Mary D. Long's November 1, 2023, email to the parties, PECO Energy Company ("PECO" or the "Company") submits this Evidentiary Challenge, respectfully requesting that Judge Long strike and/or exclude from the record the Remand Direct Testimony of Roberta Winters PhD, Edward Ketyer, M.D., James Capuzzi, and James A. Schmid, M.A., PhD, submitted on September 22, 2023, the Remand Direct Testimony of Bill Beck, submitted on October 11, 2023, and the Remand Rebuttal Testimony of James Capuzzi and James A. Schmid, submitted on October 30, 2023. Additionally, PECO requests that Judge Long exclude from the record all expert reports that have been attached as exhibits to the testimony of all of Intervenors' witnesses, on the ground that such reports are inadmissible hearsay, except the reports of witnesses Dr. Timothy McAuley and Jeffrey Marx because their reports are purported analyses conducted by those witnesses. In support of its Challenge, PECO states as follows:

I. <u>FACTUAL AND PROCEDURAL BACKGROUND</u>

1. On February 26, 2021, PECO filed a petition (the "Petition") seeking a finding from the Commission, pursuant to Section 619 of the Municipalities Planning Code, 53 P.S. § 10619, that the situation of the two buildings associated with PECO's proposed Natural Gas Reliability Station ("Station") at 2090 Sproul Road in Marple Township, Delaware County was reasonably necessary for the convenience or welfare of the public and was therefore exempt from local zoning, and that the security fence appurtenant to the Station was a public utility facility exempt from local land use controls.

2. On March 10, 2021, the Commission issued a Prehearing Conference Notice, whereby the Commission designated Administrative Law Judge Emily DeVoe as the Presiding Officer and set a deadline of April 12, 2021, for the filing of protests and answers to PECO's Petition in accordance with Title 52 of the Pennsylvania Code (the "Protest Deadline").

3. On April 14, 2021, Judge DeVoe issued an Interim Order Providing Information to Pro Se Protestants and recognized 63 individual Protestants and two individuals as filing Petitions to Intervene. Mr. Beck was not one of those individuals.

4. Four public input hearing sessions were held on May 25 and May 26, 2021. During these public input hearing sessions, ninety-three individuals testified under oath and two offered comments. In addition to the public input hearing sessions, the matter included the submission of direct, rebuttal, and surrebuttal testimony, four days of evidentiary hearings that occurred on July 15, 16, 20 and 22, 2021, and briefing from the parties (the "Initial Proceeding").

5. During the Initial Proceeding, intervenor Julia Baker offered to present Roberta Winters, PhD, as an expert witness and offered a statement to serve as Dr. Winters' direct testimony ("Winters' Initial Proceeding Testimony").

6. Julia Baker offered Dr. Winters as an expert in "public advocacy involving energy, policy and safety." *See* Tr. 868:23-24.

7. PECO objected to the testimony of Dr. Winters and the statement offered for Dr. Winters because the statement was irrelevant, Dr. Winters was not qualified as an expert, and Dr. Winters' statement contained extensive hearsay. *See* Tr. 866-871.

8. Judge DeVoe sustained PECO's objection and found that Dr. Winters was not qualified as an expert to render the opinions proffered and that her testimony was both irrelevant and contained extensive hearsay. *See* Tr. 893:5-14.

9. During the Initial Proceeding, Marple Township offered James Capuzzi as a witness, who submitted testimony as Marple Township Statement No. 2, and Mr. Capuzzi was subject to cross-examination by PECO's counsel. *See* Tr. 1501-1514.

 During the Initial Proceeding, Intervenor Julia Baker offered Edward Ketyer, M.D., as a witness and offered a statement by Dr. Ketyer, Baker Statement No. 4. Baker Statement No. 4 was admitted and Dr. Ketyer was subject to cross-examination by PECO's counsel. Tr. 1652-1687.

11. PECO objected to Dr. Ketyer's testimony as irrelevant, speculative, and outside the bounds of his expertise. *Id.*

12. Judge DeVoe admitted the written testimony of Dr. Ketyer and the crossexamination of Dr. Ketyer. Judge DeVoe ruled that the irrelevant portions of Dr. Ketyer's testimony would be ignored, "acknowledged that there are some portions of his written testimony that are outside the scope of his expertise," which would not be relied on by the Judge, and "portions [of testimony] which are within his expertise will be given the appropriate weight" based on the cross-examination. *See* Tr. 1671:13-25 and 1684:14-19.

13. On December 7, 2021, Judges DeVoe and Long issued an Initial Decision, finding that the situation of the two buildings associated with the Station was reasonably necessary for the convenience or welfare of the public pursuant to Section 619, and on March 10, 2022, the Commission on exceptions issued an Opinion and Order (the "Commission's Opinion") that likewise found that the situation of the buildings was reasonably necessary for the convenience or welfare of the public.

14. Following the Initial Proceeding, Marple Township filed a petition for review of the Commission's Opinion with the Commonwealth Court, and on March 9, 2023, the Commonwealth Court issued an Opinion and Order vacating the Commission's Opinion and remanding the matter to the Commission to "issue an Amended Decision" that "must incorporate the results of a constitutionally sound environmental impact review as to [the proposed siting of the buildings]." *Twp. of Marple v. Pennsylvania Pub. Util. Comm'n*, No. 319 C.D. 2022, 2023 WL 3069788 at *5 (Pa. Commw. Ct. Mar. 9, 2023), *reconsideration and reargument denied* (Apr. 25, 2023) (Publication Ordered Apr. 25, 2023).

15. Citing the Environmental Rights Amendment ("ERA"), article I, section 27 of the Pennsylvania Constitution, the Commonwealth Court held that "a Section 619 proceeding is constitutionally inadequate unless the Commission completes an appropriately thorough environmental review of a building siting proposal and, in addition, factors the results into its ultimate determination regarding the reasonable necessity of the proposed siting." *Id.*

16. On June 22, 2023, Judge DeVoe issued an Interim Order ("Interim Order") stating that on remand, "this proceeding must fulfill the directive of the Commonwealth Court that the Commission amend its March 10, 2022 Opinion and Order following a constitutionally sound environmental impact review [as to the proposed siting of the buildings]." *See* Interim Order at pp. 4-5.

17. Additionally, the Interim Order reflects the limited scope of the Remand Proceeding, explicitly stating that "[t]his Remand Proceeding is not an opportunity to relitigate the entire Initial Proceeding. Pennsylvania case law is clear that a remand proceeding is limited to the issues contained in the remand order." *See* Interim Order at p. 5.

18. On June 28, 2023, the case was assigned to Judge Long, and the Prehearing Conference was held as scheduled.

19. On July 5, 2023, Judge Long issued a Prehearing Order ("Prehearing Order") memorializing the matters agreed upon at the prehearing conference. The Prehearing Order further provided guidance regarding the scope of the remand proceeding: "The issue on remand, an appropriately thorough environmental review of a building siting proposal, is technical and scientific and not conducive to lay testimony[,].... [t]he public opposition to PECO's project is well-documented in the evidentiary record." Prehearing Order at pp. 2-3.

20. On July 27, 2023, Bill Beck filed his untimely Official Protest ("Beck Protest").

21. On August 4, 2023, PECO submitted its Objections and Motion to Strike the Late-Filed Beck Protest, arguing that: 1) there was no good cause to accept the Beck Protest, filed over two years after the protest filing deadline; 2) receipt of the Beck Protest would delay the orderly progress of the proceeding, and; 3) the Beck Protest could significantly broaden the issues in this proceeding.

22. On September 5, 2023, Judge Long entered an Interim Order striking the late-filed Beck Protest, finding that any new protest could risk expanding the limited scope of the remand proceeding and could additionally delay the orderly process of the case. *See* Interim Order Striking Late Filed Protest of Bill Beck at p. 4.

23. On September 19, 2023, pursuant to a Petition of Marple Township for an Extension of Time for Service of Remand Direct and Rebuttal Testimony, Judge Long issued an

Amended Prehearing Order which provided that Supplemental Direct Testimony of All Parties be served by September 22, 2023.

24. On September 22, 2023, Marple Township and intervenors submitted the Remand Direct Testimony of Roberta Winters, PhD, Marple Township, Ted Uhlman, Julie Baker Remand Statement No. 4 ("Winters Remand Direct Testimony").

25. The stated subject of Winters Remand Direct Testimony was to "provide expert testimony regarding the potential environmental consequences associated with PECO's Proposed Gas Reliability Station to be Located at 2090 Sproul Road, Marple Township, PA." Winters Remand Direct Testimony at p. 1.

26. The Winters Remand Direct Testimony offered essentially the same content as the stricken Winters' Initial Proceeding Testimony. (*See* attached hereto as **Exhibit A**, a comparison document between the Winters Remand Direct Testimony and the Statement offered during the Initial Proceeding.)

27. On September 22, 2023, Marple Township, Ted Uhlman and Julie Baker submitted the Remand Direct Testimony of Edward Ketyer, M.D. ("Ketyer Remand Direct Testimony").

28. The stated subject of Ketyer's Remand Direct Testimony was to provide "expert testimony regarding the potential environmental and health consequences associated with PECO's Proposed Gas Reliability Station to be located at 2090 Sproul Road, Marple Township, PA."

29. The Ketyer Remand Direct Testimony offered essentially the same content as Baker Statement No. 4 offered by Julia Baker during the Initial Proceeding. (*See* attached hereto as **Exhibit B**, a comparison document between the Ketyer Remand Direct Testimony and Baker Statement No. 4 offered during the Initial Proceeding).

30. On September 22, 2023, Marple Township, Ted Uhlman and Julie Baker submitted the Remand Direct Testimony of James Capuzzi ("Capuzzi Remand Direct Testimony").

31. The stated subject of Capuzzi's Remand Direct Testimony was to "provide expert testimony regarding the risks and safety issues associated with PECO's Proposed Gas Reliability Station to be located at 2090 Sproul Road, Marple Township, PA."

32. The Capuzzi Remand Direct Testimony offered essentially the same content as Marple Township Statement No. 2 offered by Marple Township during the Initial Proceeding. (*See* attached hereto as **Exhibit C**, a comparison document between the Capuzzi Remand Direct Testimony and Marple Township Statement No. 2 offered during the Initial Proceeding).

33. On September 22, 2023, Marple Township, Ted Uhlman and Julie Baker submitted the Remand Direct Testimony of James A. Schmid, M.A., PhD ("Schmid Remand Direct Testimony").

34. The stated subject of Schmid's Remand Direct Testimony was to "provide expert testimony regarding the potential environmental consequences associated with PECO's Proposed Gas Reliability Station to be located at 2090 Sproul Road, Marple Township, PA."

35. On October 11, 2023, almost three weeks after the September 22, 2023 direct testimony deadline for the Remand Proceeding, intervenor Ted Uhlman served the Beck Remand Direct Testimony on PECO.

36. The Beck Remand Direct Testimony offered essentially the same content as the late-filed and stricken Beck Protest. (*See* attached hereto as **Exhibit D** a comparison document between the Beck Remand Direct Testimony and Beck Protest).

37. On October 30, 2023, the rebuttal testimony deadline for the Remand Proceeding, Marple Township submitted the Remand Rebuttal Testimony of James Capuzzi ("Capuzzi Rebuttal Testimony").

38. The stated subject of Capuzzi's Rebuttal Testimony was to "respond to the testimony provided by [PECO witness] Mike Israni regarding the safety of the [Station]."

39. Also on October 30, 2023, Marple Township, Ted Uhlman, and Julie Baker submitted the Remand Rebuttal Testimony of James A. Schmid, PhD ("Schmid Rebuttal Testimony").

40. The stated subject of Schmid's Rebuttal Testimony was to "provide expert testimony regarding the components of a constitutionally sufficient environmental assessment of the proposed [Station]."

41. PECO submits this Motion respectfully requesting that Judge Long: 1) strike and/or exclude the Remand Direct Testimony of Bill Beck from the record as untimely and is not relevant to the limited scope of this remand proceeding; 2) strike and/or exclude the Remand Direct Testimony of Roberta Winters PhD, as improper expert testimony; 3) strike and/or exclude the Remand Direct Testimony of Edward Ketyer, M.D., as cumulative and improper expert testimony; 4) strike and/or exclude the Remand Direct Testimony of James Capuzzi as cumulative; 5) strike and/or exclude the Remand Direct Testimony of James A. Schmid, M.A., PhD, as improper expert testimony; strike and/or exclude the Capuzzi and Schmid Rebuttal Testimony as improper expert testimony; and (6) strike and/or exclude from the record all expert reports that are offered as exhibits to the testimony of all of Intervenors' witnesses, on the ground that such reports are inadmissible hearsay since they are prior, out-of-court statements offered to prove the truth of the matter asserted.

II. <u>ARGUMENT</u>

a. Legal Standard

42. The purpose of evidentiary hearings is to present expert and non-expert (i.e. factual) testimony from witnesses that comply with the rules of evidence for formal proceedings set forth in the Commission's regulations at 52 Pa. Code § 5.401, *et seq*.

43. Pursuant to 52 Pa. Code § 1.38, "[t]he Commission may reject a filing if it does not comply with any applicable statute, regulation or order of the Commission."

44. Furthermore, pursuant to 52 Pa. Code § 5.401, evidence will be excluded if: "(1) it is repetitious or cumulative; (2) its probative value is outweighed by: (i) the danger of unfair prejudice (ii) confusion of the issues (iii) considerations of undue delay or waste of time."

45. In addition, the standards for admissibility of expert testimony in Pennsylvania are governed by Pennsylvania Rule of Evidence 702, which embodies the test set forth *in Frye v*. *United States*, 293 F. 1013 (D.C. Cir. 1923), which was adopted by Pennsylvania in *Commonwealth v. Topa*, 369 A.2d 1277 (Pa. 1977). *See Grady v. Frito-Lay, Inc.*, 839 A.2d 1038, 1043-1044 (Pa. 2003). Rule 702 provides:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert's scientific, technical, or other specialized knowledge is beyond that possessed by the average lay person;
- (b) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; and
- (c) the expert's methodology is generally accepted in the field.

46. The Pennsylvania standard for expert testimony, in accordance with *Frye*, requires that the "methodologies by which [an expert] has reached her conclusions have been generally accepted in the scientific community . . . it restricts the scientific evidence which may be admitted as it ensures that the proffered evidence results from scientific research which has been conducted in a fashion that is generally recognized as being sound" *Walsh Est. of Walsh v. BASF Corp.*, 660 Pa. 313, 330, 234 A.3d 446, 456 (2020).

47. "Pennsylvania law requires that the judge serve as a gatekeeper before proffered expert testimony is provided at trial. The judge must screen to ensure that the witness has

demonstrated qualifications in the field offered, the testimony provides information that an average juror would not already possess, the testimony is relevant, and the methods used are reliable." *Greene v. Phila. Media Network, Inc.,* September Term, 2011, 2014 WL 12746377, at *2 (Pa. Comp. Pl. Phila. Cty. Aug. 1, 2014).

48. "Whether a witness is qualified to render opinions and whether his testimony passes the *Frye* test are two distinct inquiries that must be raised and developed separately by the parties, and ruled upon separately by the trial courts." *Grady*, 839 A.2d at 1045-1046 (citing *Commonwealth v. Arroyo*, 723 A.2d 162, 170 (Pa. 1999)).

49. "The proponent of the admission of expert scientific evidence bears the burden of establishing all of the elements supporting its admission, including the general acceptance of the methodology employed in the relevant scientific community." *Walsh Est. of Walsh* 234 A.3d at 456.

50. Where, as here, the purported "experts" have performed no study, analysis, or modeling to reach their opinions, their testimony not only fails to meet the *Frye* standard but also lacks any evidentiary foundation or is based merely on hearsay.

b. Bill Beck

i <u>The Beck Remand Direct Testimony Should be Stricken and/or</u> Excluded because it is Untimely.

51. Beck's Remand Direct Testimony is untimely, as it was filed with the Commission on October 11, 2023, almost three weeks after the already extended September 22, 2023 deadline to serve direct testimony of the parties.

52. There is no reasonable excuse for Mr. Uhlman missing the September 22, 2023 direct testimony deadline to file the Beck Remand Direct Testimony.

53. First, Mr. Uhlman served on the parties "Testimony of Dr. Raymond G. Najjar" on September 14, 2023.

54. Also, on September 22, 2023, Mr. Uhlman re-served the same "Testimony of Dr. Raymond G. Najjar" on the parties.

55. Both of these instances demonstrate that Mr. Uhlman was aware of the September 22, 2023 direct testimony deadline and was capable of providing direct testimony by the deadline.

56. Mr. Uhlman has provided no explanation or reasonable excuse for the almost threeweek delay in serving the Remand Direct Testimony of Bill Beck. Accordingly, Beck's Remand Direct Testimony should be stricken as untimely.

ii <u>The Beck Remand Direct Testimony should be Excluded and/or</u> Stricken because it is Irrelevant to this Remand Proceeding.

57. The Remand Proceeding is narrowly focused on the Commonwealth Court's mandate for the Commission to amend its prior decision after a constitutionally sound environmental impact review.

58. "The issue on remand, an appropriately thorough environmental review of a building siting proposal, is technical and scientific and not conducive to lay testimony." Prehearing Order at p. 2.

59. Put simply, "[t]he public opposition to PECO's project is well-documented in the evidentiary record." Prehearing Order at p. 3.

60. The Beck Protest/Remand Direct Testimony does not raise any new issues that have not already been expressed by the individuals who filed timely protests or during the public input hearings.

iii <u>Beck's Remand Direct Testimony should be Excluded and/or</u> <u>Stricken because Beck is not an Expert Relevant to this Remand</u> <u>Proceeding.</u> 61. Beck's Remand Direct Testimony is a direct recitation of his previously filed Beck Protest. *See* **Exhibit D**.

62. PECO previously filed a Motion to Strike the Beck Protest, which was unopposed and ultimately granted by the Court. *See* Interim Order Striking the Late-Filed Protest of Bill Beck, Sep. 19, 2023.

63. Indeed, Beck's Remand Direct Testimony is essentially a "copy and paste" from his prior Protest, to which he has added a "Direct Testimony" heading, and should be stricken and excluded from the remand record for the following reasons.¹

64. As previously stated, "[t]he issue on remand, an appropriately thorough environmental review of a building siting proposal, is technical and scientific and not conducive to lay testimony[,]... [t]he public opposition to PECO's project is well-documented in the evidentiary record." Prehearing Order at pp. 2-3 (emphasis added).

65. Here, the Beck Protest/Remand Direct Testimony does not remotely meet the standard for admission of expert testimony in Pennsylvania.

66. The Beck Protest/Remand Direct Testimony is comprised of two pages where Mr. Beck, who is neither a proper intervenor, protestant, nor party to this proceeding, outlines his (previously stricken) lay-person opinion and protest to the siting of the buildings associated with PECO's Station.

¹ Importantly, the Remand Proceeding "is not an opportunity to relitigate the entire Initial Proceeding. Pennsylvania case law is clear that a remand proceeding is limited to the issues contained in the remand order." *See* Interim Order at p. 5; *see also Del. Riverkeeper Network v. Middlesex Twp. Zoning Hearing Bd.*, 215 A.3d 96, 2019 WL 2605850, at *1 n.4 (Pa. Commw. Ct. June 26, 2019) (remand proceedings do not provide litigants "a second bite at the apple" on issues outside the limited purpose and scope of the remand proceeding) (citation omitted). Having failed to file a timely protest two years ago, Mr. Beck now seeks an improper *third* "bite at the apple" on remand with submission of his prior Protest (which was denied), *and* this identical Remand Direct Testimony.

67. Mr. Beck has not set forth any sufficient knowledge, skills or experience to testify regarding any scientific, technical or other specialized area that will assist the Commission with determining the limited issue in this remand proceeding, namely, whether the siting of the building is reasonably necessary for the convenience or welfare of the public.

c. Dr. Roberta Winters, PhD

i <u>Winters' Remand Direct Testimony should be Excluded and/or</u> <u>Stricken because it is Repetitious, Cumulative, and will cause</u> <u>Undue Delay</u>.

68. For this Remand Proceeding, Ms. Baker has submitted the Winters Remand Direct Testimony as what purports to be expert testimony of Dr. Roberta Winters.

69. During the Initial Proceeding, Ms. Baker also offered a statement by Dr. Winters, which statement provided nearly identical content to that now offered by Ms. Baker for this Remand Proceeding. *See* Exhibit B.

70. During the Initial Proceeding, Judge DeVoe sustained PECO's objection to the testimony of Dr. Winters because she was not qualified as an expert to render the opinions in her statement, the testimony was irrelevant, and contained extensive hearsay. *See* Tr. 893:5-14.

71. Now during this Remand Proceeding, intervenors offer nearly the same testimony for Dr. Winters.

ii <u>Winters' Remand Direct Testimony should be Excluded and/or</u> <u>Stricken because she is not an Expert in an area Relevant to the</u> <u>Remand Proceeding.</u>

72. Ms. Baker offered Dr. Roberta Winters as an expert in "public advocacy involving energy, policy and safety" during the Initial Proceeding. *See* Tr. 868:23-24.

73. Judge DeVoe sustained PECO's objection to the testimony of Dr. Winters because she was not qualified as an expert to render the opinions in her statement, the testimony was irrelevant, and contained extensive hearsay. *See* Tr. 893:5-14.

74. Now, Marple Township and intervenors offer Dr. Winters Remand Direct Testimony to "provide expert testimony regarding the potential environmental consequences associated with PECO's Proposed Gas Reliability Station to be Located at 2090 Sproul Road, Marple Township, PA." Winters Remand Direct Testimony at p. 1.

75. As with her statement in the Initial Proceeding, and again in this Remand Proceeding, Dr. Winters opines that there was a lack of community outreach and involvement for PECO's proposed Station; the natural gas main route should run along the state highway; air emissions may cause health issues as well as contribute to climate change; and natural gas pipelines can cause fatalities and present a risk of cyber-attacks and explosion.

76. As with the Initial Proceeding, Dr. Winters' expertise continues to be that of an educational schoolteacher, and Dr. Winters is not qualified to opine on the statements made in her Direct Testimony in this Remand Proceeding, including the location of the natural gas main route, health issues arising from air emissions, fatalities from natural gas pipelines, or the risk of cyber-attacks or explosion.

77. There is nothing in her training nor experience that suggests she has the relevant background to be qualified as an expert under *Frye* for the purposes of this Remand Proceeding, and her Remand Testimony should accordingly be excluded from the record.

iii <u>Winters' Remand Direct Testimony Should be Excluded and/or</u> Stricken because it is Improper Expert Testimony Under the *Frye* <u>Standard</u>.

78. Winters' Remand Direct Testimony should further be excluded and/or stricken from the record because she has not set forth any generally accepted scientific methodology or analysis in reaching the purported expert opinions within her Remand Direct Testimony in accordance with the *Frye* standard.

79. An expert must set forth a methodology or generally accepted scientific analysis in reaching her conclusions that has been generally recognized and accepted in the scientific community as "sound." *Walsh Est. of Walsh v. BASF Corp.*, 660 Pa. 313, 330, 234 A.3d 446, 456 (2020). Dr. Winters has set forth no scientifically recognized analysis in reaching her purported expert conclusions.

80. Dr. Winters opines that the Station "will release or vent natural gas [and other contaminants] into the air" which will cause harm to public health because "methane is a significant contributor to climate change." Remand Statement No. 4 at pp. 4-5. But, Dr. Winters does not refer to any generally recognized scientific analysis in reaching her conclusions; in fact, Dr. Winters does not cite to any analysis or methodology <u>at all</u> in support of her conclusions. *Id.* Rather, Dr. Winters relies on quoting various internet articles in support of her purported expert opinion. *See id.* at pp. 4-8. This is an insufficient basis with which to assert expert testimony under Pennsylvania law, and Winters Remand Direct Testimony should thus be stricken and/or excluded from the record as improper expert testimony under the *Frye* standard.

d. Dr. James A. Schmid, M.A., PhD

i <u>Dr. Schmid's Testimony Should be Excluded and/or Stricken as</u> <u>Repetitive and Cumulative.</u>

81. The Remand Direct Testimony of Dr. James A. Schmid, M.A., PhD., a purported expert opining on the "potential environmental consequences associated with the [Station]," should be excluded from the record because it is repetitious and duplicative of Dr. Schmid's prior testimony provided at the Public Input Hearing ("PIH") for this proceeding and considered by the Commission on May 26, 2021. 82. During his PIH testimony, Dr. Schmid set forth his background and experience, as well as his concerns regarding the Station's impact on the health and safety of the Township and its residents. Tr. 559-62.

83. During his PIH testimony, Dr. Schmid further set forth his concerns regarding climate change and the Station's purported environmental effects related to same. *Id.* at 562:25-565:24.

84. Accordingly, Dr. Schmid's Remand Direct Testimony should be stricken as repetitive, cumulative, and would cause undue delay and waste the Commission's and the parties' time in accordance with 52 Pa. Code § 5.401.

ii Dr. Schmid's Remand Direct Testimony Should be Excluded and/or Stricken because he is Not an Expert in the Areas As to Which His Opinions are Expressed.

85. Dr. Schmid's testimony should further be excluded from the record due to lack of adequate foundation and experience.

86. Dr. Schmid describes himself as a "biogeographer and consulting ecologist" as well as "wetlands specialist" who specializes in preparing environmental impact statements. *See* Marple Township Remand Statement No.1 at p. 1 (line 16), p. 2 (lines 5-6).

87. Dr. Schmid claims the "heavy industrial facility" will cause unnecessary risk to human safety due to increased (1) air pollution, (2) noise, and (3) risk of explosion. *Id.* at p. 3 (lines 20-23), p. 4 (lines 1-20).

88. However, Dr. Schmid's Remand Direct Testimony does not set forth that he has the requisite knowledge, skill, experience, training, or education, to testify regarding air pollution, noise, or pipeline safety concerns.

89. In fact, Dr. Schmid has proffered no testimony that he has any purported pipeline experience at all.

90. "Pennsylvania law requires that the judge serve as a gatekeeper before proffered expert testimony is provided at trial. The judge must screen to ensure that the witness has demonstrated qualifications in the field offered, the testimony provides information that an average juror would not already possess, the testimony is relevant, and the methods used are reliable." *Greene v. Phila. Media Network, Inc.,* September Term, 2011, 2014 WL 12746377, at *2 (Pa. Comp. Pl. Phila. Cty. Aug. 1, 2014).

91. There is nothing in Dr. Schmid's training or experience that suggests he has the relevant background to be qualified as an expert under *Frye* to offer the opinions rendered in his Remand Direct Testimony regarding air emissions, noise, or pipeline safety. Accordingly his testimony that the Station will cause unnecessary risk to human safety should be excluded from the record. *See id.* at p. 4 (lines 22-23), p. 5 (lines 1-23), p. 6 (lines 1-23), p. 7 (lines 1-8, 19-23), p. 8 (lines 1-25).

iii <u>Dr. Schmid's Remand Direct Testimony Should be Excluded and/or</u> Stricken as Improper Expert Testimony Under the *Frye* Standard.

92. Even if Dr. Schmid possessed the qualifications to offer opinions on the above subjects, Dr. Schmid's Remand Direct Testimony should further be excluded and/or stricken from the record because he has not set forth any generally accepted scientific methodology or analysis for reaching those opinions, as required by the *Frye* standard.

93. Dr. Schmid opines that the Station, as a "heavy industrial facility" will cause unnecessary risk to human safety due to increased air pollution and noise. Remand Statement No. 1 at p. 3 (lines 20-23), p. 4 (lines 1-20).

94. Dr. Schmid states that increased emissions of natural gas will cause human health impacts and contribute to climate change. *Id.* at p. 5 (lines 12-23), p. 6 (lines 1-23), p. 7 (lines 1-8).

95. Yet, Dr. Schmid does not employ any generally accepted scientific methodology to confirm that aforementioned concerns outlined in his testimony would actually materialize. Indeed, unlike Marple Township witness James McAuley, Dr. Schmid has performed no analysis, study, or modeling regarding emissions from the Station. Likewise, unlike Marple Township witness Jeffrey Marx. Dr. Schmid has performed no analysis, study, or modeling of potential hazards associated with the Station. Dr. Schmid makes sweeping, unsupported statements with regards to the effects of "indoor gas leaks", the "ordinary use of natural gas appliances indoors" and "discharges of carbon dioxide or methane at the facility or by users of its gas downstream," among other things, without any study to demonstrate what the levels would be or to show that it is more likely than not those levels would contribute to unreasonable degradation of the environment.

96. This is an insufficient basis with which to assert expert testimony under Pennsylvania law, and thus Dr. Schmid's Remand Direct testimony should be stricken and/or excluded from the record as improper expert testimony under the *Frye* standard. *See id.* at p. 4 (lines 22-23), p.5 (lines 1-23), p. 6 (lines 1-23), p. 7 (lines 1-8, 19-23), p.8 (lines 1-25).

iv <u>Dr. Schmid's Remand Rebuttal Testimony Should be Excluded</u> and/or Stricken as Improper Expert Testimony.

97. In his Remand Rebuttal Testimony, Dr. Schmid improperly expresses purported "expert" opinions regarding what information should be included in a constitutionally sufficient environmental analysis, and alleges that PECO has not performed an environmental assessment because it has not analyzed how the Station will impact the environment and residents of the Township. Schmid Remand Rebuttal Testimony at p. 2 (lines 2-9).

98. Dr. Schmid opines that Pennsylvania should look to the National Environmental Policy of the United States of America ("NEPA") (which Schmid analogizes to the ERA, *see* p.4,

lines 13-31), and the Council for Environmental Quality ("CEQ") guidelines for Federal agencies, when conducting environmental assessments. *Id.* at p. 2 (lines 26-27), p. 3 (lines 1-28), p. 5 (lines 2-15).

99. In considering the aforementioned standards, Dr. Schmid opines that PECO's environmental review should have complied with the standards set forth in the NEPA and the CEQ guidelines by quantifying "GHG emissions . . . disclose relevant GHG emissions and relevant climate change impacts, and identify alternatives . . . to reduce GHG emissions." See *id.* at p. 5 (lines 1-6).

100. Dr. Schmid's ultimate conclusion is that PECO failed to provide the information and data necessary for the Commission to conduct a constitutionally sound environmental review. *Id.* at p.6 (lines 20-21).

101. Dr. Schmid's "expert testimony" that the ERA requires PECO to proffer an environmental impact statement that meets NEPA standards is a legal conclusion that is reserved for the ALJ and Commission and not appropriate for witness testimony. It is *unlike* the testimony of PECO witness Douglas Oliver, who expressly states that legal conclusions contained in his testimony are the opinions of PECO's lawyers.

102. Furthermore, as a biographer and ecologist, Dr. Schmid is not qualified to reach an opinion regarding the appropriate legal standards by which PECO must operate or the Commission must conduct its review of the issues presented in this Remand Proceeding.

e. Edward Keyter, M.D.

i <u>Ketyer's Remand Direct Testimony Should be Excluded and/or</u> <u>Stricken because it is Repetitive and Cumulative</u>.

103. The Remand Direct Testimony of Edward Ketyer, M.D., should be excluded from the record because it is nearly identical to the Direct Testimony of Dr. Ketyer that was submitted by Julie Baker in the Initial Proceeding. *See* Exhibit C.

104. During the Initial Proceeding, Dr. Ketyer was subject to cross examination by PECO's counsel, as well as redirect examination.

105. Pursuant to 52 Pa. Code § 5.401, "evidence will be excluded if: (1) it is repetitious or cumulative . . . "

106. Dr. Keyter's duplicative Remand Direct Testimony offers nothing new to the record or for the Commission to consider in this Remand Proceeding, is entirely repetitive and thus should be excluded and stricken from the record.

ii <u>Keyter's Remand Direct Testimony Should be Excluded and/or</u> Stricken as Improper Expert Testimony Under the *Frye* Standard.

107. Dr. Ketyer's Remand Direct Testimony should further be excluded and/or stricken from the record because he has not set forth any generally accepted scientific methodology or analysis in setting forth his purported opinions within his Remand Direct Testimony in accordance with the *Frye* standard.

108. Dr. Ketyer, testifying as a purported expert "regarding the potential environmental and health consequences associated with the Station," opines harmful emissions from the Station "from burning natural gas, noise, and light" will "compromise public safety," particularly with respect to children, due to the Station's proximity to an elementary school. Remand Statement No. 3 at p. 3 (lines 20-22), p. 4 (lines 1-2). However, Dr. Ketyer has not set forth any scientifically recognized analysis in reaching his purported expert opinion. Indeed, Dr. Ketyer states that the Station's "emissions" will lead to very significant health risks, yet sets forth no methodology generally accepted by the scientific community by which this conclusory assertion was reached.

See id. at p. 4 (lines 4-22), p.5 (lines 1-22), p. 6 (lines 1-22), p. 7 (lines 1-21), p. 8 (1-20), p. 9 (1-22), p. 10 (1-22), p. 11 (1-2). This is an insufficient basis with which to assert expert testimony under Pennsylvania law, and thus Dr. Ketyer's Remand Direct Testimony should further be stricken and/or excluded from the record as improper expert testimony under the *Frye* standard.

f. James Capuzzi

i <u>Capuzzi's Remand Direct Testimony Should be Excluded and/or</u> Stricken because it is Repetitive and Cumulative.

109. The Remand Direct Testimony of James Capuzzi should be excluded because it is nearly identical to Marple Township Statement No. 2 offered by Marple Township during the Initial Proceeding.

110. During the Initial Proceeding, Mr. Capuzzi submitted direct testimony and was subject to cross examination by PECO's counsel as well as redirect examination.

111. Pursuant to 52 Pa. Code § 5.401, "evidence will be excluded if: (1) it is repetitious or cumulative . . ."

112. Mr. Capuzzi's duplicative Remand Direct Testimony offers nothing new to the record or for the Commission to consider in this Remand Proceeding, is entirely repetitive and thus should be excluded and/or stricken from the record.

ii. <u>Capuzzi's Remand Rebuttal Testimony Should be Excluded and/or</u> Stricken as Improper Expert Testimony.

113. Capuzzi's Remand Rebuttal Testimony attempts to respond to [PECO witness] Mike Israni regarding the safety of the Station.

114. Specifically, Mr. Capuzzi attempts to refute Mr. Israni's testimony that the Potential Impact Radius ("PIR") under the Pipeline and Hazardous Materials Safety Administration ("PHMSA") is inapplicable to the Station. *See* Capuzzi Rebuttal Testimony p. 2 (lines 10-23).

115. Mr. Capuzzi's Remand Rebuttal Testimony should be excluded from the record because he has no demonstrated expert qualifications, background, or experience regarding either PHMSA regulations or the operation of natural gas transmissions or distribution systems, and thus is unqualified to set forth any conclusions or opinions regarding same.

116. PECO's expert witness, Mike Israni, by contrast, worked at PHMSA for decades, authored several PHMSA pipeline regulations, and works in the natural gas industry as a consultant.

117. Additionally, in outlining his opinions, Mr. Capuzzi sets forth hearsay regarding PECO's alleged response to unrelated incidents (*see id.* at p.4 (lines 11-19)), and ultimately opines that the location of the Station is not in the public interest. *Id.* at p. 5 (lines 8-23), p. 6 (lines 1-5).

118. Mr. Capuzzi's reference to, and conclusions from, a house fire in Haverford Township, and a gas explosion in Yeadon, DelawareCounty, based entirely on hearsay, are wholly unrelated to this proceeding, and thus should be entirely stricken from the record as irrelevant. *See* Capuzzi Remand Rebuttal Testimony p. 4 (lines 11-12)

119. Accordingly, based on Mr. Capuzzi's lack of expertise in PHMSA regulations or natural gas facility siting and his use of irrelevant and hearsay statements, Mr. Capuzzi's Remand Rebuttal Testimony should be excluded/stricken from this Remand Proceeding.

g. Expert Reports

120. Marple Township, Ted Uhlman, and Julie Baker have included expert reports prepared by their witnesses as exhibits to the testimony.

121. Except for the reports of Dr. Timothy McAuley and Jeffrey Marx, the reports of the witnesses do not include any analyses or studies actually conducted by the respective witness proffering the report.

122. Such expert reports have traditionally been considered hearsay—prior, out-of-court statements offered to prove the truth of the matter asserted. *See, e.g., Ake v. Gen. Motors Corp.*, 942 F. Supp. 869, 877–78 (W.D.N.Y. 1996) (excluding as hearsay the report of an expert because it was not a business record, a record of events made at or near the time of the event, a record involving the proponent's regularly conducted business, a public record, a prior consistent statement because it was not offered to rebut a charge of recent fabrication or improper motive, an adoptive admission because it was not offered against the party who adopted it, or the basis for the expert's opinion because "the report is his opinion"); *see also Synthes Spine Co., L.P. v. Walden,* No. 04-CV-4140, 2006 WL 8458938, at *1 (E.D. Pa. July 26, 2006) (excluding letter report of plaintiff's witness as inadmissible hearsay).

123. In addition, in the case of the expert reports for Dr. Winters, Dr. Ketyer, and Dr. Schmid, the reports themselves contain references to articles and non-governmental sources that are themselves inadmissible hearsay.

124. The Commonwealth Court has denied attempts by parties attempting to include such reports as admissible evidence and requires that those parties meet the foundational and evidentiary burden to include such reports as substantive evidence. *See William Penn Sch. Dist. v. Pennsylvania Dep't of Educ.*, No. 587 M.D. 2014, 2021 WL 11472625, at *6 (Pa. Commw. Ct. Nov. 19, 2021) ("Petitioners cannot simply introduce the expert reports in their entirety and have those reports be presumed to be admissible in their entirety without full consideration of the Rules of Evidence and the limitations set forth therein... To the extent any party wants its expert reports, or portions thereof, to be considered as substantive evidence, it must, prior to admission, have the authoring witness testify as to the foundation and cure any other evidentiary issues contained therein, to the extent they are curable.")

125. Because these reports are inadmissible hearsay, PECO requests that Judge Long exclude the expert reports previously marked as: 1) Capuzzi Remand Direct Testimony Exhibit JC-2; 2) Ketyer Direct Remand Testimony Exhibit EK-2; 3) Najjar Direct Remand Testimony Exhibit RN-2; 4) Schmid Direct Remand Testimony Exhibit JS-2; 5) Winters Direct Remand Testimony Exhibit RW-2; and 6) Schmid Rebuttal Remand Testimony Exhibit A, collectively attached hereto as **Exhibit E**.

III. <u>CONCLUSION</u>

WHEREFORE, for all the reasons set forth above, PECO submits that the Remand Direct Testimony of Bill Beck, Roberta Winters PhD, Edward Ketyer, M.D., James Capuzzi, and James A. Schmid, M.A., PhD, and the Remand Rebuttal Testimony of James Capuzzi and James A. Schmid, M.A., PhD, be excluded/stricken from the record in this remand proceeding, together with expert reports offered as exhibits to the testimony of all of Intervenors' witnesses.

Respectfully Submitted,

BLANK ROME LLP

/s/ Christopher A. Lewis Christopher A. Lewis, Esq. Frank L. Tamulonis, Esq. Stephen C. Zumbrun, Esq. Courtney O'Brien, Esq. BLANK ROME LLP One Logan Square 130 North 18th Street Philadelphia, PA 19103 215.569.5793 215.832.5793 Chris.Lewis@blankrome.com

Counsel for PECO Energy Company

Dated: November 8, 2023

CERTIFICATE OF SERVICE

I hereby certify that on this day, I served a true copy of the foregoing Evidentiary Challenge to Exclude (1) the Remand Direct Testimony Of Bill Beck, Roberta Winters PhD, Edward Ketyer, M.D., James Capuzzi, and James A. Schmid, M.A., PhD, (2) the Rebuttal Testimony of James Capuzzi and James A. Schmid, M.A., PhD, and (3) All Expert Reports that are Offered as Exhibits By Intervenors Except Tim McAuley and Jeffrey Marx upon the parties listed below, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a party) via electronic mail.

Honorable Emily I. DeVoe PO Box 3265 Harrisburg, PA 17105-3265 edevoe@pa.gov

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<u>/s/ Christopher A. Lewis</u> Counsel to PECO Energy Company

Dated: November 8, 2023

EXHIBIT A

MARPLE TOWNSHIP, TED UHLMAN & JULIE BAKER REMAND STATEMENT NO. 4

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

PETITION OF PECO ENERGY COMPANY FOR A FINDING OF NECESSITY

PURSUANT TO 53 P.S. § 10619

Docket No. P-2021-3024328

REMAND DIRECT TESTIMONY

WITNESS: ROBERTA WINTERS, PhD

SUBJECT:

PROVIDE EXPERT TESTIMONY REGARDING THEPOTENTIALENVIRONMENTALCONSEQUENCESASSOCIATEDWITHPECO'SPROPOSEDGASRELIABILITYSTATIONTOBELOCATEDAT2090SPROUL ROAD, MARPLE TOWNSHIP, PA.

DATED: September 22, 2023

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III. EN	VIRONMENTAL IMPACT	<u>4</u>

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$\frac{\frac{1}{2}}{\frac{3}{4}}$	Testimony of Roberta Winters Proposed PECO Reliability Station and Related Infrastructure Submitted July 6, 2021 <u>Revised September 20, 2023</u>
<u>6</u>	<u>I.</u> <u>Background</u>
<u>7</u>	Q. What is your name and business address?
<u>8</u>	A. My name is Roberta Lynette Winters. I live at 326 Williams Road in
<u>9</u>	Rosemont, Pennsylvania that is located in an adjacent town within of Delaware County.
<u>10</u>	II. PURPOSE
<u>11</u>	Q. What is the purpose of your testimony?
<u>12</u>	A. I am providing expert testimony regarding the potential environmental consequences
<u>13</u>	associated with the proposed Gas Reliability Station to be located at 2090 Sproul Road, Marple
<u>14</u>	Township, PA. My testimony is based on my education and experience.
<u>15</u>	Q. What is your educational background?
<u>16</u>	A. I graduated summa cum laude with honors in biology from Bucknell University in 1970.
<u>17</u>	This included completion of work in immunology through a National Science Foundation grant.
<u>18</u>	In 1971 I graduated from Harvard University with a masters of arts in teaching in science
<u>19</u>	education that included coursework in public health. I earned a doctorate in educational
<u>20</u>	administration from the University of Pennsylvania in 1980. As a life-long learner, I also have
<u>21</u>	pursued courses in a variety of topics, including a yearlong sabbatical through West Chester
<u>22</u>	University.
<u>23</u>	Q. Please describe your work experiences that are relevant to your direct testimony.

- <u>1</u> A. Before retiring in 2006, I taught public school for 35 years. More than thirty of these years
- 2 were spent at the elementary level in the Radnor Township School District with expertise in
- <u>3</u> math and science education. I worked predominantly with gifted students. I also served as a
- <u>4</u> part-time K-12 science coordinator, union president (RTEA), instruction and professional
- 5 development chair, and K-12 science and math committee member. I also co-taught problem
- <u>6</u> solving to Radnor staff, to teachers through the Delaware County Intermediate Unit, and at the
- 7 Graduate School of Education, University of Pennsylvania.
- <u>8</u> **Q. What other experiences further qualify you to provide your expert**
- <u>9</u> <u>testimony?</u>
- 10 A.In 2009, I was elected to serve on the Board of Directors of the League of Women Voters of
- 11 Pennsylvania. In this capacity my focus from environmental issues. Natural gas extraction
- 12 through fracking was a hot topic. I worked with League members throughout the
- 13 Commonwealth to coordinate three state-wide guides and studies of Natural Gas from Marcellus
- 14 Shale; Pipelines, and Pooling. I also obtained two Technical Assistance Grant Awards from the
- 15 Pipeline Hazardous Materials Safety Administration (PHMSA), *Pipelines in Pennsylvania: A*
- 16 Case Study of Lycoming County (2012) and Pipeline Planning to Reduce Risks in Berks, Bucks,
- <u>17</u> Lehigh, and Northampton Counties (2013-2014); obtained a Colcom Grant for LWV of
- 18 Pittsburgh that continues to look at Shale Gas Extraction and Public Health(from 2013 until
- <u>19</u> <u>recently</u>); participated in four Pipeline Safety Trusts Conferences and presented at one(2011,
- 20 2012, 2013 and 2022); attended program on Pipeline Emergency Response and Damage
- 21 Prevention Training in Pennsylvania (2010); created and presented programs for youngsters on
- 22 pipeline safety, awareness and "Call Before You Dig" as part of the 2013-14 TAG grant;
- 23 facilitated groups regarding fracking and natural gas operations in local counties; provided

1	testimony of	on regulations	at the state and	national level	; offered	public comment	at numerous

- 2 DEP hearings and to its Citizens' Advisory Council; delivered educational programs on natural
- <u>3</u> gas operations to the public through Leagues across the Commonwealth; coordinated advocacy
- <u>4</u> across adjacent states and at the national level relative to natural gas operations. In 2022 and
- 5 2023 I spearheaded the successful adoption by the LWVUS and LWVPA respectively of a
- <u>6</u> resolution calling for action on the present climate emergency.
- <u>7</u> As a part of my work with the League I have visited and observed numerous fracking
- <u>8</u> operations, pipeline installations, and related infrastructure. I have had face-to-face
- <u>9</u> conversations with survivors of pipeline incidents and toured the devastation in San Bruno,
- 10 California following the explosion of a 30-inch natural gas pipeline in 2010. For several years I
- 11 have also attended in person and virtual meetings of the Chester Environmental Partnership
- 12 where I have become familiar with issues related to environmental justice areas. This was also a
- <u>13</u> <u>focus of the last Pipeline Safety Trust conference I attended last fall.</u>
- 14 Q. Dr. Winters, based upon your education and experience, do you believe that
- 15 you are capable for expressing an opinion to a reasonable degree of certainty as to the
- 16 environmental impact as it relates to the proposed gas reliability station that is the subject
- 17 to this proceeding?
- <u>18</u> <u>A.Yes, I do..</u>
- 19 **Q. Dr. Winters, are you sponsoring any exhibits?**
- 20 A. Yes. I am sponsoring Exhibit RW-1 which is professional resume of CV. I am
- 21 also sponsoring Exhibit RW-2 which is my expert report.
- 22 Q. Are there environmental concerns with the proposed Gas Reliability Station?
- <u>23</u>

III. ENVIRONMENTAL CONCERNS

- <u>2</u> <u>A. Yes, there are several.</u>
- <u>3</u> **Q.** Can you explain what those environmental concerns are?
- <u>A. I am concerned about health, safety, and the need for a more fundamental, state-of-the-art</u>
- <u>5</u> assessment of cumulative environmental impacts.
- <u>6</u> <u>Q. Let's start with concerns about health.</u>

7 Health

- <u>8</u> <u>A.The League of Women Voters of Pennsylvania recognizes the economic impact of natural gas</u>
- <u>9</u> operations in Pennsylvania and the relative safety and efficiency of pipelines as a means of
- 10 transporting natural gas. At the same time, we support the maximum protection of public health
- 11 and the environment in all aspects of natural gas operations. How might a reliability station
- 12 impact the health of those in Delaware county and beyond? To promote clarity, PECO has
- 13 modified the language of their proposed station to be that of a city gate station. Thus, health
- <u>14</u> <u>concerns associated with such facility should be applicable.</u>
- 15 As a gate station, it will release or vent natural gas into the air as a means to regulate and reduce
- 16 pipeline pressure. Methane is a significant contributor to climate change, being 84 times more
- <u>17</u> powerful in trapping heat than carbon dioxide in a 20 year period.¹ Pennsylvania is not immune
- 18 from climate change as indicated by a recently released PADEP report.² Further, Chester, PA,
- 19 an environmental justice area contained within Delaware County, is particularly at risk from

<u>see</u>

https://www.theguardian.com/environment/2021/may/06/cut-methane-emissions-rapidly-fight-climate-di sasters-un-report-greenhouse-gas-global-heating See

http://www.depgreenport.state.pa.us/elibrary/GetDocument?docId=3667348&DocName=PENNSYLVANIA%20CLI MATE%20IMPACTS%20ASSESSMENT%202021.PDF%20%20%3cspan%20style%3D%22color:green%3b%22%3e%3c/ span%3e%20%3cspan%20style%3D%22color:blue%3b%22%3e%28NEW%29%3c/span%3

- 1 rising sea levels transferred to the Delaware River, on-going storm water issues, extreme heat
- 2 challenges, and hazards created by more frequent and severe storms 3
- <u>3</u> Additional harm will be caused to public health due to the release of other contaminants that may
- <u>4</u> need to be vented during the reduction of pressure and other processes, as that may well occur as
- 5 natural gas from large, high pressure pipelines is readied for transmission to local homes and
- <u>6</u> <u>businesses. Volatile organic compounds (VOC's) are one of the emissions related to equipment</u>
- <u>7</u> involved in such natural gas operations at "gate" stations. VOC's are particularly problematic in
- <u>8</u> areas of high ozone, such as Delaware County which, according to the American Lung
- <u>9</u> Association, currently has an ozone grade of "D." Together these create respiratory problems
- <u>10</u> and lung disease.
- 11 In nearby Chester the work of the University of Pennsylvania's Perelman School of Medicine's
- 12 Center of Excellence in Environmental Toxicology indicates that Chester residents, relative to
- 13 other Pennsylvanians, are 24% more likely to develop lung cancer, 64% more likely to develop
- <u>14</u> ovarian cancer, 25% more likely to die from heart disease, 50% more likely to die from
- 15 cerebrovascular disease, and have asthma rates 37.5% higher in children and 26.7% higher in
- <u>16</u> <u>adults.⁴ The proximity of the Marple site to an elementary school where highly vulnerable</u>
- <u>17</u> <u>children study and play each day is a recipe for long-term, negative health consequences.</u>

<u>See https://www.chestercity.com/wp-content/uploads/2015/09/2014-06-</u>

²⁵_Vision_2020_Climate_Adaptation_Elements.pdf

<u>See http://ceet.upenn.edu/wp-content/uploads/2018/02/Chester_infographic.jpg</u>

<u>1</u>	A paper entitled "Hazard identification and accident analysis on city gate station in natural gas
<u>2</u>	industry" was presented at the 2010 International Conference on Environmental Engineering
<u>3</u>	Applications. ⁵ Two of its three conclusions are relevant regarding health:
<u>4</u>	
<u>5</u>	The hazards that may damage environment are not paid attention enough; and
<u>6</u>	The hazards that cause physical and mental injuries in the long time like lack of light
<u>7</u>	(in the case of workers) or noise pollution are not considered enough and guidelines and
<u>8</u>	regulations need to be up to date and reviewed more expertly.
<u>9</u>	The authors also analyzed numerous hazards from gas leakage from joints and valves to leakage
<u>10</u>	of industrial antifreeze related to the heaters. Based on the priority of accidents and the severity
<u>11</u>	of consequences, more than a dozen recommendations were made. Among the most pertinent
<u>12</u>	include:
<u>13</u>	- Use installation and repairing guidelines exactly
<u>14</u>	<u>- To enforce workers to implement rules and regulations by training and noticing through</u>
<u>15</u>	warning sights and
<u>16</u>	<u>- also punishing guilty workers</u>
<u>17</u>	- Enforce workers to implement rules and regulations by training and noticing warning
<u>18</u>	<u>signs</u>
<u>19</u>	- <u>Repair and maintain on time based on a preventive maintenance schedule</u>
<u>20</u>	- Use a gas detector to monitor the amount of gas in the air

<u>https://www.researchgate.net/publication/224181049_Hazard_identification_and_accident_anal</u> ysis on city gate station in natural gas industry

1 Womoning chilissions continuing nom an sources is critical. The public needs to know what

- 2 being emitted, when it is being emitted, and how much is being emitted. Detailed reporting is
- <u>3</u> essential. Averages on a daily or monthly basis may not indicate a single, high exposure or
- <u>4</u> <u>multiples of what residents may experience of a particularly health-impacting release. Can alarm</u>
- 5 systems be installed to alert immediately adjacent residents of planned emissions that may
- <u>6</u> accompany certain planned events needed for cleaning, repairing, or assessing equipment? In
- <u>7</u> the event of emergency conditions, can a warning system be put in place? Limiting exposure,
- <u>8</u> particularly to children and pregnant women, is important for reducing consequences. Of course,
- <u>9</u> the cumulative impact of a variety of existing and evolving pollutants already in the area is, as of
- <u>10</u> yet, unknown.
- 11 **Q. Now what about your safety concerns?**
- <u>12</u> <u>Safety</u>
- 13 A. While the notion of a "Reliability Project" addresses PECO's need to provide consistently gas
- 14 to a projected increase in users in the area, it also implies an effort that is trustworthy,
- 15 dependable, solid and sure. Although natural gas pipelines are the safest way to transport
- 16 hazardous gases and liquids, they are not without incident. In fact, during the past 3 years,
- <u>17</u> PHMSA reports an average of 30 serious incidents per year, resulting in 11 fatalities and 52
- <u>18</u> <u>injuries.</u>⁶
- 19 The proposed Marple "reliability" station is problematic because of safety considerations. In
- 20 spite of assurances that the facility and its pipelines will be monitored 24/7 by computerized
- 21 systems, human error has been found to be the most common factor in analyses of catastrophic

<u>https://portal.phmsa.dot.gov/analytics/</u>saw.dll?Portalpages&PortalPath=%2Fshared%2FPDM%20Public%20Websi te%2F_portal%2FSC%20Incident%20Trend&Page=Serious Serious incidents are those involving a fatality or hospitalization. They exclude "fire first" incidents of other outside force damage and sub-cause of Nearby Fire/Explosion as Primary Cause of Incident.

<u>1</u>	incidents in the oil and gas industry. ⁷ What safeguards will PECO put in place to make sure
<u>2</u>	those who are overseeing the systems are competent, alert, and responsive to warning signs? Are
<u>3</u>	their responders aware of the possible challenges of an incident and prepared to act
<u>4</u>	appropriately? Are safety systems and shut off valves fully operational at all times? Are valves
<u>5</u>	easily located so that the gas source can be shut off until the flammable contents are dissipated or
<u>6</u>	fully burned? Are local emergency responders aware of proper protocols? Is the public aware of
<u>7</u>	safety procedures around natural gas facilities? Is everyone, particularly elementary students,
<u>8</u>	trained in knowing the warning signs for a natural gas leak such as the odor of mercaptan, a
<u>9</u>	hissing sound, or bubbles forming in water? Given the limited number of on-the-ground
<u>10</u>	inspectors at federal and state agencies, can the public depend on the self-reporting of PECO or
<u>11</u>	its contractors to assure them of their safety? Trust but verify is an important adage.
<u>12</u>	As we look to prevent the cost burden to taxpayers of such industrialization, it should be noted
<u>13</u>	that the Reliability Project and its related station are not in areas of low consequence. It is on the
<u>14</u>	well-traveled State highway Route 320. It is adjacent to residential areas and in close proximity
<u>15</u>	to densely populated regions of southeastern PA. Will there need to be additional, connecting
<u>16</u>	distribution lines or related pipelines running through other part of the region? What will be their
<u>17</u>	size, pressure, and route? How will risks of incidents and health-related impacts deflate adjacent
<u>18</u>	property values at the site and along the pipeline routes? Do impacted residents understand the
<u>19</u>	implications of the route, size, pressure, and contents of the pipeline(s) surrounding the station?
<u>20</u>	How useful has the information been that PECO has provided to the community? Have
21	interactions between PECO and the residents been lacking in transparency and authenticity?

thttps://www.tandfonline.com/doi/full/10.1080/10803548.2021.1916238
- <u>1</u> The twelve-inch, steel pipeline operating at 475 pounds per square inch feeds the station. As
- 2 previously mentioned, this infrastructure is co-located under the State roads that run from
- <u>3</u> Conshohocken through Lower Merion, Haverford, and Marple Townships. Will problems with
- <u>4</u> storm water, sewage or other lines carrying hazardous substances in the same vicinity create a
- 5 recipe for disaster? Adequate, appropriate, collaborative and advanced planning for the location
- <u>6</u> of pipelines is a known way to reduce risk and promote safety. Although the model is complex,
- 7 by considering the diameter of the pipeline, its contents and the pressure at which it is operating,
- <u>8</u> it is possible to predict the impact area.⁸ A hazard area radius of 200 feet or more would make
- 9 for a significant potential impact along the route and a real disaster at its termination, the
- <u>10</u> <u>reliability station. This is a problem.</u>
- 11 Finally, the location of the project makes it susceptible to "bad actors" who wish to disrupt major
- 12 air, land, and routes as well as key infrastructure along the northeast corridor. PECO is not
- <u>13</u> immune to software glitches, hacking, or more serious disruptions that create safety hazards.
- 14 The cyberattack of the Colonial Pipeline, although transporting gasoline and diesel fuel, is a
- <u>15</u> <u>current case in point.</u>⁹
- 16 Q. Finally, you mentioned concerns about cumulative environmental impacts. What is this
- <u>17</u> **all about?**

18 Cumulative Environmental Impact

- 19 A.The need for the PUC to consider a comprehensive view of a constitutionally sound,
- <u>20</u> <u>environmental impact of the PECO Reliability Station is a common-sense approach in the</u>

<u>See Appendix C for a chart from page 16 of the Landowners Guide to Pipelines found at https://pstrust.org/about-pipelines/landowners-guide-to-pipelines/</u>

See https://www.wsj.com/articles/cyberattack-forces-closure-of-largest-u-s-refined-fuel-pipeline-11620479737

|--|

<u>2</u> Pennsylvania Constitution reads, *The people have a right to clean air, pure water and to the*

<u>3</u> preservation of the natural, scenic, historic and esthetic values of the environment. Protecting

- 4 this right is a challenge. The United States Environmental Protection Agency (EPA), is
- 5 prioritizing work to incorporate cumulative impacts into research, policy, law, and decision
- 6 making. Why? Under the National Environmental Policy Act (NEPA), federal projects that
- <u>7</u> <u>cause or are affected by cumulative impacts, must provide such an assessment as required by</u>
- <u>8</u> <u>Council on Environmental Quality (CEQ) regulations (CEQ, 1987). However, guidance</u>
- <u>9</u> continues to be needed to help EPA reviewers determine the accurate, reality and consistent
- 10 bases of such comments. This need for cumulative environmental assessments has been further

<u>11</u> <u>underscored by the Executive Orders issued on April 23, 2023 entitled *Revitalizing Our* <u>Nation's</u></u>

- <u>12</u> <u>Commitment to Environmental Justice for All.</u>¹⁰ Among other actions, this order will
- 13 Promote the latest science, data, and research, including on cumulative impacts. The Executive
- <u>14</u> Order directs agencies to identify and address gaps in science, data, and research related to
- 15 *environmental justice, to advance the analysis of cumulative impacts, and to make information*
- <u>16</u> on environmental and health concerns more publicly accessible to communities. To address the
- <u>17</u> <u>need for a coordinated strategy for identifying and filling environmental justice data and</u>
- <u>18</u> <u>research gaps, the Executive Order establishes a new Environmental Justice Subcommittee</u>
- 19 within the National Science and Technology Council, led by the Office of Science and
- <u>20</u> <u>Technology Policy</u>.

https://www.whitehouse.gov/briefing-room/statements-releases/2023/04/21/fact-sheet-president-biden-signs -executive-order-to-revitalize-our-nations-commitment-to-environmental-justice-for-all/#:~:text=The%20new% 20Executive%20Order%20makes,civil%20rights%20

<u>1</u>	In an October 2022 report ¹¹ , EPA defines cumulative impacts, relative to environmental justice
<u>2</u>	areas, as the totality of exposures of chemical and non-chemical stressors and their effects on
<u>3</u>	health, well-being, and quality of life outcomes. Although Marple did not yet have a classified
<u>4</u>	environmental justice zone, the following 2022 image (Figure 1) provided by the PA Department
<u>5</u>	of Environmental Protection (DEP) shows adjacent areas and significant parts of Delaware
<u>6</u>	County so categorized. ¹² A more recent September 2023 map (Figure 2) reveals that an
<u>7</u>	adjacent area to the proposed reliability site (shown by the red arrow) is, in fact, considered to be
<u>8</u>	an environmental justice area. ¹³
<u>9</u>	
<u>10</u>	Figure 1
<u>11</u>	
12	

<u> 11 See</u>

<u>Extracted from map of Environmental Justice Areas of Pennsylvania located at</u>

https://www.epa.gov/sciencematters/epa-researchers-release-cumulative-impacts-report-prioritizing-envir onmental-justice

https://files.dep.state.pa.us/publicparticipation/Office%20of%20Environmental%20Advocacy/EnvAdvocacyPortalF iles/Environmental Justice Areas PA.pdf

The adjacent dark blue census tract immediately to the east is an Environmental Justice Area (score 81 out of maximum impairment value of 100). Graphic from https://gis.dep.pa.gov/PennEnviroScreen/, accessed September 2023.



<u>2</u>



- 5 Regardless of such classification, air and water do not regard municipal boundaries. Thus, what
- <u>6</u> happens in Marple does not stay in Marple. What happens outside of Marple impacts the quality
- <u>7</u> of life of its residents as well.

- <u>1</u> <u>Under recommendations for EPA's Office of Research and Development, updated in May 2023,</u>
- <u>2</u> the following areas have been identified for additional research regarding cumulative impact.¹⁴

<u>3</u>	<u>•</u>	Air, Climate and Energy (ACE): ACE research evaluates the complex health and
<u>4</u>		ecological effects of exposures to pollutants as well as how the impacts of these
<u>5</u>		exposures can be modified by co-exposures to other stressors (e.g., extreme
<u>6</u>		temperatures, noise, social factors). In addition, ACE research investigates the
<u>7</u>		cumulative effects of short- versus long-term exposures.
<u>8</u>	<u>•</u>	Chemical Safety for Sustainability (CSS): CSS research will include a focus on exposure
<u>9</u>		to chemical mixtures that will cover research to characterize mixtures of unknown
<u>10</u>		composition as well as co-exposures to real-world mixtures; characterization of exposure
<u>11</u>		to include investigation into how non-chemical stressors combined with chemical
<u>12</u>		stressors may impact health outcomes; and efforts to evaluate health disparities that may
<u>13</u>		arise from unequal exposures to chemicals.
<u>14</u>	<u>• I</u>	Health and Environmental Risk Assessment (HERA): HERA has predominantly
<u>15</u>		focused on single chemical assessments and a smaller number of assessments of chemical
<u>16</u>		mixtures. However, as the need for evaluating multimedia exposures that incorporate
<u>17</u>		chemical and non-chemical stressor interactions has increased, HERA has focused
<u>18</u>		research on cumulative risk assessment methods and practices.
<u>19</u>	<u>• I</u>	Homeland Security (HS): Through its focus on resilience equity, HS research will
<u>20</u>		ensure that information and tools include the multitude of stressors impacting a
<u>21</u>		community when used to support incident response. Resilience to an incident is directly
	<u>14 See</u>	
	<u>https://</u> ustice	www.epa.gov/sciencematters/epa-researchers-release-cumulative-impacts-report-prioritizing-environmental-j

- 1influenced by the cumulative impacts of the incident and other stressors within a2community.
- <u>Sustainable and Healthy Communities (SHC): The SHC research portfolio takes a</u>
- <u>4</u> *holistic view, considering the interactions between people and their surroundings or,*
- <u>5</u> more specifically, the relationship between the environment and human health and well-
- <u>6</u> <u>being. SHC research examines stressors from the built, natural, and social environments,</u>
- <u>7</u> *including health benefits, such as the benefits that nature provides through ecosystem*
- <u>8</u> goods and services, and their impacts on human health and well-being.
- 9 <u>Safe and Sustainable Water Resources (SSWR):</u> The SSWR's research portfolio carries
- <u>10</u> <u>near- and long-term goals designed to yield practical tools and solutions for ensuring</u>
- <u>11</u> <u>sustainable and equitable water resources. Research includes chemical mixtures</u>
- <u>12</u> bioassay research that supports the understanding and development of ambient water
- <u>13</u> *quality criteria critical to protecting aquatic ecosystems and human health, and tool*
- <u>14</u> *development and risk management studies on exposures to contaminants in drinking*
- 15 water and the impacts of these stressors on health and well-being.
- <u>16</u>
- <u>17</u> **Q. Is there anything you wish to add to your testimony?**
- 18 A.Yes, Admittedly, preparing and reviewing a cumulative environmental impact statement t is a
- 19 tall order. However, the mission of the Pennsylvania Public Utility Commission is to balance the
- <u>20</u> <u>needs of consumers and utilities; ensure safe and reliable utility service at reasonable rates;</u>
- 21 protect the public interest; educate consumers to make independent and informed utility choices;
- <u>22</u> <u>further economic development; and foster new technologies and competitive markets in an</u>
- 23 environmentally sound manner. Many of these goals appear to be in conflict with one another.

- 1 Currently, as we look to mitigate climate change, promote public health, safety and welfare, and
- <u>2</u> protect our environment, the reliability station at the site proposed for Marple appears
- <u>3</u> <u>counterproductive to an integral part of its mission. Not only is it not "reasonably necessary"</u>
- <u>4</u> for siting at that location, but it also runs counter to the public interest. Sustainability is a
- 5 priority in Delaware County.¹⁵ While good faith efforts may be applauded, best practices and
- <u>6</u> <u>state-of-the-art science are needed to construct a realistic and accurate cumulative impact</u>
- 7 review.¹⁶ Decisions made today impact generations yet to come.
- <u>8</u>
- <u>9</u>
- <u>10</u>

<u>In April 2023, New Jersey became the first state to adopt Environmental Justice rules on cumulative impacts.</u> See https://www.ecos.org/news-and-updates/new-jersey-adopts-final-ej-rule-on-cumulative-impacts/

See https://delcopa.gov/sustainability/SustainabilityPlan.html







<u>13</u>

<u>14</u>

<u>1</u>	
$\frac{2}{3}$	<u>Appendix C</u>
<u>4</u>	
<u>5</u>	How the Potential Impact Area Around a Gas Transmission Pipeline Is Determined
<u>6</u>	
<u>7</u>	

	(Add) HOW THE POTENTIAL IMPACT AREA AROUND A GAS
<u>18</u>	This chart shows how a combination of operating pressure and the s
<u>19</u>	 Source: A Model For Sizing High Consequence Areas Associated Wit Pipelines by Gas Research Institute and C-FER Technologies, 2000
20	



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Skills Summary

<u>Teaching and advocacy aligned with interests</u> <u>Simplifying complex ideas into meaningful messages</u>

Education

- Ed.D in Educational Administration, University of Pennsylvania (1980)
- MAT in Science Education, Harvard University (1971)
- BS in Biology, Bucknell University (1970)

Experience

• League of Women Voters of Delaware County (ILO), Board of Directors (2023) Radnor Liason (2013 – 2021), Environmental Committee, Representative to Chester Environmental Partnership (CEP)

• League of Women Voters of Radnor Township Member, education liaison, president (2013-2021) involved with voter service, student engagement, area environmental issues, local advocacy re: redistricting; land use; school start time, civility, social media, etc.

League of Women Voters of Pennsylvania, Board of Directors Environment (2009-2011) Vice President (Issues and Action 2011-2013) served to coordinate three state-wide guides and studies of Natural Gas from Marcellus Shale; Pipelines, and Pooling; obtained two Technical Assistance Grant Awards from the Pipeline Hazardous Materials Safety Administration (PHMSA), Pipelines in Pennsylvania: A Case Study of Lycoming County (2012) and Pipeline Planning to Reduce Risks in Berks, Bucks, Lehigh, and Northampton Counties (2013-2014); obtained a Colcom Grant for LWV of Pittsburgh that continues to look at Shale Gas Extraction and Public Health(2013 to present); participated in three Pipeline Safety Trusts Conferences and presented at one(2011, 2012, 2013 and 2022); attended program on Pipeline Emergency Response and Damage Prevention Training in Pennsylvania (2010); created and presented programs for youngsters on pipeline safety, awareness and "Call Before You Dig" as part of the 2013-14 TAG grant; facilitated groups regarding fracking and natural gas operations in local counties; provided testimony on regulations at the state and national level; offered public comment at numerous DEP hearings and to its Citizens' Advisory Council; delivered educational programs on

natural gas operations to the public through Leagues across the Commonwealth; coordinated advocacy across adjacent states and at the national level relative to natural gas operations.

Teacher, Radnor Township School District, Wayne, PA (1973-2006)

Teacher of the gifted, elementary teacher, K-12 part-time science coordinator, union president (RTEA), and instruction and professional development chair, K-12 science and math committee member, co-taught problem solving to Radnor staff, to teachers through the Delaware County Intermediate Unit, and at the Graduate School of Education, University of Pennsylvania

Teacher, Groton Pubic Schools, Groton, MA (1971-1973)

Elementary teacher, helped initiate a K-5 multi-aged team-teaching alternative

Awards and Acknowledgements

Anne Peters Community Volunteer Award, 2021, first recipient of the Radnor Educational Foundation for efforts that embodied kindness, steadfast volunteerism, and tireless devotion to the Radnor Township School District and the surrounding community.

Anna Estes Strawbridge Award, 2013 a tribute to demonstrated energy and commitment to the ideals and principles of the League of Women Voters of Pennsylvania.

<u>16th Florence Neilson Environmental Leadership Award (2012)</u> recognition by the Clean Water Fund honoring those who uphold ideals of protecting our health and environment.

Academic Awards and Honor Societies – numerous scholarships and awards such as Summa cum laude with honors in biology diploma from Bucknell University Louis Robey Prize given to the member of the senior class who best exemplifies the aims of a Bucknell education

Phi Beta Kappa (academic), Phi Sigma (biology), Kappa Delta Pi (education)

EXHIBIT RW-2

Expert Report of Roberta Winters Proposed PECO Reliability Station and Related Infrastructure Submitted July 6, 2021 Revised September 20, 2023

Based on my work with the studies of natural gas extraction from Marcellus Shale and pipelines by the League of Women Voters of Pennsylvania (LWVPA)-and, related Technical Assistance Grants through the Pipeline and Hazardous Materials Safety Administration (PHMSA), and <u>participation in three Pipeline Safety Trust conferences in New Orleans</u>, I am providing testimony for your consideration. To address the significant issues surrounding the proposed PECO "Reliability Station", comments are divided into <u>threefour</u> sections: siting, health, and safety, and cumulative environmental impacts.

Siting:

Based on study, consensus, and concurrence, the LWVPA supports:

siting of natural gas pipelines (and, related facilities) through coordinated federal, state, regional and local efforts that are objective and responsive to safety considerations, accurate environmental assessments, county conservation districts, land use planning agencies, and local communities. The process should include adequate public notice of local stakeholders from the beginning of the process, convenient input venues, timelines reflective of the PA Municipal Planning Code, consistent with existing state and local regulation, and a mediation process to resolve conflict; and

ordinance/zoning regulations, where and when possible for natural gas pipelines at the local level sited and designed to protect the public, prevent environmental degradation, and reflect community or county-wide land use planning.¹

Planning for land use is part of the fabric of Delaware County and Marple Township. The Economic Development Plan included in Delaware County 2035, projected domestic energy production and infrastructure to continue in this area with the need for increased access to the Delaware River.² Further the plan encourages that the county foster investment that builds on its role as an energy and technology hub.³ Regrettably, the recommendation for townships to develop multi-municipal comprehensive plans and zoning ordinances that take into account larger trends and land-use issues beyond individual municipal boundaries does not seem to have been fully

<u>a</u> Taken from the LWVPA Position on Pipelines

<u>https://www.delcopa.gov/planning/pubs/delco2035/EconomicDevelopmentPlan.pdf p 1-25</u>
<u>https://www.delcopa.gov/planning/pubs/delco2035/EconomicDevelopmentPlan.pdf p. 2.2</u>

https://static1.squarespace.com/static/5cc0ef58755be24fe008e905/t/5d1fd8429813d80001b01681/1562368066 391/LWVPA+Position+on+Pipelines.pdf

implemented. Such a plan may have assisted in the siting of the infrastructure related to this project. In addition, this economic plan document underscores the importance of strengthening and preserving mature neighborhoods.⁴ Such a community is being jeopardized by the PECO Reliability Project. Marple Township also has a Comprehensive Land Use Plan with associated Zoning and Land Development Ordinances.⁵ Districts, including boundaries for an industrial area, are included.⁶ Such is common and desired practice for municipalities wishing to reduce risks to their residents.

* Taken from the LWVPA Position on Pipelines

https://static1.squarespace.com/static/5cc0ef58755be24fe008e905/t/5d1fd8429813d80001b01681/156 2368066391/LWVPA+Position+on+Pipelines.pdf

<u>https://www.delcopa.gov/planning/pubs/delco2035/EconomicDevelopmentPlan.pdf p 1-25</u>
<u>https://www.delcopa.gov/planning/pubs/delco2035/EconomicDevelopmentPlan.pdf p. 2.2</u>
<u>https://www.delcopa.gov/planning/pubs/delco2035/EconomicDevelopmentPlan.pdf p. 3 2</u>
<u>https://www.delcopa.gov/planning/demodata/marpletownship.html</u>
<u>https://ecode360.com/10776404</u>

A decade ago, in 2011, a PHMSA grant allowed the National Association of Counties Research Foundation to issue a summary report for Elected and Appointed County Officials of the work of the Pipelines and Informed Planning Alliance (PIPA).⁷ In December 2010 PIPA issued two reports. One provides recommended practices for stakeholder ⁸ implementation and the other provides an interactive table to assist in local development decisions. In January 2015 PHMSA and FEMA released a new hazard mitigation guidance document prepared by the PIPA Communication Team. *Hazard Mitigation Planning: Practices for Land Use Planning and Development near Pipelines* outlines best practices for communities to reduce risks from pipeline incidents, including those caused by natural hazards.⁹

Given that Marple, like many other townships in Delaware County, is primarily "built out," were these best management practice recommendations used to site the reliability station? Meetings and hearings between residents, PECO representatives and Marple officials do not constitute collaboration. Based on a review of PECO testimony, it appears that virtual tours were offered, questions were answered and renderings were provided to address residents' concerns. ¹⁰ COVID restrictions precluded the usual give and take that in-person encounters can generate. However, based on information provided by the Marple Safety Coalition, the Reliability Project is less than community friendly or accommodating. ¹¹

A review of documents at the Delaware County Conservation District provides a different perspective. As a Radnor resident familiar with local geography, I became concerned when I saw an article in the *Philadelphia Inquirer* regarding the Reliability Project on April 21, 2021.¹² I

<u>https://ecode360.com/10776404</u>

<u>8 More than 130 stakeholders participated in this project and, most importantly, included property developers, local, state, and federal government officials, pipeline operators, real estate agents, and even emergency responders.</u>

<u>Pocuments are available at https://primis.phmsa.dot.gov/comm/pipa/landuseplanning.htm</u> <u>https://www.peco.com/SmartEnergy/InnovationTechnology/Pages/safeandreliablenaturalgas.aspx includes</u> <u>information regarding PECO's outreach efforts.</u>

<u>See http://www.marplesafe.com</u>

<u>https://www.inquirer.com/business/peco-gas-infrastructure-reliability-marple-zoning-20210412.html</u>

<u>https://www.delcopa.gov/planning/pubs/delco2035/EconomicDevelopmentPlan.pdf p. 3-2</u>
<u>https://www.delcopa.gov/planning/demodata/marpletownship.html</u>

<u>7 PIPA is a stakeholder initiative led and supported by PHMSA. Its goal is to reduce risks and improve the safety of affected communities and transmission pipelines through implementation of recommended practices related to risk informed land use and development near transmission pipelines.</u>

mistakenly believed that a pipeline from Conshohocken to Marple would run through Radnor Township. To find out the details, I went to Media to take a look at the permits. According to Stantec Consulting Services, Inc. (Stantec), only NPDES permits for storm water at the site and for hydrostatic testing of tanks and pipelines were needed as well as erosion and sedimentation permits for crossing of seven (7) streams. Under the purpose of PA Code Chapter 459, Occupancy of Highways by Utilities,

It is in the public interest to regulate the location and construction of utility facilities and other structures within State highway right-of-way for the purpose of insuring the structural integrity of the highway, economy of maintenance, preservation of proper drainage and safe and convenient passage of traffic. This chapter is made under the State Highway Law (36 P. S. § § 670-101—670-1102), including § § 411, 420 and 702 (36 P. S. § § 670-411, 670-420 and 670-702). Nothing contained herein is intended to relax existing safety requirements in Chapter 203 (relating to work zone traffic control)

7-PIPA is a stakeholder initiative led and supported by PHMSA. Its goal is to reduce risks and improve the safety of affected communities and transmission pipelines through implementation of recommended practices related to risk informed land use and development near transmission pipelines. More than 130 stakeholders participated in this project and, most importantly, included property developers, local, state, and federal government officials, pipeline operators, real estate agents, and even emergency responders.

** See <u>http://www.marplesafe.com</u>

https://www.inquirer.com/business/peco-gas-infrastructure-reliability-marple-zoning-2021041 2.html

and similar State and Federal safety requirements referred to in § 459.7(2) (relating to general conditions).¹³

Given this law and its rationale, it was most expedient to install the pipeline under State roads from the West Conshohocken Gas Works to Marple.¹⁴ However, to reach the industrial zone for the construction of the Reliability Station, a route under or along Reed Road would be necessary.¹⁵ Because Reed Road is not a state highway, litigation and delays might occur that would be costly for PECO and its Reliability Project. Thus, it would appear that the proposed site along Route 320 is the expedient chosen given that only a special exception would be required under existing code for its construction in a commercial area immediately adjacent to a residential district. Should the influence that PECO can exert for economic and perhaps justified public necessity reasons outweigh the public interest as promulgated in local zoning? The results of an appeal to the PUC and/or the Court of Common Pleas may be telling. However, even if a special exception is mandated for this station, under existing Marple zoning for industrial districts, other general conditions seem to need special consideration as well.¹⁶ Among the list of expressly prohibited are the following uses:

(3) A facility the sole purpose of which is the manufacture, processing or storage of hazardous material;

(5) Manufacture, processing or storage of fertilizer, soaps, pesticides, wood pulp, disinfectant or industrial gas production or separation; and

<u>http://www.pacodeandbulletin.gov/Display/pacode?file=/secure/pacode/data/067/chapter459/chap459toc.htm</u>
<u>l includes all the details.</u>

<u>A See map of pipeline for Reliability Project from West Conshohocken to Marple in Appendix A.</u>

<u>See map of Marple Township with Reed Road in Appendix B.</u>

<u>See https://ecode360.com/10776770</u>

(12) Any use unable to meet the requirements of § <u>300-44E</u> or that is or may be dangerous to the public health, safety, morals or public welfare or that constitutes a public hazard whether by fire, radioactivity, explosion or otherwise or that is noxious or offensive by reason or odor, dust, fumes, smoke, steam, gas, vibration, glare, noise or toxicity.

Further, the code provides for performance standards with proof of compliance that include noise, heat and a lengthy list of airborne emissions such as odor, smoke or steam, and toxic matter and hazardous materials. Of particular interest is:

No emission of toxic matter shall exceed 50% of the Threshold Limit Value in any adjacent residential or commercial district.

To what extent will PECO be able to operate within the zoning requirements of Marple? Will this company be able to verify its emissions, noise and heat adequately to meet the expectations of Marple residents? What must PECO do if a site is going to be permitted in Marple? Perhaps PIPA recommendations such as creating consultation zones. Such zones facilitate communication among stakeholders to ensure consideration of the potential safety impact.

Health

The League of Women Voters of Pennsylvania recognizes the economic impact of natural gas operations in Pennsylvania and the relative safety and efficiency of pipelines as a means of transporting natural gas. At the same time, we support the maximum protection of public health and the environment in all aspects of natural

¹³<u>http://www.pacodeandbulletin.gov/Display/pacode?file=/secure/pacode/data/067/chapter459/chap</u> 4<u>59toc.html includes all the details.</u>

** See map of pipeline for Reliability Project from West Conshohocken to Marple in Appendix A.

** See map of Marple Township with Reed Road in Appendix B.

^{**} See <u>https://ecode360.com/10776770</u>

gas operations. How might a reliability station impact the health of those in Delaware county and beyond? To promote clarity, PECO has modified the language of their proposed station to be that of a city gate station. Thus, health concerns associated with such facility should be applicable.

As a gate station, it will release or vent natural gas into the air as a means to regulate and reduce pipeline pressure. Methane is a significant contributor to climate change, being 84 times more powerful in trapping heat than carbon dioxide in a 20 year period.¹⁷ Pennsylvania is not immune from climate change as indicated by a recently released PADEP report.¹⁸ Further, Chester, PA, an environmental justice area contained within Delaware County, is particularly at

<u>18</u> See

http://www.depgreenport.state.pa.us/elibrary/GetDocument?docId=3667348&DocName=PENNSYLVANIA%20CLI MATE%20IMPACTS%20ASSESSMENT%202021.PDF%20%20%3cspan%20style%3D%22color:green%3b%22%3e%3c/ span%3e%20%3cspan%20style%3D%22color:blue%3b%22%3e%28NEW%29%3c/span%3

<u>Z</u> See https://www.theguardian.com/environment/2021/may/06/cut-methane-emissions-rapidly-fight-climatedisasters-un-report-greenhouse-gas-global-heating

risk from rising sea levels transferred to the Delaware River, on-going storm water issues, extreme heat challenges, and hazards created by more frequent and severe storms ¹⁹

Additional harm will be caused to public health due to the release of other contaminants that may need to be vented during the reduction of pressure and other processes, as that may well occur as natural gas from large, high pressure pipelines is readied for transmission to local homes and businesses. Volatile organic compounds (VOC's) are one of the emissions related to equipment involved in such natural gas operations at "gate" stations. VOC's are particularly problematic in areas of high ozone, such as Delaware County which, according to the American Lung Association, currently has an ozone grade of "D." Together these create respiratory problems and lung disease.

In nearby Chester the work of the University of Pennsylvania's Perelman School of Medicine's Center of Excellence in Environmental Toxicology indicates that Chester residents, relative to other Pennsylvanians, are 24% more likely to develop lung cancer, 64% more likely to develop ovarian cancer, 25% more likely to die from heart disease, 50% more likely to die from cerebrovascular disease, and have asthma rates 37.5% higher in children and 26.7% higher in adults.²⁰ The proximity of the Marple site to an elementary school where highly vulnerable children study and play each day is a recipe for long-term, negative health consequences.

A paper entitled "Hazard identification and accident analysis on city gate station in natural gas industry" was presented at the 2010 International Conference on Environmental Engineering Applications.²¹ Two of its three conclusions are relevant regarding health:

17 See

https://www.theguardian.com/environment/2021/may/06/cut methane emissions rapidly fight climate disaster s un report greenhouse gas global heating

** See

http://www.depgreenport.state.pa.us/elibrary/GetDocument?docId=3667348&DocName=PENNSYLVA NIA%20CLIMATE%20IMPACTS%20ASSESSMENT%202021.PDF%20%20%3cspan%20style%3D%22eolo r:green%3b%22%3e%3c/span%3e%20%3cspan%20style%3D%22color:blue%3b%22%3e%28NEW%29% 3c/span%3

See https://www.chestercity.com/wp_content/uploads/2015/09/2014_06-

25 Vision 2020 Climate Adaptation Elements.pdf

²⁰ See <u>http://ceet.upenn.edu/wp-content/uploads/2018/02/Chester_infographic.jpg</u>

"https://www.researchgate.net/publication/224181049 Hazard identification and accident ana

lysis on city gate station in natural gas industry

The hazards that may damage environment are not paid attention enough; and

the hazards that cause physical and mental injuries in the long time like lack of light (in the case of workers) or noise pollution are not considered enough and guidelines and regulations need to be up to date and reviewed more expertly.

The authors also analyzed numerous hazards from gas leakage from joints and valves to leakage of industrial antifreeze related to the heaters. Based on the priority of accidents and the

<u>See https://www.chestercity.com/wp-content/uploads/2015/09/2014-06-</u>
 <u>Vision 2020 Climate Adaptation Elements.pdf</u>
 <u>See http://ceet.upenn.edu/wp-content/uploads/2018/02/Chester_infographic.jpg</u>
 <u>https://www.researchgate.net/publication/224181049_Hazard_identification_and_accident_ana</u>
 <u>lysis on city gate station in natural gas industry</u>

severity of consequences, more than a dozen recommendations were made. Among the most pertinent include:

- Use installation and repairing guidelines exactly
- <u>Enforce workers to implement rules and regulations by training and noticing</u> <u>through warning sights and</u>
- <u>- also punishing guilty workers</u>
- Enforce workers to implement rules and regulations by training and noticing warning signs
- Repair and maintain on time based on a preventive maintenance schedule
- Use a gas detector to monitor the amount of gas in the air

Monitoring emissions continuing from all sources is critical. The public needs to know what is being emitted, when it is being emitted, and how much is being emitted. Detailed reporting is essential. Averages on a daily or monthly basis may not indicate a single, high exposure or multiples of what residents may experience of a particularly health-impacting release. Can alarm systems be installed to alert immediately adjacent residents of planned emissions that may accompany certain planned events needed for cleaning, repairing, or assessing equipment? In the event of emergency conditions, can a warning system be put in place? Limiting exposure, particularly to children and pregnant women, is important for reducing consequences. Of course, the cumulative impact of a variety of existing and evolving pollutants already in the area is, as of yet, unknown.

Safety

While the notion of a "Reliability Project" addresses PECO's need to provide consistently gas to a projected increase in users in the area, it also implies an effort that is trustworthy, dependable, solid and sure. Although natural gas pipelines are the safest way to transport hazardous gases and liquids, they are not without incident. In fact, during the past 3 years, PHMSA reports an average of 30 serious incidents per year, resulting in 11 fatalities and 52 injuries.²²

The proposed Marple "reliability" station is problematic because of safety considerations. In spite of assurances that the facility and its pipelines will be monitored 24/7 by computerized

²²https://portal.phmsa.dot.gov/analytics/saw.dll?Portalpages&PortalPath=%2Fshared%2FPDM%20Public%20Web site%2F_portal%2FSC%20Incident%20Trend&Page=Serious Serious incidents are those involving a fatality or hospitalization. They exclude "fire first" incidents of other outside force damage and sub-cause of Nearby Fire/Explosion as Primary Cause of Incident.

systems, human error has been found to be the most common factor in analyses of catastrophic incidents in the oil and gas industry.²³ What safeguards will PECO put in place to make sure those who are overseeing the systems are competent, alert, and responsive to warning signs? Are their responders aware of the possible challenges of an incident and prepared to act appropriately? Are

**<u>https://portal.phmsa.dot.gov/analytics/saw.dll?Portalpages&PortalPath=%2Fshared%2FPDM%20Pu</u> <u>blic%20Website%2F_portal%2FSC%20Incident%20Trend&Page=Serious</u> Serious incidents are those involving a fatality or hospitalization. They exclude "fire first" incidents of other outside force damage and sub-cause of Nearby Fire/Explosion as Primary Cause of Incident. **<u>https://www.tandfonline.com/doi/full/10.1080/10803548.2021.1916238</u> safety systems and shut off valves fully operational at all times? Are valves easily located so that the gas source can be shut off until the flammable contents are dissipated or fully burned? Are local emergency responders aware of proper protocols? Is the public aware of safety procedures around natural gas facilities? Is everyone, particularly elementary students, trained in knowing the warning signs for a natural gas leak such as the odor of mercaptan, a hissing sound, or bubbles forming in water? Given the limited number of on-the-ground inspectors at federal and state agencies, can the public depend on the self-reporting of PECO or its contractors to assure them of their safety?

Trust but verify is an important adage.

As we look to prevent the cost burden to taxpayers of such industrialization, it should be noted that the Reliability Project and its related station are not in areas of low consequence. It is on the well-traveled State highway Route 320. It is adjacent to residential areas and in close proximity to densely populated regions of southeastern PA. Will there need to be additional, connecting distribution lines or related pipelines running through other part of the region? What will be their size, pressure, and route? How will risks of incidents and health-related impacts deflate adjacent property values at the site and along the pipeline routes? Do impacted residents understand the implications of the route, size, pressure, and contents of the pipeline(s) surrounding the station? How useful has the information been that PECO has provided to the community? Have interactions between PECO and the residents been lacking in transparency and authenticity?

The twelve-inch, steel pipeline operating at 475 pounds per square inch feeds the station. As previously mentioned, this infrastructure is co-located under the State roads that run from Conshohocken through Lower Merion, Haverford, and Marple Townships. Will problems with storm water, sewage or other lines carrying hazardous substances in the same vicinity create a recipe for disaster? Adequate, appropriate, collaborative and advanced planning for the location of pipelines is a known way to reduce risk and promote safety. Although the model is complex, by considering the diameter of the pipeline, its contents and the pressure at which it is operating, it is possible to predict the impact area.²⁴ A hazard area radius of 200 feet or more

<u>https://www.tandfonline.com/doi/full/10.1080/10803548.2021.1916238</u>
 <u>See Appendix C for a chart from page 16 of the Landowners Guide to Pipelines found at https://pstrust.org/about-pipelines/landowners-guide-to-pipelines/</u>
 would make for a significant potential impact along the route and a real disaster at its termination, the reliability station. This is a problem.

Finally, the location of the project makes it susceptible to "bad actors" who wish to disrupt major air, land, and routes as well as key infrastructure along the northeast corridor. PECO is not immune to software glitches, hacking, or more serious disruptions that create safety hazards. The cyberattack of the Colonial Pipeline, although transporting gasoline and diesel fuel, is a current case in point.²⁵

Cumulative Environmental Impact

The need for the PUC to consider a comprehensive view of a constitutionally sound, environmental impact of the PECO Reliability Station is a common-sense approach in the current climate. Just what should such an impact review include? Article 1 Section 27 of the Pennsylvania Constitution reads, *The people have a right to clean air, pure water and to the preservation of the natural, scenic, historic and esthetic values of the environment.* Protecting this right is a challenge. The United States Environmental Protection Agency (EPA), is prioritizing work to incorporate cumulative impacts into research, policy, law, and decision making. Why? Under the National Environmental Policy Act (NEPA), federal projects that cause or are affected by cumulative impacts, must provide such an assessment as required by Council on Environmental Quality (CEQ) regulations (CEQ, 1987). However, guidance continues to be needed to help EPA reviewers determine the accurate, reality and consistent bases of such comments. This need for cumulative environmental assessments has been further underscored by the Executive Orders issued on April 23, 2023 entitled *Revitalizing Our Nation's Commitment to Environmental Justice for All.*²⁶ Among other actions, this order will

Promote the latest science, data, and research, including on cumulative impacts. The Executive Order directs agencies to identify and address gaps in science, data, and research related to environmental justice, to advance the analysis of cumulative impacts, and to make information on environmental and health concerns more publicly accessible to communities. To address the need for a coordinated strategy for identifying and filling environmental justice data and research gaps, the Executive Order establishes a new Environmental Justice Subcommittee within the National Science and Technology Council, led by the Office of Science and Technology Policy.

See https://www.wsj.com/articles/cyberattack-forces-closure-of-largest-u-s-refined-fuel-pipeline-11620479737 https://www.whitehouse.gov/briefing-room/statements-releases/2023/04/21/fact-sheet-president-biden-signs-executive-order-to-revitalize-our-nations-commitment-to-environmental-justice-for-all/#:~:text=The%20new%20Ex ecutive%20Order%20makes,civil%20rights%20 In an October 2022 report²⁷, EPA defines cumulative impacts, relative to environmental justice areas, as the totality of exposures of chemical and non-chemical stressors and their effects on health, well-being, and quality of life outcomes. Although Marple does not yet have a classified environmental justice zone, the following image shows adjacent areas and significant parts of Delaware County so categorized.²⁸ Air and water do not regard municipal boundaries. Thus, what happens in Marple does not stay in Marple. What happens outside of Marple impacts the quality of life of its residents as well.



<u>Under recommendations for EPA's Office of Research and Development, updated in May 2023,</u> the following areas have been identified for additional research regarding cumulative impact.²⁹

- Air, Climate and Energy (ACE): ACE research evaluates the complex health and ecological effects of exposures to pollutants as well as how the impacts of these exposures can be modified by co-exposures to other stressors (e.g., extreme temperatures, noise, social factors). In addition, ACE research investigates the cumulative effects of short- versus long-term exposures.
- Chemical Safety for Sustainability (CSS): CSS research will include a focus on exposure to chemical mixtures that will cover research to characterize mixtures of unknown composition as well as co-exposures to real-world mixtures; characterization of exposure to include investigation into how non-chemical stressors combined with chemical

See

https://www.epa.gov/sciencematters/epa-researchers-release-cumulative-impacts-report-prioritizing-environemental-justice

<u>Extracted from map of Environmental Justice Areas of Pennsylvania located at</u>

https://files.dep.state.pa.us/publicparticipation/Office%20of%20Environmental%20Advocacy/EnvAdvocacyPortalF iles/Environmental_Justice_Areas_PA.pdf

²⁹ See

https://www.epa.gov/sciencematters/epa-researchers-release-cumulative-impacts-report-prioritizing-enviro nmental-justice

stressors may impact health outcomes; and efforts to evaluate health disparities that may arise from unequal exposures to chemicals.

- Health and Environmental Risk Assessment (HERA): HERA has predominantly focused on single chemical assessments and a smaller number of assessments of chemical mixtures. However, as the need for evaluating multimedia exposures that incorporate chemical and non-chemical stressor interactions has increased, HERA has focused research on cumulative risk assessment methods and practices.
- Homeland Security (HS): Through its focus on resilience equity, HS research will ensure that information and tools include the multitude of stressors impacting a community when used to support incident response. Resilience to an incident is directly influenced by the cumulative impacts of the incident and other stressors within a community.
- Sustainable and Healthy Communities (SHC): The SHC research portfolio takes a holistic view, considering the interactions between people and their surroundings or, more specifically, the relationship between the environment and human health and wellbeing. SHC research examines stressors from the built, natural, and social environments, including health benefits, such as the benefits that nature provides through ecosystem goods and services, and their impacts on human health and well-being.
- Safe and Sustainable Water Resources (SSWR): The SSWR's research portfolio carries near- and long-term goals designed to yield practical tools and solutions for ensuring sustainable and equitable water resources. Research includes chemical mixtures bioassay research that supports the understanding and development of ambient water quality criteria critical to protecting aquatic ecosystems and human health, and tool development and risk management studies on exposures to contaminants in drinking water and the impacts of these stressors on health and well-being.

As you may knowAdmittedly, this is a tall order. However, the mission of the Pennsylvania Public Utility Commission is to balance the needs of consumers and utilities; ensure safe and reliable utility service at reasonable rates; protect the public interest; educate consumers to make independent

and ²⁴-See Appendix C for a chart from page 16 of the Landowners Guide to Pipelines found at <u>https://pstrust.org/about-pipelines/landowners-guide-to-pipelines/</u> <u>²⁶-See https://www.wsj.com/articles/cyberattack forces closure of largest u s refined fuel pipeline 11620479737</u> and informed utility choices; further economic development; and foster new technologies and competitive markets in an environmentally sound manner. Many of these goals appear to be in conflict with one another. Currently, as we look to mitigate climate change, promote public health, safety and welfare, and protect our environment, the reliability station at the site proposed for Marple appears counterproductive to an integral part of its mission. Not only is it not "reasonably necessary" for siting at that location, but it also runs counter to the public interest. Sustainable infrastructure should be in the heart and head of the Public Utility Commission. This is a bad choice for today and for the future. Sustainability is a priority in Delaware County.³⁰ While good faith

<u>See https://delcopa.gov/sustainability/SustainabilityPlan.html</u>

efforts may be applauded, best practices and state-of-the-art science are needed to construct a realistic and accurate cumulative impact review.³¹ Decisions made today impact generations yet to come.

We appreciate your consideration and are optimistic that you will be responsive to this input.

<u>In April 2023, New Jersey became the first state to adopt Environmental Justice rules on cumulative impacts. See https://www.ecos.org/news-and-updates/new-jersey-adopts-final-ej-rule-on-cumulative-impacts/</u>

Appendix A

Pipeline Route from West Conshohocken to Marple





Appendix B

Appendix B



Reed Road – Location of Industrial District of Marple


Appendix C

How the Potential Impact Area Around a Gas Transmission Pipeline Is Determined



HOW THE POTENTIAL IMPACT AREA AROUND A GAS TRANSMISSION PIPELINE IS DETERMINED

- This chart shows how a combination of operating pressure and the s determines the most dangerous area around a pipeline if it should ru
- Source: A Model For Sizing High Consequence Areas Associated Wit Pipelines by Gas Research Institute and C-FER Technologies, 2000

(Add) HOW THE POTENTIAL IMPACT AREA AROUND A GAS TRANSMISSION PIPELINE IS DETERMINED

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Source: A Model For Sizing High Consequence Areas Associated Wit Pipelines by Gas Research Institute and C-FER Technologies, 2000

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EXHIBIT B

TESTIMONY REPORT OF DR. EDWARD KETYER REGARDING PROPOSED PECO "NATURAL GAS RELIABILITY PROJECT RELIABILITY PROJECT"

MARPLE TOWNSHIP,PA

I. Introduction

My name is Dr. Edward Ketyer. I reside at 102 Meadowvue Court in Venetia, PA (Washington County). I am a medical doctor (M.D., Northwestern University School of Medicine 1987). I am a pediatrician who retired from patient care after 26 wonderful years in a busy primary care pediatric office. Until my retirement I was a Clinical Assistant Professor of Pediatrics in the Department of Pediatrics at the University of Pittsburgh School of Medicine.

I am still employed by Allegheny Health Network as their Social Media Medical Advisor for the AHN Pediatric Institute (AHN Pediatrics - Pediatric Alliance). I am proud to be the editor and principle writer for *The PediaBlog* (www.thepediablog.com), a blog centered around pediatric topics of interest for parents and caretakers, with posts published every day since August 2012.

I remain a member of the Pennsylvania Medical Society and the Allegheny County Medical Society.

I am also a member of the American Academy of Pediatrics and the AAP Council on Environmental Health and Climate Change (COEHCC).

Since 2015, I have been a medical advisor for SWPA Environmental Health Project — a nonprofit, evidence-based, public health organization dedicated to assisting residents reduce their health risks objectively associated with living near shale gas (unconventional) oil and gas operations in Pennsylvania's Marcellus Shale region and other areas in the U.S.

I am a board member and President-elect of Physicians for Social Responsibility, a statewide non-profit environmental health advocacy organization helping doctors and other health care providers and the public learn about health risks objectively associated with shale gas development and climate change, in addition to other topics of national and global importance. I also serve on the steering committee of Concerned Health Professionals of Pennsylvania, a group of physicians and nurses who understand that there is no safe way to frack.

I am a Co-Chair of the Education and Outreach Workgroup of the Cancer and Environment Network of Southwestern Pennsylvania.

Finally, I am a member of the Climate Reality Project Leadership Corps. and Climate Reality Pittsburgh & SWPA Chapter.

I was asked to present this testimony from residents living in Marple Township who are opposed to this fracked gas project. I will limit this testimony to the potential and expected harms to the health of residents living nearby, and to children attending an elementary school less than 500 feet away from the proposed site.

I am not an engineer, so I will not discuss in any detail the nature of the building being proposed or its function to supply consumers with natural gas. Nor am I a city planner, so, although this project doesn't seem advisable, I will not opine about the wisdom or foolishness associated with siting a large fracked gas facility such as this one into close proximity to residential and commercial properties, residents and schoolchildren, except to consider the threat to public health and safety this facility represents.

I am a pediatrician by training. I take care of children and advise their parents on how to care for them and protect them from harm and disease. This is my area of expertise. From a pediatric health and safety standpoint, siting PECO's "Natural Gas Reliability Project" at the intersection of two busy roads, in close proximity to homes, retail businesses, and an elementary school is unwise. It is dangerous. It exposes children and their families to harmful emissions from burningfromburning natural gas, noise, and light pollution, and it compromises public safety due to the potential for inadvertantinadvertent leaks and explosions that can occur accidently or during periods of maintenance at thefacility.

As a pediatrician, a father, and an advocate for urgent solutions to the climate crisis, I believe I am within my area of expertise to say that the PECO "Natural Gas Reliability Project" should not be approved at this or any site. Climate change is an immediate threat to the health of children and the adults who love them. This is an objective statement. Any project that involves burning even more fossil fuels than before, even natural gas, is inconsistent with solving the climate crisis. In fact, allowing this project to proceed would ignore the scope, the severity, and the urgency of the climate crisis — a local, regional, national, and global emergency which is very much happening today. In fact, partly because of Pennsylvania's long history of extracting fossil fuels (today, mostly by the rapid expansion of fracking), climate change is accelerating. Last month, the International Energy Agency (IEA) declared that investment in, and new development of, all fossil fuel infrastructure, including natural gas, must end immediately in order to fully decarbonize by 2050 and limit global average warming to 1.5 degrees Celsius, which is the consensus value of climate scientists everywhere, recorded in the Intergovernmental Panel on Climate Change Special Report (2018), and the minimum goal of the Paris Climate Agreement.

This makes the PECO "Natural Gas Reliability Station" not only an unwise project, it is an irresponsible and amoral one. Expanding customers' reliance on natural gas will require even more expansion of drilling and fracking in the Marcellus Shale, negatively impacting the health of safety of people living near it. I live in Washington County, which is the most heavily fracked county in Pennsylvania. While fracking has brought a number of jobs, it has brought with it a dangerous amount of pollution to the air, water, and soil that we all share. It has negatively impacted the health of adultsand childrenliving nearby.

I have personally witnessed some of the health harms people have suffered and continue to suffer as a result of leaving nearby fracking wells, pipelines, and compressor stations. Many of their stories were heard by the 43rd Statewide Investigating Grand Jurythat last year reported on many industry and regulatory failures to protect Pennsylvania residents fromharm.

Fracking is dirty and dangerous. It scars the landscape, damaging and degrading the environment. It pollutes the air and water — precious resources that are supposed to be protected by Article I Section 27 of the Pennsylvania Constitution for all PA residents, and for generations to come. Objectively, fracking makes people sick. The Compendium of Scientific, Medical, andMedia Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and OilExtraction) Seventh Edition, published by Concerned Health Professionals of New York and Physicians for Social Responsibility now contains in excess of 2,000 peer-reviewed studies, government investigations, and media reports. The medical experts conclude that "fracking cannot operate without threating public health directly, or without imperiling climate stability upon which public health depends."

Let's take a look at how this gate station, which PECO disingenuously calls a "natural gas reliability station," will adversely impact public health and safety.

II. Public health and safety threats and potential impacts from PECO GateStation

A. Airpollution

Burning methane (CH4) generates specific physical and chemical byproducts that must be released into the atmosphere in order for efficient combustion to occur. While the PECO website offers very little information about what activities will actually be going on at the site in Marple Township, my understanding is that six large methane-fired "heaters" operating alone or in combination will produce large enough volumes of emissions to produce health symptoms in adults and children living, shopping, and learning nearby.

The emissions produced by burning natural gas are by and large invisible due to the size and physical properties of each component. Each component of the air pollution generated by burning natural gas has very significant health risks potentially associated with it. There is no safe level of exposure to any component of pollution resulting from natural gas combustion. We know that even small amounts of exposure, even when brief, can produce significant health signs and symptoms that can affect quality of life for some and increase the risk of poor health outcomes foreveryone.

The natural gas industry tells consumers that natural gas burns cleaner than coal and oil. While that's generally true — for example, burning methane results is significantly less particulate matter pollution compared with coal and oil — it's like putting a filter on a cigarette and saying that it too is cleaner. Yes, there are fewer particles and the filter captures some dangerous tar and other substances, but no doctor is going to reassure their patient that it is safe to smoke it.

We also know that invisible particles, smelly vapors, and chemicals that constitute modern air pollution caused mostly from burning fossil fuels like natural gas can impair fertility, complicate pregnancies, and lead to poor birth outcomes. Birth defects and developmental delays caused by some components of toxic air pollution lead to lifelong health burdens for young children, for their families, and for society. ADHD, learning disabilities, and even the development of autism have been associated with air pollution exposure during pregnancy. Lung cancer, bladder cancer, and other types of adult and childhood cancers are linked to air pollution, which impacts practically every organ system in the body — not just the lungs, but also the heart and brain, the liver and kidneys. Adults with chronic obstructive pulmonary diseases (COPD) and other chronic lung diseases, heart disease, and children with asthma have worse symptoms and sicker days when air quality is not good. Recent research describes the links between air pollution and the development of obesity, type 2 diabetes, dementia, anxiety, depression and other forms of mental illness. And it is now estimated that nearly 9 million peopleworldwide die prematurely each year as a result of air pollution, and that includes hundreds of thousands of Americans.

1. Fine and ultrafine particulate matter (PM 2.5 and smaller; PM 2.5 refers to particles 2.5 micrometers and smaller — for perspective, about thirty 2.5 micron particles laid side by side would equal the width of a humanhair).

The cradle-to-grave health impacts caused by breathing air polluted with microscopic fine and ultrafine particles are well-known after decades of occupational and community-level, peer-reviewed, epidemiological research. As I mentioned above, researchers have linked PM 2.5 pollution with impaired fertility, miscarriage, and poor birth outcomes such as low birth weight, small-for-gestational age newborns, and prematurity — each of which carry lifelong health burdens for children, their families, and society. Breathing air contaminated with PM 2.5

exacerbates lung symptoms in children and adults with asthma and other chronic lung diseases. PM 2.5 is a potent contributor to the development of cardiovascular and cerebrovascular disease (i.e. heart attacks and strokes). PM 2.5 is a known carcinogen, causing lung cancer and bladder cancer, and is associated with other types of cancer in adults.

Many people tolerate particulate matter pollution to some degree, even if they experience relatively mild health symptoms impacting the eyes (burning and redness), ears (middle ear infections in children), nose (burning, rhinitis, sneezing, nosebleeds), and throat (irritation and soreness). Breathing PM 2.5 causes headaches in some people and sinus problems in others. But let me be clear: there is no safe level of PM 2.5 exposure because even small exposures (even those under EPA or WHO standards) can still result in noticeable health symptoms.

2. Volatile organic compounds (benzene and formaldehyde are twoexamples).

Burning fossil fuels, including natural gas, produces VOCs like benzene. Benzene as an airborne pollutant can cause mild symptoms of toxicity — dizziness, headache, and nausea, for example — and more extreme symptoms such as tremors, confusion, and unconsciousness with high levels of exposure. Benzene is a known carcinogen, causing cancer in children and adults. Fossil fuel combustion (which includes natural gas) results in emissions of other harmful VOCs potentially leading to serious health concerns, including toluene (permanent neurological damage), ethylbenzene and xylene (ENT and neurotoxicity), and formaldehyde (ENT and lung irritant, humancarcinogen).

3. Nitrogen oxides(NOx)

Nitrogen oxide is produced abundantly wherever fossil fuels and natural gas are combusted. Nitrogen oxide combines with VOCs in the presence of sunlight and heat to produce ground level ozone, also known as smog. Ozone adversely impacts every person's lung function. It has been shown to stuntlung function growth in infants and young children. Whether one is young or old, rich or poor, active or sedentary, everyone's lung function is diminished on days when ozone levels are high.

4. Carbon monoxide(CO)

Carbon monoxide is toxic to every human if exposure is high enough. Depending on the level and duration of exposure, carbon monoxide can cause symptoms as mild as headaches, dizziness, and nausea, to more severe symptoms like hallucinations and loss of consciousness, anddeath.

5. Carbon dioxide(CO2)

Burning methane produces about 50% less CO2 than coal per energy equivalent. On a planet facing a climate emergency, with all the methane being fracked and burned, that is still a lot of greenhouse gas emissions. CO2 from the burning of fossil fuels, including fossil gas, is the principle greenhouse gas responsible for causing the climate crisis. Climate change is adversely impacting the health and safety of children and adults around the world right now. It is a health threat to every child on the planet today, and will be a threat for generations to come until humans decide to abruptly stop using fossil fuels.

6. Sulfur dioxide(SO2)

Burning methane results in less sulfur dioxide pollution compared with burning coal and oil, but as I alluded to earlier, "less" does not mean "none." SO2 in low amounts can cause upper and lower respiratory irritation; higher exposures can lead to difficulty breathing and death from respiratory failure and cardiac arrest.

7. Radongas Radon gas

Natural gas slated to flow through the Marple Township Natural Gas Gate Station comes from the highly radioactive Marcellus Shale. Radioactivity is a major health threat from upstream and downstream sources in the shale gas supply chain, beginning at the wellhead and continuing on to consumers' stovetops and furnaces.

Radon gas has been shown to be one of these radioactive threats. Radon is the second-leading cause of lung cancer behind tobacco smoke.

8. Methane (from incomplete combustion, intentional venting, and unintentionalleaks).

Large volumes of methane leak inadvertently and are vented and flared intentionally into the atmosphere throughout every phase of natural gas extraction (conventional and especially unconventional shale gas development), transportation/transmission, delivery, and consumption. Methane is an extremely potent greenhouse gas, trapping heat in the atmosphere 86 times more effectively compared with CO2 over a 20-year time period. Methane leaks abundantly from fracked gas infrastructure — from gas wells to pipelines to compressor stations to processing facilities to gate stations and metering stations to homes and businesses. Any greenhouse gas savings achieved by burning natural gas instead of coal is instead squandered by allowing methane to carelessly escape from natural gas infrastructure.

B. Noise and lightpollution

Noise pollution and light pollution from the proposed Marple Township gate station will potentially result in additional adverse health impacts, especially mental health. Both types of pollution have been shown to interfere with healthy, restful, restorative sleep in residents living nearby loud and bright industrial sites. Cognition may be impacted from chronic exposure to loud background noise, creating a disadvantage for students who wish to learn efficiently and working adults who wish to be productive on the job.

I would like to pause and note here that any human who witnesses environmental degradation and destruction (as this project represents to anyone seeing the big picture) generally experiences a negative impact on their mental health. And this is especially true in children.

C. Vehiculartraffic

The proposed PECO Gate Station in Marple Township is sited on the corner of a busy intersection. The surrounding homes, school, and businesses already generate abundant car, truck, and school bus traffic. In the event of anticipated vehicular accidents, an evacuation plan for the neighboring community, school, and businesses must be created, made public, and updated as local conditions/development change.

D. Explosions and fires

It is well known that pipelines can leak and spill. They can shift in the ground and slip into sinkholes. Over time, pipelines rust and corrode. Pipeline accidents and explosions can destroy homes and property, and they can maim and kill people. There are multiple examples of each of these incidents involving pipelines in Pennsylvania. The proposed Gate Station in Marple Township is essentially a part of the pipeline infrastructure. Because natural gas will enter and exit the facility, and because the pipelines are expected to undergo physical stress due to cooling and heating, the Gate Station will plausibly be subjected to any and all of these potentially catastrophic events. Residents, businesses, and the parents of schoolchildren must be warned ahead of time of the potential threats this facility presents to the health and safety of all community members.

It is my understanding that first responders will not be allowed to respond to an incident or accident occurring at the site unless PECO first determines whether they are needed. This doesn't sound like a good idea. Properly trained police, firefighters, and EMS personnel should be able to respond immediately to any dangerous incident in the community. If true, the public will need to be educated about why PECO thinks this is an advisable emergency protocol.

III. Summary

The proposed PECO Gate Station facility will bring increased risks to public health and safety. Burning natural gas to operate the plant will produce an array of chemicals and particles — smog-forming VOCs and nitrogen oxides that make breathing difficult, cancer-causing fine particulate matter and possibly radon gas, climate-destroying greenhouse gases — emitted into

the atmosphere where they will be invisible to the eye even as they do their very grave damage to health and well-being.

Some health symptoms may be felt immediately by some residents living in the neighborhood, workers and customers occupying businesses in close proximity, and elementary students attending school within 500 feet of the facility. The odors and noise coming from the site could reasonably be expected to interfere with students' learning, especially those who struggle in school with learning differences and attention issues like ADHD. In addition to acute exposures to toxic air emissions, cumulative exposures can cause serious health problems, particularly in women who are pregnant, and in children who may not develop chronic heart and respiratory disorders or cancer until years and even decades have passed after exposure.

It is predictable that the air pollution, noise and light pollution, the added vehicular traffic, and knowing of the possibility of an industrial accident at the site are likely to generate stress in the population of adults and children living in proximity to the facility. Stress is a side effect of living near fossil fuel infrastructure and other industrial facilities and has been shown to exacerbate mental health conditions such as anxiety and depression. Chronic stress also helps contribute to the development of chronic medical conditions.

PECO's plan to build and operate a natural gas gate station in such a densely developed, highly populated, high-traffic area is inherently dangerous to people living, working, shopping, and learning nearby. An operational gate station at this site will subject children and adults to toxic air pollution that will not pause and cannot be avoided. Threats to health and safety due to the nature of natural gas's extremely flammable and explosive physical properties will only add to the public health and safety risk people will face every day.

There are alternatives to natural gas. There are no alternatives to clean air. This PECO gate station in this location should not be built. The risk to health and safety is far too high. Building and operating it on this site is irresponsible and unnecessary. In my opinion, as a pediatrician, a father, and a fellow traveler on this planet, I believe this plan should be abandoned.

IV. More Resources:

The Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harmsof Fracking (Unconventional Gas and Oil Extraction) Seventh Edition

PubChem(NIH, National Library of Medicine, National Center for Biotechnology information)

Southwest Pennsylvania Environmental Health Project

Physicians for Social Responsibility Pennsylvania

Edward C. Ketyer, M.D., F.A.A.P.

Allegheny Health Network Pediatrics - Pediatric Alliance (Social Media Medical Advisor, Editor, *The Pedia Blog*) American Academy of Pediatrics Council on Environmental Health and Climate Change SWPA Environmental Health Project (Medical consultant) Physicians for Social Responsibility Pennsylvania (Board member and President-elect) Climate Reality Project Leadership Corps (Pittsburgh 2017)

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Delete	10				
Move From	0				
Move To	0				
Table Insert	0				
Table Delete	0				
Table moves to	0				
Table moves from 0					
Embedded Graphics (Visio, ChemDraw, Images etc.)	0				
Embedded Excel	0				
Format changes	0				
Total Changes:	17				

EXHIBIT C

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

PETITION OF PECO ENERGY COMPANY FOR A FINDING OF NECESSITY

PURSUANT TO 53 P.S. § 10619

Docket No. P-2021-3024328

<u>REMAND</u> DIRECT TESTIMONY

WITNESS: **JIMJAMES** CAPUZZI

CONFIDENTIAL VERSION

SUBJECT: ADVISE OF ISSUES, CONCERNS AND RECOMMENDATIONS RESULTING FROM THE REVEW OF PECO'S DOCUMENTS; AND PROFESSIONAL OPINION PROVIDE EXPERT TESTIMONY REGARDING THE SUITABILITY OF THE 2090 SPROUL ROAD SITE FOR THE RISKS AND SAFETY ISSUES ASSOCIATED WITH PECO'S PROPOSED LOCATION OF THE NATURAL GAS RELIABILITY STATION TO BE LOCATED AT 2090 SPROUL ROAD, MARPLE TOWNSHP, PA.

DATED: July 6September 22, 20212023

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- I
-

2

REMAND DIRECT TESTIMONY OF JIM CAPUZZI

I. INTRODUCTION

3

Q. Please state your name and business address.

4 A. My name is Jim Capuzzi. My business address as Fire Marshall for Marple Township is

5 227 S. Sproul Road, Broomall, PA 19008

6 Q. What is your educational background?

7 A. I received the following degrees: Drexel University - BS, Civil Engineering, 1979,

8 La Salle University - MBA, Risk Management & Insurance, 1986 and St. Joseph's University -

9 MS, Environmental Protection & Safety Mgmt, 2011.

10 Q. Please describe your work experience relevant to your Direct Testimony.

11 A. I am currently the Fire Marshal for Marple Township and have held that position for over

12 a decade. The Township Fire Marshall has all of the duties for enforcement of the Fire

13 Prevention Code of the Township, which establishes regulations governing conditions hazardous

14 to life and property from fire or explosion and includes the BOCA National Fire

15 Prevention Code and the Life Safety Code of the National Fire Protection Association.

16 Additionally, I am a Senior Consultant for Aon Global Risk Consulting of Philadelphia,

17 Pennsylvania, where I am responsible for property risk control consulting services for a diverse

18 book of business, including large multinational companies, and facilitating the resources of Aon

19 Global Risk Consultants (AGRC). I have over 40 years of fire protection engineering, property

20 risk control and related insurance brokerage experience. Previously, I was Director of Property

21 Risk Control for <u>Aon's Aon's</u> Philadelphia operations, including responsibility for the HPR/property

risk control consulting practice. Prior to joining Aon (Frank B. Hall & Co.) in 1987, I served as

1	a fire protection consultant and special representative with the Industrial Risk Insurers (IRI) -	
2	Philadelphia office.	
3	Q. Do you have any other experience or professional certifications that would be	
4	relevant to your Direct Testimony?	
5	A. Yes. I hold the professional designation CFPS (Certified Fire Protection Specialist). I an	n
6	a voting member of the National Fire Protection Association. Additionally, I am a long-time	
7	member of Broomall Fire Company #53 and currently serve as its President.	
8	II. PURPOSE OF TESTIMONY	
9	Q. What is the purpose of your <u>Remand</u> Direct Testimony in this proceeding?	
10 infor	A. I was asked by the Township to review the provided Direct Testimony, documents and ation in the initial hearings in this matter. It is my understanding	
<u>11</u>	that the Commonwealth Court remanded the matter back to the Public Utility Commission to	
<u>12</u>	conduct a thorough environmental review of the building siting proposal, including issues such	
<u>13</u>	as impact radius, noise, or heater emissions. I had reviewed the testimony, documents and	
11 Stati	<u>information</u> submitted by PECO in these proceedings related to the Gas Reliability n-proposed for the	
12 prepa	<u>proposed for the 2090 Sproul Road property relative to fire or life safety matters- in</u> ration	
<u>16</u>	for the initial testimony in this matter. I have been asked by the Township re affirm my prior	
<u>17</u>	testimony, updating same if necessary in light of the testimony offered by others at the initial	
<u>18</u>	hearings. The purpose of my testimony is to advise of issues, concerns and/or recommendations	<u>i</u>
13 profe	to advise of issues, concerns and/or recommendations $\underline{19}$ resulting from such review and to offer massional opinion as to the suitability of the $\underline{2090}$	у
14 from	professional opinion as to the suitability of the 2090-20 Sproul Road site for the proposed facilities a fire and life safety standpoint.	s
<u>1521</u>	Q. Are you sponsoring any exhibits?	

1622 A. Yes. I am sponsoring sponsored Exhibit JC-1, which is my professional resume of CV.-I am also

and 17 sponsoring-Exhibit JC-2, which is a draft (dated June 24, 2021) of the report I propose to issue to

1823which is the report I issued tothe Township Director of Code Enforcement. I understandthat my

- <u>1</u> prior testimony and the exhibits were previously admitted of record in this proceeding. I re-
- <u>2</u> affirm my previous testimony, including exhibits,
- **193** III. FIRE MARSHAL REVIEW AND REPORT
- **<u>204</u> Q.** Please describe your review.
- 215 A. At the request of the Township Solicitor and after signing the required non-disclosure
- 226 form, I reviewed PECO responses and supplemental responses to request for production of
- 237 documents and to interrogatories. My review included the following documents: PECO

18 000762-000769 Safety Data Sheets, 000473-000520C Gas Emergency Response, Confidential

29 2500-2506 Response to Emergency generator alarm; Confidential 2799-2822 Tank information

310 and safety data sheets; Confidential 3020-3026 Heater information; Confidential 3179-3223

- 4<u>11</u> Intertek surface burning report; Confidential 2731-2792 Due diligence report. On a separate
- **512** occasion, Thomas Dobbins, Chief of Broomall Fire Company, and I had a call with
- 613 representatives of PECO to discuss the proposed facility. I also reviewed the testimony of the

14 various witnesses at the prior hearings in this matter.

715 Q. Did you have any findings relative to fire and life safety matters?

<mark>8<u>16</u> A. Yes.</mark>

9<u>17</u> **Q.** What were your findings?

1018 A. As detailed in my draft-report, the information provided by PECO is lacking in detail as my initial findings were the Safety Data Sheet for Natural Gas

11 to the exact equipment, piping, instrumentation and protection systems for the proposed

12 Reliability Station, so giving exact recommendations at this time is difficult. However, from a

13 general standpoint, I call your attention to the Safety Data Sheet for Natural Gas provided by

14<u>19 provided by PECO. It</u> confirms that Natural Gas is an extremely flammable gas, easily ignitable and will

1520 will form explosive mixtures in air. The Data Sheet also gives guidance to emergency responders

1621 responders when an accidental release occurs. This guidance tracks with the guidance presented in the US

1722in the USDepartment of Transportation 2020 Emergency Response Guide (ERG). Bothdocuments call

1823 documents call for an immediate isolation of the leak area for at least 100 meters (330 feet) in all directions.

19 This would mean that on the report of any leak at the proposed facility at a minimum the

- <u>1</u> directions. This would mean that on the report of any leak at the proposed facility at a minimum
- <u>202</u> <u>the following evacuations must take place:</u>
- **213** 1. All homes on Cedar Grove Road between Sproul Road and Boxwood Dr.
- 2. All homes and businesses on Sproul between Parkway W and north of Cedar Grove
- 235 Rd. (Including Freddy's and Fritch's Fritch's)

2 7	4. The total shut-down of Sproul Road (PA Route 320).
3 8	If the leak is not immediately controlled this isolation area will need to be increased accordingly.
4	It may be argued that the US Department of Transportation also gives guidance to pipeline
5	operators in its Transmission Integrity Management Rule that could set the "Potential Impact
6	Circle (aka. Potential Impact Radius (PIR))" at a number less than the isolation radius in the
7	same agency's ERG. To calculate the PIR, exact parameters (e.g. pipe size and pressures) must
8	be provided, however all I can determine from PECO's response is the pressure under normal
9	operating conditions is expected to be below 200 psi).
10 9	I would also note that although I am concerned about the integrity of the underground piping, I
11<u>10</u>	am most concerned with the piping above ground and inside the proposed building which upon a
12 11	breach would vent directly to the atmosphere.
13	My review of PECO's Technical Procedure "Responses to Gas Odor Calls at PECO Gate
14	Stations" dated 3/11/2021 indicates that "all odor calls shall be covered within one hour of
15	notification of a suspected gas odor". This gives me great concern as for two reasons:
16	1. The use of the word shall does not guarantee that a representative from PECO will be on
17	site within the timeframe.
18	2. There is no guarantee that the PECO representative that responds is trained or qualified to
19	mitigate a leak.
20	I understand from my call that the proposed Reliability Station will not be manned, but remotely
21 <u>has</u>	<u>12</u> <u>I understand will not be manned, but remotely monitored and controlled. PECO</u>
<u>13</u>	indicated that there will also be safety systems installed in the station aimed at mitigating
22 provi	mitigating <u>14</u> potentially hazardous conditions. When written details of these systems are ded, <u>I will</u>

3. The first 3 homes on the east side of Boxwood Dr. from Cedar Grove Rd.

<u> 1</u><u>6</u>

23<u>15</u> **I** will review them the same as I do for any other new hazardous operation in the township.

With that said we all know that systems, no matter how redundant, are subject to failure and
require human intervention to control an incident. Should there be a leak emanating from a pipe
flange ahead of the main valve of the incoming gas line inside the Reliability Station it will be
necessary to manually shut <u>athe</u> valve in the street. Each second the leak goes unmitigated
increases the potential for an explosion with widespread destruction of property and potentially
the loss of life (both civilian and emergency responders).

722 Q. Are you aware that the Gas Reliability Station will be an unmanned facility?

81 A. Yes. The intent of the facility to be unmanned is a great concern and increases the <mark>9</mark>2 likelihood of greater area of damage to property and person before mitigation can be accomplished. Of even greater concern is the location of the Gas Reliability Station at the 103 <u>114</u> proposed 2090 Sproul Road site. Given the densely populated immediately surrounding residential community and adjacent commercial shopping center, the potential for immediate and 125 widespread damage to property and person in an emergency in-greatly increased. Having been 136 involved in the fire service for over forty years and a Certified Fire Protection Specialist who sits <u>147</u> on an NFPA committee, I strongly recommend the proposed Reliability Station not be built in <u>158</u> the densely habituated area. 169

¹⁷10 Q. Based on review and findings, do you have an opinion as to whether the location of
¹⁸11 Gas Reliability Station facilities as proposed by PECO at the 2090 Sproul Road site is
¹⁹12 appropriate and in the public interest.

<u>2013</u> A. I do.

<u>2114</u> Q. What is your opinion?

2215 A. For I originally offered that, or the reasons stated above, given the adjacent and immediate

<u>16</u> proximity to densely <u>23</u> populated residential community and immediately adjacent busy restaurant and commercial

1<u>17</u> and commercial shopping, coupled with the lack of information on emergency systems response,

18it is my opinion2that the 2090 Sproul Road site is not an appropriate location for theproposed Gas Reliability

3<u>19</u> <u>Gas Reliability</u> Station from a fire and life safety standpoint, and therefore is not in the public interest.

- 20 interest. I would like to re-affirm that opinion and, giving additional consideration to the
- 21 testimony of others in the initial hearings before the PUC, to reiterate my concerns from a fire
- <u>22</u> and life-safety standpoint. In my professional opinion, based on over forty years of fire service
- 23 and my experience and training as fire marshal and risk-management consultant certification as

1	Certified Fire	Protection S	pecialist,	that the	siting of	of this	facility	at this	site is	s not	appror	oriate

- 2 from a fire and life safety standpoint nor is it in the public interest. This opinion is based on the
- <u>3</u> my initial review as contained in his the JC-1 report and testimony in the initial hearings which
- <u>4</u> <u>confirmed that a significant number of persons live, work and shop and many buildings are</u>
- 5 situated within the impact radius in the event of fire or other catastrophic event at the facility,
- <u>6</u> coupled with the fact the facility will not be manned, PECO's projected response time and my ex

<u>7</u> experience with the Fire Company with respect to PECO's response time. Based on these factors,

- 8 it appears that the damage to persons and property in such an event could be substantial, and,
- 9 therefore, this facility should not be located or sited at the proposed site in such close proximity
- <u>10</u> to person and property.
- 4<u>11</u> IV. CONCLUSION
- **512 Q.** Does this conclude your <u>Remand</u> Direct Testimony?
- 613 A. Yes. However, I reserve the right to file such additional testimony as may be necessary or
- 7<u>14</u> appropriate.

EXHIBIT JC-





Jim Capuzzi

Senior Consultant Aon Global Risk Consulting / Philadelphia, PA

Current Responsibilities:	Jim Capuzzi is responsible for property risk control consulting
Special Areas of Expertise:	for a diverse book of business, including large multinational companies, and facilitating the resources of Aon Global Risk Consultants (AGRC). Jim possesses expertise in providing risk management consulting and in developing creative risk control solutions for a diverse client-base encompassing manufacturing; pharmaceutical/chemical; hospitality; entertainment; financial services; real estate and portfolio companies. Jim serves as a client advocate, providing consulting services including effective fire protection, property risk control and loss control solutions on a global basis with customers, consultants, carriers and vendors.
	Property Risk Control Due Diligence
	Flood Zone Determination HPR Trained - GE Gaps/IRI Former Employee
	Plan Review (Sprinkler/Construction) Risk Control Surveys Business Interruption & Contingent Business Interruption Analysis Account Risk & Recommendation Analysis
Prior Industry Experience:	Rapid Response Team Member Level ##
Education:	Jim's' career spans over 40 years of fire protection engineering, property risk control and related insurance brokerage experience. The former Director of Property Risk Control for Aon's Philadelphia operations including the Hershey office, he was responsible for HPR/property risk control consulting practice. He managed a staff of HPR-trained property risk control consultants and provided direction, support and resources to the ARS client base. Specializing in delivery of global HPR property risk control services to diversified manufacturing, pharmaceutical/chemical, financial services, hospitality, entertainment and real estate and service Industries. Prior to joining Aon (Frank B. Hall & Co.) in 1987, Jim served as a fire protection consultant and special representative with the Industrial Risk Insurers (IRIFRI) - Philadelphia office.
	St. Joseph's University - MS, Environmental Protection & Safety
Professional Designations:	Mgmt, 2011 La Salle University - MBA, Risk Management & Insurance, 1986 Drexel University - BS, Civil Engineering, 1979
Affiliations:	CFPS (Certified Fire Protection Specialist)
	NFPA (National Fire Protection Association) - Voting Member
	Heavy Industry Healthcare Pharmaceuticals / Chemicals

Client Experience:	Real Estate Technology

EXHIBIT JC-2

June 24, 2021

Joseph Romano Director Code Enforcement Marple Township 227 S Sproul Road Broomall, PA 19008-2397

Re: PECO Natural Gas Reliability Station

Dear Joe:

At the request of J. Adam Matlawski, I have reviewed the documents including PECO's responses to the interrogatories. On a separate occasion Thomas Dobbins, Chief of Broomall Fire Company and I had a call with representatives of PECO to discuss the proposed facility.

The information provided by PECO is lacking in detail as to the exact equipment, piping, instrumentation and protection systems for the proposed Reliability Station, so giving exact recommendations at this time is difficult.

From a general standpoint I call your attention to the Safety Data Sheet for Natural Gas provided by PECO. It confirms that Natural Gas is an extremely flammable gas, easily ignitable and will form explosive mixtures in air.

The Data Sheet also gives guidance to emergency responders when an accidental release occurs. This guidance tracks with the guidance presented in the US Department of Transportation 2020 Emergency Response Guide (ERG). Both documents call for an immediate isolation of the leak area for at least 100 meters (330 feet) in all directions. This would mean that on the report of any leak at the proposed facility at a minimum the following evacuations must take place:

- 1. All homes on Cedar Grove Road between Sproul Road and Boxwood Dr.
- 2. All homes and businesses on Sproul between Parkway W and north of Cedar Grove Rd. (Including Freddy's and Fritch's)
- 3. The first fn•st 3 homes on the east side of Boxwood Dr. from Cedar Grove Rd.
- 4. The total shut-down of Sproul Road (PA Route 320).

If the leak is not immediately controlled this isolation area will need to be increased accordingly. It may be argued that the US Department of Transportation also gives guidance to pipeline operators in its Transmission Integrity Management Rule that could set the "Potential Impact Circle (aka. Potential Impact Radius (PIR))" at a number less than the isolation radius in the same agency's ERG. To calculate the PIR exact parameters (e.g. pipe size and pressures) must be provided, however all I can determine from PECO's response is the pressure under normal operating conditions is expected to be below 200-psi). I would also note that although I am concerned about the integrity of the underground piping, I am most concerned with the piping above ground and inside the proposed building which upon a breach would vent directly to the atmosphere.

My review of PECO's Technical Procedure "Responses to Gas Odor Calls at PECO Gate Stations" dated 3/11/2021 indicates that "all odor calls shall be covered within one hour of notification of a suspected gas odor". This gives me great concern as for two reasons:

This gives me great concern as for two reasons:

- **1.** The use of the word shall does not guarantee that a representative from PECO will be on site within the timeframe.
 - 2. There is no guarantee that the PECO representative that responds is trained or qualified to mitigate

a leak.

I understand from my call that the proposed Reliability Station will not be manned, but remotely monitored and controlled. There will also be safety systems installed in the station aimed at mitigating potentially hazardous conditions. When written details of these systems are provided I will review them the same as I do for any other new hazardous operation in the township.

With that said we all know that systems, no matter how redundant are subject to failure and require human intervention to control an incident. Should there be a leak emanating from a pipe flange ahead of the main valve of the incoming gas line inside the Reliability Station it will be necessary to manually shut a valve in the street. Each second the leak goes unmitigated increases the potential for an explosion with widespread destruction of property and potentially the loss of life (both civilian and emergency responders).

Having been involved in the fire service for over forty years and a Certified Fire Protection Specialist who sits on an NFPA committee, I strongly recommend the proposed Reliability Station not be built in the densely habituated area.

Should you have any questions, please do not hesitate to contact me on my cellular telephone (215-4859094).

Sincerely,

Jone M Copy
(Add) $/_{(e7, 77)}$

James M. Capuzzi Fire Marshal —Marple Township

Cc: Glen Holt — Marple Township

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true and correct copy of the foregoing, Pre-Served Testimony of Jim Capuzzi on behalf of Marple Township and Delaware County, in accordance with the requirements of 52 Pa. Code §1.54 (relating to service by a participant) in the manner listed below upon the parties listed below:

Christopher A. Lewis, Esquire Frank L. Tamulonis, Esquire Stephen C. Zumbrun, Esquire Blank Rome LLP One Logan Square Philadelphia, PA 19103-6998 lewisa, blankrome.com ftam u I on isablan krom e.com szpabelpadelphikyspecemer Accepts eService Representing PECO Energy Company

Theodore R. Uhlman 2152 Sproul Road Broomall, PA 19008 uhlm antrayaoo . corn Accepts eService Jack R. Garfinkle, EsquirePECO Energy Company2301 Market StreetP.O. Box 8699Philadelphia, PA 19101-8699Jack.garfinkle@exeloncohpAccepts eService/s/ J. Ada

VERIFICAT ION

/s/ J. Adam Matlawski

ke C Robert W Scott By: J. Adam

Carl Ewald, Esquire 205 North Monroe Street Media, PA 19063 rscotrobertwscottpc.com carlewald@gmail.com_Accepts eService

Julia M. Baker Objects Conservation Associates 2150 Sproul Road Broomall, PA 19008 jbakerocaamsn.com Accepts eService

Respectfully Submitted,

MCNICHOL, BYRNE & MATLAWSKI, P.C.

I, James Capuzzi, hereby verify that the facts set forth in the foregoing Remand Direct Written Testimony is true and correct to the best of my knowledge, information and belief, and that these statements are made subject to the penalties of 18 Pa. C.S. §4909, relating to unsworn falsification to authorities.

CERTIFICATE OF SERVICE

<u>I hereby certify that I have this day served a true and correct copy of the Remand Direct</u> <u>Testimony of James Capuzzi, in accordance with the requirements of 52 Pa. Code §1.54 (relating</u> to service by a participant) in the manner listed below upon the parties listed below:

Christopher A. Lewis, Esquire Frank L. Tamulonis, Esquire Stephen C. Zumbrun, Esquire Joel Michel, Esquire Blank Rome LLP One Logan Square Philadelphia, PA 19103-6998 lewis@blankrome.com ftamulonis@blankrome.com szumbrun@blankrome.com jmichel@blankrome.com Accepts eService *Representing PECO Energy Company*

<u>Theodore R. Uhlman</u> <u>2152 Sproul Road</u> <u>Broomall, PA 19008</u> <u>uhlmantr@yahoo.com</u> <u>Accepts eService</u>

<u>Julia M. Baker</u> <u>Objects Conservation Associates</u> 2150 Sproul Road <u>Broomall, PA 19008</u> jbakeroca@msn.com <u>Accepts eService</u> Jack R. Garfinkle, Esquire <u>PECO Energy Company</u> <u>2301 Market Street</u> <u>P.O. Box 8699</u> <u>Philadelphia, PA 19101-8699</u> <u>Jack.garfinkle@exeloncorp</u> <u>Accepts eService</u>

Robert W. Scott, Esquire Carl Ewald, Esquire 205 North Monroe Street Media, PA 19063 rscott@robertwscottpc.com carlewald@gmail.com Accepts eService

MCNICHOL, BYRNE & MATLAWSKI, P.C.:

Dated: September 22, 2023

<u>/s/ J. Adam Matlawski</u> J. Adam Matlawski, Esq. <u>Attorney I.D. No.: 41678</u> 1223 N. Providence Road

Media, PA 19063

By:

Summary report:	
Litera Compare for Word 11.3.0.46 Document comparison done on	
9/26/2023 9:40:53 AM	
Style name: Default Style	
Intelligent Table Comparison: Active	
Original filename: Rebuttal Testimony - Jim Capuzzi - Statem	nent No.
2(126733147.1).pdf	
Modified filename: CAPUZZI Testimony.pdf	
Changes:	
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Delete	154
Move From	6
Move To	6
Table Insert	4
Table Delete	0
Table moves to	0
Table moves from	0
Embedded Graphics (Visio, ChemDraw, Images etc.)	1
Embedded Excel	0
Format changes	0
Total Changes:	360

Exhibit D

Rosemary Chiavetta, Secretary Pennsylvania Public Utility Commission Commonwealth Keystone Building 400 North Street, 2 nd Floor Harrisburg, PA 17120

Re: Docket No. P-2021-3024328

Dear Secretary Chiavetta:

Enclosed please find attached

BILL BECK'S OFFICIAL PROTEST

Copies of this document have been served in accordance with the attached Certificate of Service.

Thank you for your attention to this matter.

Respectfully Submitted,

Beek. Bill Beck

2123 Boxwood Drive Broomall, PA 19008

July 27, 2023

Prepared with assistance from Ted Uhlman

BEFORE THE COMMONWEALTH OF PENNSYLVANIA PENNSYLVANIA PUBLIC UTILITY COMMISSION

:

:

:

Petition of PECO Energy Company for a Finding of Necessity Pursuant to 53 P.S. § 10619 that the Situation of Two Buildings Associated with a Gas Reliability Station in Marple Township, Delaware County Is Reasonably Necessary for the Convenience and Welfare of the Public

Docket No. P-2021-3024328

BILL BECK'S PROTEST (OFFICIAL)

Born in 1952, I moved to 2123 Boxwood with my family in 1964. My father died in 2007, mother in 2011. Now I livehere with my sister. I have lived with Spastic Cerebral Palsy since I was a child. Despite this disability, I have had an active life. My last job was working at a non-profit, Freedom Valley Services, in the field of Disability Advocacy Support Services and Independent Living, from the mid-80's until I retired in 2012, at which time I briefly served on the Board of Directors. I am non-ambulatory and have used wheelchairs and power wheelchairs since childhood.

The way I look at it, PECO may need this Reliability Station, but not in this location. Not in this densely populated residential and community business neighborhood. I always hear the noisy children eating outside at Freddy's, and I am concerned for their sake by the remote possibility of the facility blowing up.

Also, and I wonder what the response time would be if there were a problem. I am concerned about the fact that there will be nobody on-site at the facility if a problem develops, and I am concerned about dependence on the Internet and computers, both as a source of access to hackers and as an emergency communication system. How I be evacuated? The Group Home on Mary Lane has 24/7 attendants and vehicles that could move them out of harms way; I live with my sister, and we both will need assistance if an emergency at the Reliability Station occurs. Currently, I cannot ride in a standard vehicle; ambulance rides are extremely painful. Paratransit vans and other wheelchair accessible vehicles are required due to my special medical condition. The Potential Impact Radius of the facility is 190 feet, and our property is with that radius. There are also many older people living in the area who would require assistance.

I also suffer from Spastic Startle Reflex; therefore, sudden loud noises from the facility would be a problem for me. When I experience sudden loud noises, such as fireworks, I suffer a variety of uncontrolled responses that cause me to drop items I am holding, etc. I also respond with an increased

2

heart rate. Not only am I concerned for myself in regards to this, but also, infants who experience these sounds are at greater risk for Spastic Startle Reflex, in which the normal Moro Reflex that is expected in newborns is not reduced and eliminated with age.

Respectfully Submitted,

6/Beck Bill Beck

2123 Boxwood Drive Broomall, PA 19008

July 27, 2023

Prepared with assistance from Ted Uhlman

P-2021-3024328 - PETITION OF PECO ENERGY COMPANY FOR A FINDING OF NECESSITY PURSUANT TO 53 P.S. § 10619 THAT THE SITUATION OF TWO BUILDINGS ASSOCIATED WITH A GAS RELIABILITY STATION IN MARPLE TOWNSHIP, DELAWARE COUNTY IS REASONABLY NECESSARY FOR THE CONVENIENCE AND WELFARE OF THE PUBLIC.

FULL-SERVICE LIST:

ALJ Mary Long malong@pa.gov

CHRISTOPHER A. LEWIS ESQUIRE FRANK L. TAMULONIS ESQUIRE STEPHEN C. ZUMBRUN ESQUIRE BLANK ROME, LLP ONE LOGAN SQUARE 130 NORTH 18TH STREET PHILADELPHIA PA 19103 215-569-5793 lewis@blankrome.com

ftamulonis@blankrome.com szumbrun@blankrome.com

Accepts eService Representing PECO Energy Company

JACK R. GARFINKLE ESQUIRE PECO ENERGY COMPANY 2301 MARKET STREET PO BOX 8699 PHILADELPHIA PA 19101-8699 215.841.6863 jack.garfinkle@exeloncorp Accepts eService KAITLYN T. SEARLS ESQUIRE J. ADAM MATLAWSKI ESQUIRE MCNICHOL, BYRBE & MATLAWSKI, P.C. 1223 N PROVIDENCE ROAD MEDIA PA 19063 ksearls@mbmlawoffice.com amatlawski@mbmlawoffice.com Accepts eService

Representing Marple Township

THEODORE R. UHLMAN 2152 SPROUL RD BROOMALL PA 19008 484.904.5377

uhlmantr@yahoo.com Accepts eService

JULIA M. BAKER 2150 SPROUL RD BROOMALL PA 19008 610.745.8491

jbakeroca@gmail.com Accepts eService

1	DIRECT TESTIMONY OF BILL BECK
2	Docket No. P-2021-3024328
3	<u>October 11, 2023</u>

1

DIRECT TESTIMONY OF BILL BECK

- 2 **Q.** Please state your name and address.
- A. My name is William Beck, and I live at 2123 Boxwood Drive, Broomall, PA, about 200 feet from
 the proposed location of the Exelon/PECO Gas Expansion Plant at the Corner of Sproul and Cedar
 Grove Roads.
- 6 Q. How long have you lived at that address?
- A. Born in 1952, I moved to 2123 Boxwood with my family in 1964. My father died in 2007, mother in
 2011. Now I live here with my sister.

9 Q. Do you have any significant health conditions?

10 A. I have lived with Spastic Cerebral Palsy since I was a baby. Despite this disability, I have had an 11 active life. My last job was working. at a former non-profit called Freedom Valley Disability 12 Enablement-FVDE (a Center for Independent Living), in the field of Disability Advocacy, 13 Community Support Services, Peer Mentoring/Counseling and Independent Living Skills Training, from the mid-80's until I retired in 2012, at which time I asked to served on FVDE's Board of 14 15 Directors, mostly as their President. I am non-ambulatory and have used wheelchairs and power wheelchairs since childhood for my mobility. Also, I have a BS and MEd degrees in Rehabilitation 16 17 Services Education and Rehabilitation Counseling from Penn State University.

18 **Q.** What is the purpose of your testimony in this proceeding?

19 The way I look at it, PECO may need this facility, but not in this location. Not in this densely
20 populated residential and commercial business neighborhood. I always hear the noisy children
21 eating outside at Freddy's (fast food business next to PECO's purposed project) and I am concerned
22 for their safety by the remote possibility of the facility an incident like blowing up.

1 Q. Do you have any specific concerns about the facility as it relates to your health conditions? 2 A. I wonder what the response time would be if there were a problem. I am concerned about the fact 3 that there will be nobody on-site at the facility if a problem develops, and I am concerned about 4 dependence on the Internet and computers, both as a source of access to hackers and as an 5 emergency communication system. How will I be evacuated? The Group Home on Mary Lane has 6 24/7 attendants and vehicles that could move them out of harms way; however, I live with my sister, 7 and we both will need assistance if an emergency at the facility occurs. Currently, I cannot ride in a 8 standard vehicle; ambulance rides are extremely painful. Paratransit vans and other wheelchair 9 accessible vehicles are required due to my special medical condition. The Potential Impact Radius of 10 the facility is 190 feet, and our property is with that radius. There are also many older people living 11 in the area who would require assistance.

12 **Q.** Do you have any additional concerns about the facility?

A. I also suffer from Spastic Startle Reflex; therefore, sudden loud noises from the facility would be a
problem for me. When I experience sudden loud noises, such as fireworks, I suffer a variety of
uncontrolled responses that cause me to drop items I am holding, etc. I also respond with an
increased heart rate. Not only am I concerned for myself in regards to this, but also, infants who
experience these sounds are at greater risk for Spastic Startle Reflex, in which this is normal motor
Reflex that is expected in newborns but is not reduced and eliminated with age with some people
with Cerebral Palsy.

20 Respectfully Submitted,

BBeck, **Bill Beck**

2123 Boxwood Drive Broomall, PA 19008

Exhibit E

EXHIBIT JC-2

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June 24, 2021

Joseph Romano Director Code Enforcement Marple Township 227 S Sproul Road Broomall, PA 19008-2397

Re: PECO Natural Gas Reliability Station

Dear Joe:

At the request of J. Adam Matlawski, I have reviewed the documents including PECO's responses to the interrogatories. On a separate occasion Thomas Dobbins, Chief of Broomall Fire Company and I had a call with representatives of PECO to discuss the proposed facility.

The information provided by PECO is lacking in detail as to the exact equipment, piping, instrumentation and protection systems for the proposed Reliability Station, so giving exact recommendations at this time is difficult.

From a general standpoint I call your attention to the Safety Data Sheet for Natural Gas provided by PECO. It confirms that Natural Gas is an extremely flammable gas, easily ignitable and will form explosive mixtures in air.

The Data Sheet also gives guidance to emergency responders when an accidental release occurs. This guidance tracks with the guidance presented in the US Department of Transportation 2020 Emergency Response Guide (ERG). Both documents call for an immediate isolation of the leak area for at least 100 meters (330 feet) in all directions. This would mean that on the report of any leak at the proposed facility at a minimum the following evacuations must take place:

- 1. All homes on Cedar Grove Road between Sproul Road and Boxwood Dr.
- 2. All homes and businesses on Sproul between Parkway W and north of Cedar Grove Rd. (Including Freddy's and Fritch's)
- 3. The first 3 homes on the east side of Boxwood Dr. from Cedar Grove Rd.
- 4. The total shut-down of Sproul Road (PA Route 320).

If the leak is not immediately controlled this isolation area will need to be increased accordingly. It may be argued that the US Department of Transportation also gives guidance to pipeline operators in its Transmission Integrity Management Rule that could set the "Potential Impact Circle (aka. Potential Impact Radius (PIR))" at a number less than the isolation radius in the same agency's ERG. To calculate the PIR exact parameters (e.g. pipe size and pressures) must be provided, however all I can determine from PECO's response is the pressure under normal operating conditions is expected to be below 200-psi). I would also note that although I am concerned about the integrity of the underground piping, I am most concerned with the piping above ground and inside the proposed building which upon a breach would vent directly to the atmosphere.



- 1. The use of the word shall does not guarantee that a representative from PECO will be on site within the timeframe.
- 2. There is no guarantee that the PECO representative that responds is trained or qualified to mitigate a leak.

I understand from my call that the proposed Reliability Station will not be manned, but remotely monitored and controlled. There will also be safety systems installed in the station aimed at mitigating potentially hazardous conditions. When written details of these systems are provided I will review them the same as I do for any other new hazardous operation in the township.

With that said we all know that systems, no matter how redundant are subject to failure and require human intervention to control an incident. Should there be a leak emanating from a pipe flange ahead of the main valve of the incoming gas line inside the Reliability Station it will be necessary to manually shut a valve in the street. Each second the leak goes unmitigated increases the potential for an explosion with widespread destruction of property and potentially the loss of life (both civilian and emergency responders).

Having been involved in the fire service for over forty years and a Certified Fire Protection Specialist who sits on an NFPA committee, I strongly recommend the proposed Reliability Station not be built in the densely habituated area.

Should you have any questions, please do not hesitate to contact me on my cellular telephone (215-485-9094).

Sincerely,

Jam M. Copy

James M. Capuzzi Fire Marshal – Marple Township

Cc: Glen Holt – Marple Township

EXHIBIT EK-2

REPORT OF DR. EDWARD KETYER REGARDING PROPOSED PECO "NATURAL GAS RELIABILITY PROJECT" MARPLE TOWNSHIP, PA

I. Introduction

My name is Dr. Edward Ketyer. I reside at 102 Meadowvue Court in Venetia, PA (Washington County). I am a medical doctor (M.D., Northwestern University School of Medicine 1987). I am a pediatrician who retired from patient care after 26 wonderful years in a busy primary care pediatric office. Until my retirement I was a Clinical Assistant Professor of Pediatrics in the Department of Pediatrics at the University of Pittsburgh School of Medicine.

I am still employed by Allegheny Health Network as their Social Media Medical Advisor for the AHN Pediatric Institute (AHN Pediatrics - Pediatric Alliance). I am proud to be the editor and principle writer for *The PediaBlog* (www.thepediablog.com), a blog centered around pediatric topics of interest for parents and caretakers, with posts published every day since August 2012.

I remain a member of the Pennsylvania Medical Society and the Allegheny County Medical Society.

I am also a member of the American Academy of Pediatrics and the AAP Council on Environmental Health and Climate Change (COEHCC).

Since 2015, I have been a medical advisor for SWPA Environmental Health Project — a nonprofit, evidence-based, public health organization dedicated to assisting residents reduce their health risks objectively associated with living near shale gas (unconventional) oil and gas operations in Pennsylvania's Marcellus Shale region and other areas in the U.S.

I am a board member and President-elect of Physicians for Social Responsibility, a statewide non-profit environmental health advocacy organization helping doctors and other health care providers and the public learn about health risks objectively associated with shale gas development and climate change, in addition to other topics of national and global importance. I also serve on the steering committee of Concerned Health Professionals of Pennsylvania, a group of physicians and nurses who understand that there is no safe way to frack.

I am a Co-Chair of the Education and Outreach Workgroup of the Cancer and Environment Network of Southwestern Pennsylvania.

Finally, I am a member of the Climate Reality Project Leadership Corps. and Climate Reality Pittsburgh & SWPA Chapter.

I was asked to present this testimony from residents living in Marple Township who are opposed to this fracked gas project. I will limit this testimony to the potential and expected harms to the health of residents living nearby, and to children attending an elementary school less than 500 feet away from the proposed site.

I am not an engineer, so I will not discuss in any detail the nature of the building being proposed or its function to supply consumers with natural gas. Nor am I a city planner, so, although this project doesn't seem advisable, I will not opine about the wisdom or foolishness associated with siting a large fracked gas facility such as this one into close proximity to residential and commercial properties, residents and schoolchildren, except to consider the threat to public health and safety this facility represents.

I am a pediatrician by training. I take care of children and advise their parents on how to care for them and protect them from harm and disease. This is my area of expertise. From a pediatric health and safety standpoint, siting PECO's "Natural Gas Reliability Project" at the intersection of two busy roads, in close proximity to homes, retail businesses, and an elementary school is unwise. It is dangerous. It exposes children and their families to harmful emissions from burning natural gas, noise, and light pollution, and it compromises public safety due to the potential for inadvertent leaks and explosions that can occur accidently or during periods of maintenance at the facility.

As a pediatrician, a father, and an advocate for urgent solutions to the climate crisis, I believe I am within my area of expertise to say that the PECO "Natural Gas Reliability Project" should not be approved at this or any site. Climate change is an immediate threat to the health of children and the adults who love them. This is an objective statement. Any project that involves burning even more fossil fuels than before, even natural gas, is inconsistent with solving the climate crisis. In fact, allowing this project to proceed would ignore the scope, the severity, and the urgency of the climate crisis — a local, regional, national, and global emergency which is very much happening today. In fact, partly because of Pennsylvania's long history of extracting fossil fuels (today, mostly by the rapid expansion of fracking), climate change is accelerating. Last month, the International Energy Agency (IEA) <u>declared</u> that investment in, and new development of, all fossil fuel infrastructure, including natural gas, must end immediately in order to fully decarbonize by 2050 and limit global average warming to 1.5 degrees Celsius, which is the consensus value of climate scientists everywhere, recorded in the Intergovernmental Panel on Climate Change Special Report (2018), and the minimum goal of the Paris Climate Agreement.

This makes the PECO "Natural Gas Reliability Station" not only an unwise project, it is an irresponsible and amoral one. Expanding customers' reliance on natural gas will require even more expansion of drilling and fracking in the Marcellus Shale, negatively impacting the health of safety of people living near it. I live in Washington County, which is the most heavily fracked county in Pennsylvania. While fracking has brought a number of jobs, it has brought with it a dangerous amount of pollution to the air, water, and soil that we all share. It has negatively impacted the health of <u>adults</u> and <u>children</u> living nearby.

I have personally witnessed some of the health harms people have suffered and continue to suffer as a result of leaving nearby fracking wells, pipelines, and compressor stations. Many of their stories were heard by the <u>43rd Statewide Investigating Grand Jury</u> that last year reported on many industry and regulatory failures to protect Pennsylvania residents from harm.

Fracking is dirty and dangerous. It scars the landscape, damaging and degrading the environment. It pollutes the air and water — precious resources that are supposed to be protected by Article I Section 27 of the Pennsylvania Constitution for all PA residents, and for generations to come. Objectively, fracking makes people sick. <u>The Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction) Seventh Edition</u>, published by Concerned Health Professionals of New York and Physicians for Social Responsibility now contains in excess of 2,000 peer-reviewed studies, government investigations, and media reports. The medical experts conclude that "fracking cannot operate without threating public health directly, or without imperiling climate stability upon which public health depends."

Let's take a look at how this gate station, which PECO disingenuously calls a "natural gas reliability station," will adversely impact public health and safety.

II. Public health and safety threats and potential impacts from PECO Gate Station

A. Air pollution

Burning methane (CH4) generates specific physical and chemical byproducts that must be released into the atmosphere in order for efficient combustion to occur. While the PECO website offers very little information about what activities will actually be going on at the site in Marple Township, my understanding is that six large methane-fired "heaters" operating alone or in combination will produce large enough volumes of emissions to produce health symptoms in adults and children living, shopping, and learning nearby.

The emissions produced by burning natural gas are by and large invisible due to the size and physical properties of each component. Each component of the air pollution generated by burning natural gas has very significant health risks potentially associated with it. There is no safe level of exposure to any component of pollution resulting from natural gas combustion. We know that even small amounts of exposure, even when brief, can produce significant health signs and symptoms that can affect quality of life for some and increase the risk of poor health outcomes for everyone.

The natural gas industry tells consumers that natural gas burns cleaner than coal and oil. While that's generally true — for example, burning methane results is significantly less particulate matter pollution compared with coal and oil — it's like putting a filter on a cigarette and saying that it too is cleaner. Yes, there are fewer particles and the filter captures some dangerous tar and other substances, but no doctor is going to reassure their patient that it is safe to smoke it.

We also know that invisible particles, smelly vapors, and chemicals that constitute modern air pollution caused mostly from burning fossil fuels like natural gas can impair fertility, complicate pregnancies, and lead to poor birth outcomes. Birth defects and developmental delays caused by some components of toxic air pollution lead to lifelong health burdens for young children, for their families, and for society. ADHD, learning disabilities, and even the development of autism have been associated with air pollution exposure during pregnancy. Lung cancer, bladder cancer, and other types of adult and childhood cancers are linked to air pollution, which impacts practically every organ system in the body — not just the lungs, but also the heart and brain, the liver and kidneys. Adults with chronic obstructive pulmonary diseases (COPD) and other chronic lung diseases, heart disease, and children with asthma have worse symptoms and sicker days when air quality is not good. Recent research describes the links between air pollution and the development of obesity, type 2 diabetes, dementia, anxiety, depression and other forms of mental illness. And it is now estimated that nearly <u>9 million people</u> worldwide die prematurely each year as a result of air pollution, and that includes hundreds of thousands of Americans.

1. Fine and ultrafine particulate matter (PM 2.5 and smaller; PM 2.5 refers to particles 2.5 micrometers and smaller — for perspective, about thirty 2.5 micron particles laid side by side would equal the width of a human hair).

The cradle-to-grave health impacts caused by breathing air polluted with microscopic fine and ultrafine particles are well-known after decades of occupational and community-level, peer-reviewed, epidemiological research. As I mentioned above, researchers have linked PM 2.5 pollution with impaired fertility, miscarriage, and poor birth outcomes such as low birth weight, small-for-gestational age newborns, and prematurity — each of which carry lifelong health burdens for children, their families, and society. Breathing air contaminated with PM 2.5

exacerbates lung symptoms in children and adults with asthma and other chronic lung diseases. PM 2.5 is a potent contributor to the development of cardiovascular and cerebrovascular disease (i.e. heart attacks and strokes). PM 2.5 is a known carcinogen, causing lung cancer and bladder cancer, and is associated with other types of cancer in adults.

Many people tolerate particulate matter pollution to some degree, even if they experience relatively mild health symptoms impacting the eyes (burning and redness), ears (middle ear infections in children), nose (burning, rhinitis, sneezing, nosebleeds), and throat (irritation and soreness). Breathing PM 2.5 causes headaches in some people and sinus problems in others. But let me be clear: there is no safe level of PM 2.5 exposure because even small exposures (even those under EPA or WHO standards) can still result in noticeable health symptoms.

2. Volatile organic compounds (benzene and formaldehyde are two examples).

Burning fossil fuels, including natural gas, produces VOCs like benzene. Benzene as an airborne pollutant can cause mild symptoms of toxicity — dizziness, headache, and nausea, for example — and more extreme symptoms such as tremors, confusion, and unconsciousness with high levels of exposure. Benzene is a known carcinogen, causing cancer in children and adults. Fossil fuel combustion (which includes natural gas) results in emissions of other harmful VOCs potentially leading to serious health concerns, including toluene (permanent neurological damage), ethylbenzene and xylene (ENT and neurotoxicity), and formaldehyde (ENT and lung irritant, human carcinogen).

3. Nitrogen oxides (NOx)

Nitrogen oxide is produced abundantly wherever fossil fuels and natural gas are combusted. Nitrogen oxide combines with VOCs in the presence of sunlight and heat to produce ground level ozone, also known as smog. Ozone adversely impacts every person's lung function. It has been shown to <u>stunt</u> lung function growth in infants and young children. Whether one is young or old, rich or poor, active or sedentary, everyone's lung function is diminished on days when ozone levels are high.

4. Carbon monoxide (CO)

Carbon monoxide is toxic to every human if exposure is high enough. Depending on the level and duration of exposure, carbon monoxide can cause symptoms as mild as headaches, dizziness, and nausea, to more severe symptoms like hallucinations and loss of consciousness, and death.

5. Carbon dioxide (CO2)

Burning methane produces about 50% less CO2 than coal per energy equivalent. On a planet facing a climate emergency, with all the methane being fracked and burned, that is still a lot of greenhouse gas emissions. CO2 from the burning of fossil fuels, including fossil gas, is the principle greenhouse gas responsible for causing the climate crisis. Climate change is adversely impacting the health and safety of children and adults around the world right now. It is a health threat to every child on the planet today, and will be a threat for generations to come until humans decide to abruptly stop using fossil fuels.

6. Sulfur dioxide (SO2)

Burning methane results in less sulfur dioxide pollution compared with burning coal and oil, but as I alluded to earlier, "less" does not mean "none." SO2 in low amounts can cause upper and lower respiratory irritation; higher exposures can lead to difficulty breathing and death from respiratory failure and cardiac arrest.

7. Radon gas

Natural gas slated to flow through the Marple Township Natural Gas Gate Station comes from the highly radioactive Marcellus Shale. Radioactivity is a major health threat from upstream and downstream sources in the shale gas supply chain, beginning at the wellhead and continuing on to consumers' stovetops and furnaces.

Radon gas has been shown to be one of these radioactive threats. Radon is the second-leading cause of lung cancer behind tobacco smoke.

8. Methane (from incomplete combustion, intentional venting, and unintentional leaks).

Large volumes of methane leak inadvertently and are vented and flared intentionally into the atmosphere throughout every phase of natural gas extraction (conventional and especially unconventional shale gas development), transportation/transmission, delivery, and consumption. Methane is an extremely potent greenhouse gas, trapping heat in the atmosphere 86 times more effectively compared with CO2 over a 20-year time period. Methane leaks abundantly from fracked gas infrastructure — from gas wells to pipelines to compressor stations to processing facilities to gate stations and metering stations to homes and businesses. Any greenhouse gas savings achieved by burning natural gas instead of coal is instead squandered by allowing methane to carelessly escape from natural gas infrastructure.

B. Noise and light pollution

Noise pollution and light pollution from the proposed Marple Township gate station will potentially result in additional adverse health impacts, especially mental health. Both types of pollution have been shown to interfere with healthy, restful, restorative sleep in residents living nearby loud and bright industrial sites. Cognition may be impacted from chronic exposure to loud background noise, creating a disadvantage for students who wish to learn efficiently and working adults who wish to be productive on the job.

I would like to pause and note here that any human who witnesses environmental degradation and destruction (as this project represents to anyone seeing the big picture) generally experiences a negative impact on their mental health. And this is especially true in children.

C. Vehicular traffic

The proposed PECO Gate Station in Marple Township is sited on the corner of a busy intersection. The surrounding homes, school, and businesses already generate abundant car, truck, and school bus traffic. In the event of anticipated vehicular accidents, an evacuation plan for the neighboring community, school, and businesses must be created, made public, and updated as local conditions/development change.

D. Explosions and fires

It is well known that pipelines can leak and spill. They can shift in the ground and slip into sinkholes. Over time, pipelines rust and corrode. Pipeline accidents and explosions can destroy homes and property, and they can maim and kill people. There are multiple examples of each of these incidents involving pipelines in Pennsylvania. The proposed Gate Station in Marple Township is essentially a part of the pipeline infrastructure. Because natural gas will enter and exit the facility, and because the pipelines are expected to undergo physical stress due to cooling and heating, the Gate Station will plausibly be subjected to any and all of these potentially catastrophic events. Residents, businesses, and the parents of schoolchildren must be warned ahead of time of the potential threats this facility presents to the health and safety of all community members.

It is my understanding that first responders will not be allowed to respond to an incident or accident occurring at the site unless PECO first determines whether they are needed. This doesn't sound like a good idea. Properly trained police, firefighters, and EMS personnel should be able to respond immediately to any dangerous incident in the community. If true, the public will need to be educated about why PECO thinks this is an advisable emergency protocol.

III. Summary

The proposed PECO Gate Station facility will bring increased risks to public health and safety. Burning natural gas to operate the plant will produce an array of chemicals and particles smog-forming VOCs and nitrogen oxides that make breathing difficult, cancer-causing fine particulate matter and possibly radon gas, climate-destroying greenhouse gases — emitted into the atmosphere where they will be invisible to the eye even as they do their very grave damage to health and well-being.

Some health symptoms may be felt immediately by some residents living in the neighborhood, workers and customers occupying businesses in close proximity, and elementary students attending school within 500 feet of the facility. The odors and noise coming from the site could reasonably be expected to interfere with students' learning, especially those who struggle in school with learning differences and attention issues like ADHD. In addition to acute exposures to toxic air emissions, cumulative exposures can cause serious health problems, particularly in women who are pregnant, and in children who may not develop chronic heart and respiratory disorders or cancer until years and even decades have passed after exposure.

It is predictable that the air pollution, noise and light pollution, the added vehicular traffic, and knowing of the possibility of an industrial accident at the site are likely to generate stress in the population of adults and children living in proximity to the facility. Stress is a side effect of living near fossil fuel infrastructure and other industrial facilities and has been shown to exacerbate mental health conditions such as anxiety and depression. Chronic stress also helps contribute to the development of chronic medical conditions.

PECO's plan to build and operate a natural gas gate station in such a densely developed, highly populated, high-traffic area is inherently dangerous to people living, working, shopping, and learning nearby. An operational gate station at this site will subject children and adults to toxic air pollution that will not pause and cannot be avoided. Threats to health and safety due to the nature of natural gas's extremely flammable and explosive physical properties will only add to the public health and safety risk people will face every day.

There are alternatives to natural gas. There are no alternatives to clean air. This PECO gate station in this location should not be built. The risk to health and safety is far too high. Building and operating it on this site is irresponsible and unnecessary. In my opinion, as a pediatrician, a father, and a fellow traveler on this planet, I believe this plan should be abandoned.

IV. More Resources:

The Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction) Seventh Edition

PubChem (NIH, National Library of Medicine, National Center for Biotechnology information)

Southwest Pennsylvania Environmental Health Project

Physicians for Social Responsibility Pennsylvania

Edward C. Ketyer, M.D., F.A.A.P.

Allegheny Health Network Pediatrics - Pediatric Alliance (Social Media Medical Advisor, Editor, *The Pedia Blog*) American Academy of Pediatrics Council on Environmental Health and Climate Change SWPA Environmental Health Project (Medical consultant) Physicians for Social Responsibility Pennsylvania (Board member and President-elect) Climate Reality Project Leadership Corps (Pittsburgh 2017)

102 Meadowvue Court Venetia, PA 15367

(724) 255-7440 ecketyer@gmail.com

September 22, 2023

EXHIBIT RW-2

Expert Report of Roberta Winters Proposed PECO Reliability Station and Related Infrastructure Submitted July 6, 2021 Revised September 20, 2023

Based on my work with the studies of natural gas extraction from Marcellus Shale and pipelines by the League of Women Voters of Pennsylvania (LWVPA), related Technical Assistance Grants through the Pipeline and Hazardous Materials Safety Administration (PHMSA), and participation in three Pipeline Safety Trust conferences in New Orleans, I am providing testimony for your consideration. To address the significant issues surrounding the proposed PECO "Reliability Station", comments are divided into four sections: siting, health, safety, and cumulative environmental impacts.

Siting:

Based on study, consensus, and concurrence, the LWVPA supports:

siting of natural gas pipelines (and, related facilities) through coordinated federal, state, regional and local efforts that are objective and responsive to safety considerations, accurate environmental assessments, county conservation districts, land use planning agencies, and local communities. The process should include adequate public notice of local stakeholders from the beginning of the process, convenient input venues, timelines reflective of the PA Municipal Planning Code, consistent with existing state and local regulation, and a mediation process to resolve conflict; and ordinance/zoning regulations, where and when possible for natural gas pipelines at the local level sited and designed to protect the public, prevent environmental degradation, and reflect community or county-wide land use planning.¹

Planning for land use is part of the fabric of Delaware County and Marple Township. The Economic Development Plan included in Delaware County 2035, projected domestic energy production and infrastructure to continue in this area with the need for increased access to the Delaware River.² Further the plan encourages that the county foster investment that builds on its role as an energy and technology hub.³ Regrettably, the recommendation for townships to develop multi-municipal comprehensive plans and zoning ordinances that take into account larger trends and land-use issues beyond individual municipal boundaries does not seem to have been fully

¹ Taken from the LWVPA Position on Pipelines

https://static1.squarespace.com/static/5cc0ef58755be24fe008e905/t/5d1fd8429813d80001b01681/1562368066 391/LWVPA+Position+on+Pipelines.pdf

² <u>https://www.delcopa.gov/planning/pubs/delco2035/EconomicDevelopmentPlan.pdf</u> p 1-25

³ <u>https://www.delcopa.gov/planning/pubs/delco2035/EconomicDevelopmentPlan.pdf</u> p. 2.2

implemented. Such a plan may have assisted in the siting of the infrastructure related to this project. In addition, this economic plan document underscores the importance of strengthening and preserving mature neighborhoods.⁴ Such a community is being jeopardized by the PECO Reliability Project. Marple Township also has a Comprehensive Land Use Plan with associated Zoning and Land Development Ordinances.⁵ Districts, including boundaries for an industrial area, are included.⁶ Such is common and desired practice for municipalities wishing to reduce risks to their residents.

A decade ago, in 2011, a PHMSA grant allowed the National Association of Counties Research Foundation to issue a summary report for Elected and Appointed County Officials of the work of the Pipelines and Informed Planning Alliance (PIPA).⁷ In December 2010 PIPA issued two reports. One provides recommended practices for stakeholder ⁸ implementation and the other provides an interactive table to assist in local development decisions. In January 2015 PHMSA and FEMA released a new hazard mitigation guidance document prepared by the PIPA Communication Team. *Hazard Mitigation Planning: Practices for Land Use Planning and Development near Pipelines* outlines best practices for communities to reduce risks from pipeline incidents, including those caused by natural hazards.⁹

Given that Marple, like many other townships in Delaware County, is primarily "built out," were these best management practice recommendations used to site the reliability station? Meetings and hearings between residents, PECO representatives and Marple officials do not constitute collaboration. Based on a review of PECO testimony, it appears that virtual tours were offered, questions were answered and renderings were provided to address residents' concerns. ¹⁰ COVID restrictions precluded the usual give and take that in-person encounters can generate. However, based on information provided by the Marple Safety Coalition, the Reliability Project is less than community friendly or accommodating. ¹¹

A review of documents at the Delaware County Conservation District provides a different perspective. As a Radnor resident familiar with local geography, I became concerned when I saw an article in the *Philadelphia Inquirer* regarding the Reliability Project on April 21, 2021.¹² I

⁴ <u>https://www.delcopa.gov/planning/pubs/delco2035/EconomicDevelopmentPlan.pdf</u> p. 3-2

⁵ <u>https://www.delcopa.gov/planning/demodata/marpletownship.html</u>

⁶ https://ecode360.com/10776404

⁷ PIPA is a stakeholder initiative led and supported by PHMSA. Its goal is to reduce risks and improve the safety of affected communities and transmission pipelines through implementation of recommended practices related to risk informed land use and development near transmission pipelines.

⁸ More than 130 stakeholders participated in this project and, most importantly, included property developers, local, state, and federal government officials, pipeline operators, real estate agents, and even emergency responders.

⁹ Documents are available at <u>https://primis.phmsa.dot.gov/comm/pipa/landuseplanning.htm</u>

¹⁰<u>https://www.peco.com/SmartEnergy/InnovationTechnology/Pages/safeandreliablenaturalgas.aspx</u> includes information regarding PECO's outreach efforts.

¹¹ See <u>http://www.marplesafe.com</u>

¹² <u>https://www.inquirer.com/business/peco-gas-infrastructure-reliability-marple-zoning-20210412.html</u>

mistakenly believed that a pipeline from Conshohocken to Marple would run through Radnor Township. To find out the details, I went to Media to take a look at the permits. According to Stantec Consulting Services, Inc. (Stantec), only NPDES permits for storm water at the site and for hydrostatic testing of tanks and pipelines were needed as well as erosion and sedimentation permits for crossing of seven (7) streams. Under the purpose of PA Code Chapter 459, Occupancy of Highways by Utilities,

It is in the public interest to regulate the location and construction of utility facilities and other structures within State highway right-of-way for the purpose of insuring the structural integrity of the highway, economy of maintenance, preservation of proper drainage and safe and convenient passage of traffic. This chapter is made under the State Highway Law (36 P. S. § § 670-101—670-1102), including § § 411, 420 and 702 (36 P. S. § § 670-411, 670-420 and 670-702). Nothing contained herein is intended to relax existing safety requirements in Chapter 203 (relating to work zone traffic control) and similar State and Federal safety requirements referred to in § 459.7(2) (relating to general conditions).¹³

Given this law and its rationale, it was most expedient to install the pipeline under State roads from the West Conshohocken Gas Works to Marple.¹⁴ However, to reach the industrial zone for the construction of the Reliability Station, a route under or along Reed Road would be necessary.¹⁵ Because Reed Road is not a state highway, litigation and delays might occur that would be costly for PECO and its Reliability Project. Thus, it would appear that the proposed site along Route 320 is the expedient chosen given that only a special exception would be required under existing code for its construction in a commercial area immediately adjacent to a residential district. Should the influence that PECO can exert for economic and perhaps justified public necessity reasons outweigh the public interest as promulgated in local zoning? The results of an appeal to the PUC and/or the Court of Common Pleas may be telling. However, even if a special exception is mandated for this station, under existing Marple zoning for industrial districts, other general conditions seem to need special consideration as well.¹⁶ Among the list of expressly prohibited are the following uses:

(3) A facility the sole purpose of which is the manufacture, processing or storage of hazardous material;

(5) Manufacture, processing or storage of fertilizer, soaps, pesticides, wood pulp, disinfectant or industrial gas production or separation; and

¹³<u>http://www.pacodeandbulletin.gov/Display/pacode?file=/secure/pacode/data/067/chapter459/chap459toc.htm</u> <u>l</u> includes all the details.

¹⁴ See map of pipeline for Reliability Project from West Conshohocken to Marple in Appendix A.

¹⁵ See map of Marple Township with Reed Road in Appendix B.

¹⁶ See <u>https://ecode360.com/10776770</u>

(12) Any use unable to meet the requirements of § <u>300-44E</u> or that is or may be dangerous to the public health, safety, morals or public welfare or that constitutes a public hazard whether by fire, radioactivity, explosion or otherwise or that is noxious or offensive by reason or odor, dust, fumes, smoke, steam, gas, vibration, glare, noise or toxicity.

Further, the code provides for performance standards with proof of compliance that include noise, heat and a lengthy list of airborne emissions such as odor, smoke or steam, and toxic matter and hazardous materials. Of particular interest is:

No emission of toxic matter shall exceed 50% of the Threshold Limit Value in any adjacent residential or commercial district.

To what extent will PECO be able to operate within the zoning requirements of Marple? Will this company be able to verify its emissions, noise and heat adequately to meet the expectations of Marple residents? What must PECO do if a site is going to be permitted in Marple? Perhaps PIPA recommendations such as creating consultation zones. Such zones facilitate communication among stakeholders to ensure consideration of the potential safety impact.

Health

The League of Women Voters of Pennsylvania recognizes the economic impact of natural gas operations in Pennsylvania and the relative safety and efficiency of pipelines as a means of transporting natural gas. At the same time, we support the maximum protection of public health and the environment in all aspects of natural gas operations. How might a reliability station impact the health of those in Delaware county and beyond? To promote clarity, PECO has modified the language of their proposed station to be that of a city gate station. Thus, health concerns associated with such facility should be applicable.

As a gate station, it will release or vent natural gas into the air as a means to regulate and reduce pipeline pressure. Methane is a significant contributor to climate change, being 84 times more powerful in trapping heat than carbon dioxide in a 20 year period.¹⁷ Pennsylvania is not immune from climate change as indicated by a recently released PADEP report.¹⁸ Further, Chester, PA, an environmental justice area contained within Delaware County, is particularly at

 ¹⁷ See <u>https://www.theguardian.com/environment/2021/may/06/cut-methane-emissions-rapidly-fight-climate-disasters-un-report-greenhouse-gas-global-heating</u>
 ¹⁸ See

http://www.depgreenport.state.pa.us/elibrary/GetDocument?docId=3667348&DocName=PENNSYLVANIA%20CLI MATE%20IMPACTS%20ASSESSMENT%202021.PDF%20%20%3cspan%20style%3D%22color:green%3b%22%3e%3c/ span%3e%20%3cspan%20style%3D%22color:blue%3b%22%3e%28NEW%29%3c/span%3

risk from rising sea levels transferred to the Delaware River, on-going storm water issues, extreme heat challenges, and hazards created by more frequent and severe storms ¹⁹

Additional harm will be caused to public health due to the release of other contaminants that may need to be vented during the reduction of pressure and other processes, as that may well occur as natural gas from large, high pressure pipelines is readied for transmission to local homes and businesses. Volatile organic compounds (VOC's) are one of the emissions related to equipment involved in such natural gas operations at "gate" stations. VOC's are particularly problematic in areas of high ozone, such as Delaware County which, according to the American Lung Association, currently has an ozone grade of "D." Together these create respiratory problems and lung disease.

In nearby Chester the work of the University of Pennsylvania's Perelman School of Medicine's Center of Excellence in Environmental Toxicology indicates that Chester residents, relative to other Pennsylvanians, are 24% more likely to develop lung cancer, 64% more likely to develop ovarian cancer, 25% more likely to die from heart disease, 50% more likely to die from cerebrovascular disease, and have asthma rates 37.5% higher in children and 26.7% higher in adults.²⁰ The proximity of the Marple site to an elementary school where highly vulnerable children study and play each day is a recipe for long-term, negative health consequences.

A paper entitled "Hazard identification and accident analysis on city gate station in natural gas industry" was presented at the 2010 International Conference on Environmental Engineering Applications.²¹ Two of its three conclusions are relevant regarding health:

The hazards that may damage environment are not paid attention enough; and the hazards that cause physical and mental injuries in the long time like lack of light (in the case of workers) or noise pollution are not considered enough and guidelines and regulations need to be up to date and reviewed more expertly.

The authors also analyzed numerous hazards from gas leakage from joints and valves to leakage of industrial antifreeze related to the heaters. Based on the priority of accidents and the

¹⁹ See <u>https://www.chestercity.com/wp-content/uploads/2015/09/2014-06-</u>

²⁵ Vision 2020 Climate Adaptation Elements.pdf

²⁰ See <u>http://ceet.upenn.edu/wp-content/uploads/2018/02/Chester_infographic.jpg</u>

²¹<u>https://www.researchgate.net/publication/224181049_Hazard_identification_and_accident_ana</u> lysis_on_city_gate_station_in_natural_gas_industry

severity of consequences, more than a dozen recommendations were made. Among the most pertinent include:

- Use installation and repairing guidelines exactly
- Enforce workers to implement rules and regulations by training and noticing through warning sights and
- also punishing guilty workers
- Enforce workers to implement rules and regulations by training and noticing warning signs
- Repair and maintain on time based on a preventive maintenance schedule
- Use a gas detector to monitor the amount of gas in the air

Monitoring emissions continuing from all sources is critical. The public needs to know what is being emitted, when it is being emitted, and how much is being emitted. Detailed reporting is essential. Averages on a daily or monthly basis may not indicate a single, high exposure or multiples of what residents may experience of a particularly health-impacting release. Can alarm systems be installed to alert immediately adjacent residents of planned emissions that may accompany certain planned events needed for cleaning, repairing, or assessing equipment? In the event of emergency conditions, can a warning system be put in place? Limiting exposure, particularly to children and pregnant women, is important for reducing consequences. Of course, the cumulative impact of a variety of existing and evolving pollutants already in the area is, as of yet, unknown.

Safety

While the notion of a "Reliability Project" addresses PECO's need to provide consistently gas to a projected increase in users in the area, it also implies an effort that is trustworthy, dependable, solid and sure. Although natural gas pipelines are the safest way to transport hazardous gases and liquids, they are not without incident. In fact, during the past 3 years, PHMSA reports an average of 30 serious incidents per year, resulting in 11 fatalities and 52 injuries.²²

The proposed Marple "reliability" station is problematic because of safety considerations. In spite of assurances that the facility and its pipelines will be monitored 24/7 by computerized

²²<u>https://portal.phmsa.dot.gov/analytics/saw.dll?Portalpages&PortalPath=%2Fshared%2FPDM%20Public%20Web</u> <u>site%2F portal%2FSC%20Incident%20Trend&Page=Serious</u> Serious incidents are those involving a fatality or hospitalization. They exclude "fire first" incidents of other outside force damage and sub-cause of Nearby Fire/Explosion as Primary Cause of Incident.

systems, human error has been found to be the most common factor in analyses of catastrophic incidents in the oil and gas industry.²³ What safeguards will PECO put in place to make sure those who are overseeing the systems are competent, alert, and responsive to warning signs? Are their responders aware of the possible challenges of an incident and prepared to act appropriately? Are safety systems and shut off valves fully operational at all times? Are valves easily located so that the gas source can be shut off until the flammable contents are dissipated or fully burned? Are local emergency responders aware of proper protocols? Is the public aware of safety procedures around natural gas facilities? Is everyone, particularly elementary students, trained in knowing the warning signs for a natural gas leak such as the odor of mercaptan, a hissing sound, or bubbles forming in water? Given the limited number of on-the-ground inspectors at federal and state agencies, can the public depend on the self-reporting of PECO or its contractors to assure them of their safety?

Trust but verify is an important adage.

As we look to prevent the cost burden to taxpayers of such industrialization, it should be noted that the Reliability Project and its related station are not in areas of low consequence. It is on the well-traveled State highway Route 320. It is adjacent to residential areas and in close proximity to densely populated regions of southeastern PA. Will there need to be additional, connecting distribution lines or related pipelines running through other part of the region? What will be their size, pressure, and route? How will risks of incidents and health-related impacts deflate adjacent property values at the site and along the pipeline routes? Do impacted residents understand the implications of the route, size, pressure, and contents of the pipeline(s) surrounding the station? How useful has the information been that PECO has provided to the community? Have interactions between PECO and the residents been lacking in transparency and authenticity?

The twelve-inch, steel pipeline operating at 475 pounds per square inch feeds the station. As previously mentioned, this infrastructure is co-located under the State roads that run from Conshohocken through Lower Merion, Haverford, and Marple Townships. Will problems with storm water, sewage or other lines carrying hazardous substances in the same vicinity create a recipe for disaster? Adequate, appropriate, collaborative and advanced planning for the location of pipelines is a known way to reduce risk and promote safety. Although the model is complex, by considering the diameter of the pipeline, its contents and the pressure at which it is operating, it is possible to predict the impact area.²⁴ A hazard area radius of 200 feet or more

²³ https://www.tandfonline.com/doi/full/10.1080/10803548.2021.1916238

²⁴ See Appendix C for a chart from page 16 of the Landowners Guide to Pipelines found at <u>https://pstrust.org/about-pipelines/landowners-guide-to-pipelines/</u>

would make for a significant potential impact along the route and a real disaster at its termination, the reliability station. This is a problem.

Finally, the location of the project makes it susceptible to "bad actors" who wish to disrupt major air, land, and routes as well as key infrastructure along the northeast corridor. PECO is not immune to software glitches, hacking, or more serious disruptions that create safety hazards. The cyberattack of the Colonial Pipeline, although transporting gasoline and diesel fuel, is a current case in point.²⁵

Cumulative Environmental Impact

The need for the PUC to consider a comprehensive view of a constitutionally sound, environmental impact of the PECO Reliability Station is a common-sense approach in the current climate. Just what should such an impact review include? Article 1 Section 27 of the Pennsylvania Constitution reads, *The people have a right to clean air, pure water and to the preservation of the natural, scenic, historic and esthetic values of the environment.* Protecting this right is a challenge. The United States Environmental Protection Agency (EPA), is prioritizing work to incorporate cumulative impacts into research, policy, law, and decision making. Why? Under the National Environmental Policy Act (NEPA), federal projects that cause or are affected by cumulative impacts, must provide such an assessment as required by Council on Environmental Quality (CEQ) regulations (CEQ, 1987). However, guidance continues to be needed to help EPA reviewers determine the accurate, reality and consistent bases of such comments. This need for cumulative environmental assessments has been further underscored by the Executive Orders issued on April 23, 2023 entitled *Revitalizing Our Nation's Commitment to Environmental Justice for All.*²⁶ Among other actions, this order will

Promote the latest science, data, and research, including on cumulative impacts. The Executive Order directs agencies to identify and address gaps in science, data, and research related to environmental justice, to advance the analysis of cumulative impacts, and to make information on environmental and health concerns more publicly accessible to communities. To address the need for a coordinated strategy for identifying and filling environmental justice data and research gaps, the Executive Order establishes a new Environmental Justice Subcommittee within the National Science and Technology Council, led by the Office of Science and Technology Policy.

 ²⁵ See https://www.wsj.com/articles/cyberattack-forces-closure-of-largest-u-s-refined-fuel-pipeline-11620479737
 ²⁶ <a href="https://www.whitehouse.gov/briefing-room/statements-releases/2023/04/21/fact-sheet-president-biden-signs-executive-order-to-revitalize-our-nations-commitment-to-environmental-justice-for-all/#:~:text=The%20new%20Executive%20Order%20makes,civil%20rights%20
In an October 2022 report²⁷, EPA defines cumulative impacts, relative to environmental justice areas, as the totality of exposures of chemical and non-chemical stressors and their effects on health, well-being, and quality of life outcomes. Although Marple does not yet have a classified environmental justice zone, the following image shows adjacent areas and significant parts of Delaware County so categorized.²⁸ Air and water do not regard municipal boundaries. Thus, what happens in Marple does not stay in Marple. What happens outside of Marple impacts the quality of life of its residents as well.



Under recommendations for EPA's Office of Research and Development, updated in May 2023, the following areas have been identified for additional research regarding cumulative impact.²⁹

- Air, Climate and Energy (ACE): ACE research evaluates the complex health and ecological effects of exposures to pollutants as well as how the impacts of these exposures can be modified by co-exposures to other stressors (e.g., extreme temperatures, noise, social factors). In addition, ACE research investigates the cumulative effects of short- versus long-term exposures.
- Chemical Safety for Sustainability (CSS): CSS research will include a focus on exposure to chemical mixtures that will cover research to characterize mixtures of unknown composition as well as co-exposures to real-world mixtures; characterization of exposure to include investigation into how non-chemical stressors combined with chemical

²⁷ See <u>https://www.epa.gov/sciencematters/epa-researchers-release-cumulative-impacts-report-prioritizing-environmental-justice</u>

²⁸ Extracted from map of Environmental Justice Areas of Pennsylvania located at <u>https://files.dep.state.pa.us/publicparticipation/Office%20of%20Environmental%20Advocacy/EnvAdvocacyPortalFiles/Environmental Justice Areas PA.pdf</u>

²⁹ See <u>https://www.epa.gov/sciencematters/epa-researchers-release-cumulative-impacts-report-prioritizing-</u> environmental-justice

stressors may impact health outcomes; and efforts to evaluate health disparities that may arise from unequal exposures to chemicals.

- Health and Environmental Risk Assessment (HERA): HERA has predominantly focused on single chemical assessments and a smaller number of assessments of chemical mixtures. However, as the need for evaluating multimedia exposures that incorporate chemical and non-chemical stressor interactions has increased, HERA has focused research on cumulative risk assessment methods and practices.
- Homeland Security (HS): Through its focus on resilience equity, HS research will ensure that information and tools include the multitude of stressors impacting a community when used to support incident response. Resilience to an incident is directly influenced by the cumulative impacts of the incident and other stressors within a community.
- Sustainable and Healthy Communities (SHC): The SHC research portfolio takes a holistic view, considering the interactions between people and their surroundings or, more specifically, the relationship between the environment and human health and well-being. SHC research examines stressors from the built, natural, and social environments, including health benefits, such as the benefits that nature provides through ecosystem goods and services, and their impacts on human health and well-being.
- Safe and Sustainable Water Resources (SSWR): The SSWR's research portfolio carries near- and long-term goals designed to yield practical tools and solutions for ensuring sustainable and equitable water resources. Research includes chemical mixtures bioassay research that supports the understanding and development of ambient water quality criteria critical to protecting aquatic ecosystems and human health, and tool development and risk management studies on exposures to contaminants in drinking water and the impacts of these stressors on health and well-being.

Admittedly, this is a tall order. However, the mission of the Pennsylvania Public Utility Commission is to balance the needs of consumers and utilities; ensure safe and reliable utility service at reasonable rates; protect the public interest; educate consumers to make independent and informed utility choices; further economic development; and foster new technologies and competitive markets in an environmentally sound manner. Many of these goals appear to be in conflict with one another. Currently, as we look to mitigate climate change, promote public health, safety and welfare, and protect our environment, the reliability station at the site proposed for Marple appears counterproductive to an integral part of its mission. Not only is it not "reasonably necessary" for siting at that location, but it also runs counter to the public interest. Sustainability is a priority in Delaware County.³⁰ While good faith

³⁰ See <u>https://delcopa.gov/sustainability/SustainabilityPlan.html</u>

efforts may be applauded, best practices and state-of-the-art science are needed to construct a realistic and accurate cumulative impact review.³¹ Decisions made today impact generations yet to come.

We appreciate your consideration and are optimistic that you will be responsive to this input.

³¹ In April 2023, New Jersey became the first state to adopt Environmental Justice rules on cumulative impacts. See <u>https://www.ecos.org/news-and-updates/new-jersey-adopts-final-ej-rule-on-cumulative-impacts/</u>

Appendix A Pipeline Route from West Conshohocken to Marple



Appendix B

Reed Road – Location of Industrial District of Marple



Appendix C

How the Potential Impact Area Around a Gas Transmission Pipeline Is Determined



HOW THE POTENTIAL IMPACT AREA AROUND A GAS TRANSMISSION PIPELINE IS DETERMINED

This chart shows how a combination of operating pressure and the size of the pipe determines the most dangerous area around a pipeline if it should rupture completely.

Source: A Model For Sizing High Consequence Areas Associated With Natural Gas Pipelines by Gas Research Institute and C-FER Technologies, 2000

EXHIBIT JS-2

1. Purpose of this Report

This report is to express my concern and expert opinions regarding probable environmental consequences of the proposed gas reliability station proposed by PECO for a site in Marple Township, Delaware County, Pennsylvania. The station is proposed to facilitate the expansion of additional gas supply to expected new PECO customers in Marple Township and elsewhere in Delaware County. Based on my education and experience, I believe construction of the proposed facility, if approved, will endanger me and other occupants of the Township, will reduce the quality of air and biological resources in the Township, will contribute to global warming and thereby endanger all current and future residents of Pennsylvania, will contribute to indoor air pollution reducing the health of Township and County residents, and will conflict directly with the trustee obligations of all Commonwealth entities imposed by Article 1, §27, of the Pennsylvania Constitution to protect the environmental resources of current and future generations of Pennsylvanias.

2. Qualifications

I am a biogeographer and consulting ecologist employed full-time in the professional assessment of environmental impacts since 1973. I received my B.A. degree cum laude, ΦBK, from Columbia College in 1966. I received my M.A. and Ph.D. degrees from the University of Chicago. From 1970 until 1973 I taught graduate and undergraduate courses in environmental science, plant ecology, and biogeography as a member of the Biological Sciences Department at Columbia University and Barnard College in New York City. After work as a consulting ecologist for several firms, I founded Schmid & Company in 1980 and serve as its president.

My clients include industrial organizations and individuals seeking permits to construct many kinds of facilities, conservation-oriented groups that question proposed developments, and federal, state, and municipal regulatory agencies seeking environmental reviews, regulatory assistance, and policy guidance. I have written and

supervised preparation of many dozens of environmental impact statements, as well as permit applications for proposed development projects. I have acted as senior scientist on many contracts involving multidisciplinary teams preparing guidance for agencies such as the New Jersey and Pennsylvania Departments of Environmental Protection, the National Oceanic and Atmospheric Administration and the Council on Environmental Quality. My personal research specialties are wetlands, water resources, and urban vegetation. I hold certification as a Senior Ecologist from the Ecological Society of America and as a Professional Wetland Scientist from the Society of Wetland Scientists, and I have served on the professional accreditation committees of both those organizations. My publications include ten books on urban vegetation and on the plants of the mid-Atlantic states, as well as numerous book chapters and professional reviews. I routinely perform fieldwork, as well as write reports and offer expert testimony before federal and state courts, including the Pennsylvania Environmental Hearing Board and the New Jersey Office of Administrative Law, and various other public boards and commissions. I have worked on potential impacts from several major pipelines in Pennsylvania, and I prepared a general technical review of pipelines in the context of Lycoming County, Pennsylvania, for the Pennsylvania League of Women Voters under contract to the Pipeline and Hazardous Materials Safety Administration of the US Department of Transportation. Over the years I have made numerous presentations at academic and professional conferences, and I have delivered guest lectures at several colleges and universities. My report titles, listed in my attached curriculum vitae, cover many pages of fine print.

I also have participated in public service. For some 30 years I served on the Marple Township Environmental Advisory Board, many terms as chair or vice-chair. Since 2017 I have served on the Citizens Advisory Council to the Pennsylvania Department of Environmental Protection pursuant to gubernatorial appointment. I currently am a voting member of the Environmental Quality Board (elected by the Council), and also of the Mining and Reclamation Advisory Board. I thus am bound by oath to support the Constitution of the Commonwealth of Pennsylvania, including Article 1, §27.

I have resided on Cedar Grove Road for more than 48 years, so its intersection with Sproul Road, where the reliability station is proposed, is a place I must visit daily. I also am familiar with the surrounding neighborhood. On weekends I take my grandchildren through that intersection to play at Russell Elementary School one block away, a school which their fathers attended. I patronize Freddy's restaurant next to the reliability station site and other commercial establishments along Sproul Road regularly.

3. The Proposed Project

As I understand it, PECO (the local gas utility) proposes to construct a gas reliability station on the west side of Sproul Road (PA 320) on the south side of its intersection with Cedar Grove Road at the lowest possible cost to its investors. This is proposed to be a "city gate" facility with the purpose of reducing the pressure and raising the temperature of natural gas (primarily methane, CH₄) dispatched from Conshohocken via a new 12-inch (nominal diameter), relatively high-pressure pipeline before transfer of the gas into an old main trunk gas distribution line 16 inches in diameter.

PECO states that gas supplies to Marple Township and nearby sections of Delaware County at present are adequate in volume and pressure to supply natural gas to existing customers. However, the utility hopes and expects demand to increase on the part of new users in the future, based on its actual experience of increased demand from 2011 to 2020. The proposed station is intended to make additional gas available in the future for consumption by new commercial and residential users in Marple Township and Delaware County at the least possible cost.

PECO states that the optimal location for adding gas to its old 16-inch pipeline is at the intersection of Sproul Road with Reed Road, 0.46 mile south of the proposed location. At that point the 16-inch line, which receives input at its north end in Conshohocken Borough, Montgomery County, and at its south end in Brookhaven Borough, Delaware County, has the lowest pressure experienced along its length, with gas reaching its "null" point there from either direction at various times.

The new 12-inch pipeline is to receive gas from liquid storage in Conshohocken. This pipeline has a maximum authorized operating pressure (MAOP) of 525 psig (pounds per square inch above atmospheric pressure). Insertion pressure at Conshohocken is expected to be operated typically at 475 psig and to drop within the 12-inch pipeline over the 11.5 miles down to about 150 psig at the proposed facility. At the station the gas will be heated, and its pressure will be reduced to 99 psig before discharge into the 16-inch line. Currently the 16-inch line is operated at a typical target pressure of 99 psig, and its actual pressure ranges down to 65 psig at non-peak usage hours. The proposed reliability station will provide the additional gas needed by new customers served by the 16-inch line at forecast times of peak demand.

PECO has not stated the quantities or schedule for air pollutants to be released from the proposed station' heaters and valves, the levels or schedule of noise that will be produced, or the outdoor light levels that will be maintained at night.

4. Environmental Concerns

First is the matter of human safety. I am concerned about the very close proximity of the proposed heavy industrial facility to adjacent homes and to Freddy's restaurant, inasmuch as this would create an unnecessary and unwise risk to human safety, physical health, and mental health along with increased noise, air pollution, and possibly nighttime light from facility operations for numerous pedestrians and residents.

Homes are present on the adjacent lots to the east, north, and west of the facility site, and sidewalks run along two of its sides (**Figure 1**). The rectangular PECO lot is about 0.4 acre in size, approximately 130 by 140 feet. There are half a dozen homes and one restaurant within 200 feet. The food services along this stretch of Sproul Road draw much pedestrian traffic from children and adults, as well as patrons arriving by automobile.

None of the surrounding structures was constructed with fire- and explosion-proof protection measures on walls that face the transfer facility or the high-pressure gas pipeline that is to



Figure 1. Residences in Marple Township surrounding the intersection of Cedar Grove Road with Sproul Road (PA Route 320). Proposed reliability station site is the lot west of Sproul Road, south of Cedar Grove Road, and north of Freddy's, in the center of this image. North is up in this June 2022 aerial photo from Google Earth.

feed it. Despite the relatively low probability of a major explosion, the potential for lethal damage to resident and transient people unavoidably will be increased if the facility is constructed in this densely populated area. Heavy industrial facilities belong in districts zoned for industrial use (such exist in Marple Township). Damage risk increases with pipeline diameter and operating pressure and decreases with distance.

Modeling for pipelines such as those constructed here by PECO shows that damage would be expected in a broad zone adjacent to them, according to recommendations from the Pipeline Association for Public Awareness (**Figure 2**). The new 12-inch PECO pipeline has a risk corridor 1,200 feet wide, centered on the pipeline, that includes numerous residences and and the Russell Elementary School (**Figure 3**). For a 16-inch diameter pipeline south of the proposed station operated at about 100 psig, the risk corridor narrows by 40% to 730 feet (only 365 feet wide on each side). Additional distribution pipelines will be needed somewhere to reach new customers beyond the present pipeline terminus within additional lands that also are densely settled, thereby further extending currently existing hazards. The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) uses a simple, industry-sponsored formula for modeling potential impact radii (PIRs) for use in high consequence areas such as schools and densely populated settlements (C-FER Technologies. 2001. A model for sizing high consequence areas associated with natural gas pipelines. Gas Research Institute Report GRI-00/0189).

Persons in the 60- to 80-year age bracket (and others with impaired mobility) resident within these distances would be expected to experience a mortality rate greater than 50% in the event of a pipeline explosion, according to another report to the Gas Research Institute by DEATECH Consulting Company (2008. Analysis of Report No. GRI – 00/0189 on 'A model for sizing high consequence areas associated with natural gas pipelines.' DEATECH Consulting Company. Montgomery TX. 44 p.).

The current PHMSA PIR formula yields the following distances from the PECO Sproul Road pipelines in Marple Township: for new 12-inch diameter, 180 feet at 475 psig [its MAOP is 525 psig], 101 feet at 150 psig; for old 16-inch diameter, 110 feet at 99 psig. This formula ignores several applicable conservative assumptions and does not consider wind effects (National Transportation Safety Board. 2022. Enbridge Inc. natural gas transmission pipeline rupture and fire [Danville KY, 2019]. Pipeline Investigation Report NTSB/PIR-22/02. Washington DC. 56 p.). When the current PHMSA PIR formula is applied, fatalities and damage at distances well beyond its predictions have been observed across the nation. Thus the National Transportation Safety Board has recommended that PHMSA revise its PIR formula to generate larger, more realistic distances for the limits of adjacent areas at risk from pipeline impacts.

Recommended Minimum Evacuation Distances For

Natural Gas Pipeline Leaks and Ruptures

(Not applicable for Butane, Propane, or other Hazardous Liquids)

Pipeline Size (inches)

		4	6	8	10	12	16	20	22	24	30	36	42
Pressure (psig)	100	91	137	182	228	274	365	456	502	547	684	821	958
	200	129	193	258	322	387	516	645	709	774	967	1161	1354
	300	158	237	316	395	474	632	790	869	948	1185	1422	1659
	400	182	274	365	456	547	730	912	1003	1094	1368	1642	1915
	500	204	306	408	510	612	816	1020	1122	1224	1529	1835	2141
	600	223	335	447	558	670	894	1117	1229	1340	1675	2011	2346
	700	241	362	483	603	724	965	1206	1327	1448	1810	2172	2534
	800	258	387	516	645	774	1032	1290	1419	1548	1935	2322	2709
	900	274	410	547	684	821	1094	1368	1505	1642	2052	2462	2873
	1000	288	433	577	721	865	1154	1442	1586	1730	2163	2596	3028
	1100	302	454	605	756	907	1210	1512	1664	1815	2269	2722	3176
	1200	316	474	632	790	948	1264	1580	1738	1896	2369	2843	3317
	1300	329	493	658	822	986	1315	1644	1809	1973	2466	2959	3453
	1400	341	512	682	853	1024	1365	1706	1877	2047	2559	3071	3583
	1500	353	530	706	883	1060	1413	1766	1943	2119	2649	3179	3709
	1600	365	547	730	912	1094	1459	1824	2006	2189	2736	3283	3830
	1700	376	564	752	940	1128	1504	1880	2068	2256	2820	3384	3948
	1800	387	580	774	967	1161	1548	1935	2128	2322	2902	3482	4063
	1900	398	596	795	994	1193	1590	1988	2186	2385	2981	3578	4174
	2000	408	612	816	1020	1224	1631	2039	2243	2447	3059	3671	4283
	2100	418	627	836	1045	1254	1672	2090	2299	2508	3134	3761	4388
	2200	428	642	856	1069	1283	1711	2139	2353	2567	3208	3850	4492

Table 1 - Evacuation Distance in Feet

The applicable leak or rupture condition is that of a sustained trench fire fueled by non-toxic natural gas escaping from two full bore pipe ends. Blast overpressure is not addressed. The distances shown in Table 1 are intended to provide protection from burn injury and correspond to a thermal heat flux exposure level of 450 Btu/hr ft². This is the accepted limit of heat exposure for unprotected outdoor areas where people congregate; as established by the US Department of Housing & Urban Development Code 24CFR51, Subpart C, Siting of HUD Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature. The formula used to calculate distance was taken from the Gas Research Institute Report GRI-00/0189, *A Model for Sizing High Consequence Areas Associated with Natural Gas Pipelines*, 2001, prepared by C-FER Technologies. That model does not take into account wind or other factors which may greatly influence specific conditions. Users are advised that the distances shown in Table 1 are considered to be "general information" only and are not intended to replace a site specific risk analysis. The Pipeline Association for Public Awareness makes no warranty with respect to the usefulness of this information and assumes no liability for any and all damages resulting from its use. Anyone using this information does so at their own risk.

Figure 2. Recommended minimum distances from natural gas pipelines to

guard against damage to people and property (Pipeline Association for Public Awareness. 2007. Pipeline emergency response guidelines. Golden CO. 20 p.).



Figure 3. Location of the new 12-inch pipeline in Sproul Road (orange line) in Marple Township south from Russell Elementary School to the site of the proposed transfer station. Yellow lines show the 600-foot limits of "minimum evacuation distance" modeled to meet US Department of Housing and Urban Development recommendations for burn protection (Figure 2) if this line were operated at 475 psig. At 150 psig the limit narrows to 320 feet, on each side of the pipe, still encompassing many homes. This October 2020 airphoto is from GoogleEarth.

Second, operation of the proposed reliability station facility itself will generate outdoor air pollution from two sources. One is the onsite combustion of the natural gas (primarily methane) to heat products moved through the pipelines. Natural gas combustion is just as

damaging to climate as byproducts of the other fossil fuels---coal and oil. The other source is the valves which control the flow of products through the pipeline, and which typically leak methane. These discharges will increase the amounts of carbon dioxide, methane, nitrogen dioxide, and other air pollutants discharged into Marple Township for residents to breathe. Outdoor air in Delaware County currently is classified as not attaining national air quality standards (NAAQS) for nitrogen dioxide (NO₂), ozone (O₃), and fine particulate matter (PM 2.5). Some of the land adjacent to the proposed reliability station site has been designated by the Pennsylvania Department of Environmental Protection as an Environmental Justice Area (**Figure 4**). Such areas are most likely to be damaged by additional sources of air pollution and hazardous facilities. We Marple residents will get more volatiles and organic carbons to



Figure 4. Red arrow in the center of the map shows the proposed new reliability station site at the intersection of Cedar Grove Road with Sproul Road, surrounded by small, residential streets and the alleyway of the commercial strip. The adjacent dark blue census tract immediately to the east is an Environmental Justice Area (score 81 out of maximum impairment value of 100). There are numerous other Environmental Justice areas in Delaware County. Graphic from https://gis.dep.pa.gov/PennEnviroScreen/, accessed September 2023.

breathe, affecting my asthma and that of far too many neighbors. Environmental Justice Areas also warrant expanded public participation when projects are planned (Environmental Justice Office. 2023. Environmental justice policy. Document 015-0501-002. PA Department of Environmental Protection. Harrisburg PA. 27 p.).

Third, approval of the proposed gas reliability station will promote adverse impacts on the health of Marple Township and Delaware County residents and employees by facilitating the proliferation of gas appliances used indoors in buildings increasingly insulated against air leaks. As a result of indoor gas leaks, persons occasionally die of asphyxiation by carbon monoxide, and fires are caused by flammable methane. Gas appliances often leak methane even when turned off. The ordinary use of natural gas appliances indoors causes many health problems via release of air pollutants generated during the combustion of methane, such as nitrogen dioxide, super-fine particulate matter, carbon monoxide, and others. Some, but not all, gas appliances to be used indoors are required to be equipped with ventilation flues to reduce the harmful byproducts of gas combustion. Gas ranges, space heaters, and fireplace logs, however, are <u>seldom</u> required to be vented. After installation, ventilation requires maintenance to function effectively, and noisy ventilation fans may discourage actual use by consumers. Thus indoor air quality where gas-fired appliances are used often exceeds the concentrations of pollutants allowed by regulation outdoors (Figuroa, Laura A., and J. Lienke. 2022. The emissions in the kitchen: how the Consumer Products Safety Commission can address the risks of indoor air pollution from gas stoves. Center for Policy Integrity, New York University Law School. New York NY. 19 p.).

The resulting impacts are greatest on children. They may cause various short-term physical symptoms---most often contributing to asthma---as well as damage long-term mental health. The proportion of childhood asthma in Pennsylvania that could be theoretically prevented if gas stove use was not present is estimated as 13.5% (Gruenwald, Talor, B.A. Seals, L.D. Knibbs, and H.D. Hosgood III. 2023. Population attributable fraction of gas stoves and childhood asthma in the United States. International Journal of Environmental Research and Public Health 20[1]: 75). Hence New York City and Ithaca, New York; Berkeley, California; and the state of Victoria (Australia) have banned the use of gas appliances in new construction

(Bambrick, Hilary, K. Charlesworth, S. Bradshaw, and T. Baxter. 2021. Kicking the gas habit: how gas is harming our health. Climate Council of Australia, Limited. Potts Point, Australia. 48 p.). The Consumer Products Safety Commission has been requested to evaluate the need for nationwide restrictions on gas-fired appliances in the United States (Krishnamoorthi, Raja. 1 August 2022. Letter to CPSC. U.S. House of Representatives, Committee on Oversight and Reform, Subcommittee on Economic and Consumer Policy. Washington DC. 5 p.). Again, the most likely persons to be affected are residents of Environmental Justice areas who may rent and may not be able to afford upgrading appliances or ventilation equipment (WE ACT for Environmental Justice. 2023. Out of gas, in with justice: studying the impacts of induction stoves on indoor air quality in affordable housing. New York NY. 68 p.).

Fourth, there is no space for functional or aesthetic landscaping between the proposed industrial facility and pedestrians, vehicles, or homes. PECO proposes to reduce operational noise by enclosing its equipment within structures and providing an eight-foot-tall fence with some kind of noise buffering properties. It has not reported the noise levels to be generated at the facility or indicated the expected noise levels at its property lines. Thus the significance of the noise increase cannot be estimated. Noise levels decrease logarithmically with distance from a noise source at the rate of 6 decibels (dBA) per doubling of distance. Relatively small distances sometimes enable significant drops in noise levels. Whether the industrial facility will increase neighborhood light levels at night is not clear.

Fifth, any discharges of carbon dioxide or methane at the transfer facility or initiated by downstream users of the increased natural gas supply provided will contribute directly to the atmospheric warming that has now risen to crisis levels globally, as discussed by Professor Najjar in other testimony for this case. The proposed facility would facilitate the burning of methane gas at new residences and businesses to be built within the expanded service area served by the reliability station. There is no proposed offset of warming by greenhouse gases to be discharged from the service area.

Under business as usual, <u>annual average</u> temperatures in Pennsylvania by 2050 are projected to be about 6° F. above the baseline average for the 1971-2000 period (Pennsylvania

Department of Environmental Protection. 2021. Climate impacts assessment. ICF. Fairfax VA. 143 p.). The same report tells us that Environmental Justice communities in PA will suffer twice as much increase in 90° F. or hotter days as will the state as a whole. We shall experience crisis summer heat waves, more rainfall delivered as frequent and intense thunderstorms separated by drought periods, and increased flooding in the Darby Creek basin. Downstream communities in our basin also will get runoff from the proposed impervious construction, and Marple (unlike Philadelphia), does not collect any fee for stormwater management. The state's climate report labels the clearly predictable added heat mortality, Lyme disease increase, and rises in violent crime as <u>critical</u> impacts that result from global warming. They describe the resulting impacts as <u>catastrophic</u> on Pennsylvania forests, wildlife, and ecosystems. These include reduced dissolved oxygen in the waters of our freshwater streams as well as the Delaware River estuary as consequences of global warming to which this proposed PECO facility will contribute. During 2023 our region experienced unhealthy concentrations of smoke from distant wildfires induced by global warming.

Additional electric energy to power the additional air conditioning would be needed by everyone in Marple and Delaware County to offset the temperature increased by PECO's new gas customers via its proposed reliability station. Most affected, of course, will be residents of Environmental Justice areas in Marple Township and elsewhere in Delaware County. This is precisely the kind of facility that should NOT be constructed: it is to provide gas to new users. PECO claims that it has sufficient capacity to serve this vicinity without any new pipeline or reliability station. Instead of expanding gas consumption, PECO should be removing gas infrastructure and instead increasing electric energy supplies, primarily from renewable sources, to replace existing gas uses.

5. Alternatives

PECO states that the completed engineering for the proposed reliability station allows its location to be practicable within 0.5 mile of the "null point" of the 16-inch pipeline, that is, 0.5 mile from the intersection of Reed Road with Sproul Road. The proposed site is 0.46 mile north, at Cedar Grove Road on the west side of Sproul Road. At least one additional site

would appear to provide significant reduction in danger from station operations and from explosive potential to residents of Marple Township. This location is 0.47 mile south of the null point along the east side of Sproul Road south of Reed Road (**Figure 5**). This location is on



Figure 5. Alternative sites for a gas reliability station in Marple Township, Delaware County, Pennsylvania. The yellow circle represents a 0.5-mile radius on a GoogleEarth aerial photograph prepared as PECO Exhibit RL-4. I have added labels in orange. My purple numbers are (1) PECO's ideal null point for injection of gas into the 16-inch trunk pipeline;
(2) PECO's proposed location at Cedar Grove Road; and (3) an alternative location south of Reed Road. PECO considered and rejected alternative sites between numbers (1) and (2).

vacant land across a wide segment of Sproul Road from one existing home and from a cemetery. It is across Reed Road at a significantly greater distance from the Wendy's restaurant than the proposed station is from Freddy's restaurant. PECO offered no engineering reasons why this would not be an acceptable location for its reliability station. A location here would be dramatically farther from existing homes and other facilities than the proposed site enabling reduced impacts on residents of Marple Township and screening from adjacent uses.

PECO rejected----as too costly----undertaking alternative transfer station designs and installation of larger diameter pipelines that could enable expansion of the radius of search for an alternative transfer station site such as within the industrially zoned district of Marple Township. It acknowledged the "significant disruption of traffic patterns" and delays over the months of pipeline construction which resulted when it installed the 12-inch pipeline prior to securing the necessary approvals for its proposed reliability station.

No alternative siting of a reliability station, of course, could reduce the long-term impacts of the station on global warming.

6. Sustainability

This proposed gas reliability station is precisely the kind of facility that should NOT be constructed anywhere in Marple Township or Delaware County. Its stated purpose is providing additional gas supply to new users, as cheaply as possible to encourage consumption. Instead of expanding gas use, PECO instead should be removing gas infrastructure and increasing electric energy supplies, primarily from renewable sources, to replace existing gas uses. Fossil fuel use is not sustainable, if the earth is to remain habitable.

A peer-reviewed report from the International Energy Agency (2021. Net zero by 2050, a roadmap for the global energy sector. International Energy Agency. Paris, France. 224 p.) details how governments, business, investors, and citizens all must be investing in new ways to <u>cut</u> fossil fuel use, if there is to be any hope of avoiding increasingly

disastrous impacts on climate. Our municipalities should be prohibiting the issuance of all building permits for new buildings to be served by natural gas and requiring solar panels and electric appliances instead. We do not permit new urban or suburban outhouses, after all. Pennsylvania municipalities should ban gas appliances and heating in new construction. Municipalities should refuse to accept dedication of new roadways serving new developments that burn gas. Our utilities should not be risking their shareholders' dollars to expand natural gas supplies whose use and price are going to decline. Our governments should be raising taxes on gas, not subsidizing PECO's efforts to strand capital assets in new gas distribution facilities while it chases short-term profits and engineering convenience while imposing public nuisances on established communities. Instead, PECO should be subsidizing sustainable items like heat pumps and solar panels.

Denying approvals for this PECO project will not solve the global climate crisis, but it will avoid the genuine, adverse, cumulative effects of one more proposed source of environmental damage in Marple Township and Delaware County. Each bit of natural gas use reduction helps and is vitally important to current and future generations of residents. From my experience participating for decades in environmental regulation, Pennsylvania appears to like rhetoric on paper in environmental laws and regulations that might promote sustainable life in our commonwealth, but loopholes and nonenforcement usually assure that the soothing recommendations on paper are not actually applied in specific cases.

Marple Township's zoning hearing board and commissioners should be commended for denying municipal approval for PECO's proposed gas transfer station. State regulators and the judicial system should stand behind such local efforts to protect residents of Marple, of Pennsylvania, and of our beleaguered earth.

7. Conclusions

This proposed PECO gas heating and transfer station is NOT reasonably necessary for the convenience and welfare of the public. Its negative, short- and long-term impacts on public welfare are both local and global. Its basic purpose is to facilitate additional future use of natural gas, which should be reduced instead to benefit public health and safety. This reliability station is badly sited in a high consequence area that is contrary to township zoning and much too close to residences, businesses, and pedestrians. Its appearance would detract from the aesthetic values of the community. It would be a dangerous nuisance that threatens public safety close to an elementary school. As an industrial facility it would contribute to documented air quality issues that are particularly relevant to an adjacent Environmental Justice zone. The impact of its air pollution on public health, its on-going noise and light, would contribute stress degrading to both mental and physical health of station neighbors. Because these cumulative impacts create unnecessary adverse consequences both locally and worldwide, the PECO "reliability" station should not be built at all. It conflicts directly with Article 1, §27, of the Pennsylvania Constitution. As a trustee responsible for protecting the citizens of the Commonwealth and their environment from unnecessary and harmful activities, it is the duty of the Public Utility Commission to deny the requested Finding of Necessity.

James A. Schming

James A. Schmid, Ph. D. 22 September 2023

EXHIBIT RN-2

BEFORE THE COMMONWEALTH OF PENNSYLVANIA PENNSYLVANIA PUBLIC UTILITY COMMISSION

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)

Petition of PECO Energy Company for a Finding) of Necessity Pursuant to 53 P.S. § 10619 that the) Situation of Two Buildings Associated with a Gas Reliability Station in Marple Township, Delaware) County Is Reasonably Necessary for the Convenience and Welfare of the Public)

Docket No. P-2021-3024328 (On Remand)

Report of

Dr. Raymond G. Najjar, Jr.

September 14, 2023

1 1. Purpose of this report

This report provides my expert opinions on: (1) how emissions from combustion of natural 2 3 gas and other fossil fuels drive climate change, (2) resources protected under Article I, § 27 of the Pennsylvania Constitution, (3) why Pennsylvania and the rest of the world cannot expand 4 infrastructure that will lead to increased combustion of fossil fuels without increasing damage to 5 6 Section 27 resources, (4) how climate change already occurring has reduced demand for natural gas for heating over the winter and will further reduce demand in the future, and (5) how the station 7 in Marple Township as part of a project by PECO to increase the local distribution of natural gas 8 9 ("Project") will not be needed to meet the needs of existing customers but will only increase fossil fuel combustion and further damage Section 27 resources. 10

11 **2.** Qualifications

I am employed by The Pennsylvania State University (Penn State), where I am a 12 Professor of Oceanography in the Department of Meteorology and Atmospheric Science, with a 13 14 joint appointment with the Department of Geosciences. I graduated from the Cooper Union for the Advancement of Art & Science in 1985 with a degree in Mechanical Engineering, where I 15 16 studied numerous subjects that laid the foundation of my work in climate science, including fluid mechanics, thermodynamics, and transport phenomena. In 1987, I earned a Masters in 17 18 Geophysical Fluid Dynamics from Princeton University. In 1990, I earned my Ph.D. in 19 Atmosphere and Ocean Science from Princeton University. I was a post-doctoral scholar at the National Center for Atmospheric Research from 1990 to 1993. My early research focused on 20 21 large-scale, open-ocean biogeochemistry, particularly the cycling of nutrients (nitrogen, phosphorus, and silicon), oxygen, and carbon. A few years after arriving at Penn State in 1993, I 22 became interested in coastal issues, such as eutrophication, hypoxia, and sea-level rise. I worked 23

on numerous regional climate impact assessments, including one that was part of the first 1 2 National Climate Assessment. I am mainly a data analyst, but I also use numerical models and 3 remote sensing. I have conducted field studies in the Sargasso Sea and coastal waters of Antarctica, the Eastern United States, and Florida. I have received funding for my research from 4 5 the Environmental Protection Agency, the National Oceanic and Atmospheric Administration, 6 the National Aeronautics and Space Administration, the National Science Foundation, the Department of Energy, the Pennsylvania Department of Environmental Protection, and 7 Pennsylvania Sea Grant. 8

At Penn State, I teach undergraduate and graduate courses on meteorology, atmospheric 9 science, fluid dynamics, physical oceanography, marine biogeochemistry, and scientific 10 11 communication. The material in these courses lays the foundation for climate science and many of the courses directly discuss global warming. For years now, my work has focused on the science 12 of climate change. I conduct research on climate change, publish papers on it, give regular talks to 13 14 public and professional audiences about it, and direct two educational programs at Penn State about it (the Dual Title Ph.D. Program in Climate Science and the Research Experiences for 15 16 Undergraduates Summer Climate Science Program). My research has been published in peer-17 reviewed scientific journals, including Nature, Nature Climate Change, the Proceedings of the 18 National Academy of Sciences, the Journal of Climate, Climatic Change, and Climate Research. I 19 have been an author of numerous regional climate impact assessments, including three reports the Pennsylvania Department of Environmental Protection has produced in compliance with the 20 21 Pennsylvania Climate Change Act (Act 70 of 2008). Other climate impact assessments and climate-related reports I have contributed to include the First U.S. National Climate Assessment, 22 the Second State of the Carbon Cycle Report (a U.S. Global Climate Change Research Program 23

Sustained Assessment Reports), and reports analyzing the Delaware Bay, Chesapeake Bay, and
 their watersheds, which take up a large part of the Commonwealth's area.

3 3. Current understanding of climate change and its causes

When we refer to "climate change," or more specifically "anthropogenic climate change," 4 we are referring to the long-term changes in the atmosphere and other components of the climate 5 system (e.g., the ocean and cryosphere) due to increased concentrations of greenhouse gases in the 6 7 atmosphere. The most prominent of these changes is the increase in average temperatures found in most places across the globe-that is to say: global warming. Evidence for global warming is 8 presented in Figure 1, which shows the increase in Earth's average surface air temperature from 9 1880 to 2022 as estimated by NASA. Warming has been particularly rapid over the last 50 years, 10 during which the mean temperature increased by more than 1 °C (1.8 °F). The last nine years are 11 the hottest nine years on record. The same source of climate data (NASA) also shows 2023 thus 12 13 far to be particularly warm, with June being the hottest month ever recorded, well above the 14 previous record.



Fig. 1. Global mean surface-air temperature departure from the 1951–1980 baseline, including
 annual averages (black squares) and their uncertainty with 95% confidence (gray shading), and a
 smoothed analysis (red line). Source: NASA Goddard Institute for Space Studies,
 <u>https://data.giss.nasa.gov/gistemp/graphs_v4/</u>

Additional evidence for global warming comes from increases in humidity, ocean temperature,
 and sea level, and decreases in snow cover, glacier extent, and sea ice extent, and many more
 metrics.

The cause of this steady upward march in temperature is well understood. Sources of 4 natural variations in temperature, such as changes in the intensity of sunlight, Earth's orbital 5 6 dynamics, and volcanic activity, do not explain the warming. While such changes do cause fluctuations in temperature, those fluctuations are minor and result in very weak long-term 7 temperature trends. Human activities, on the other hand, explain the observed temperature changes 8 9 extremely well. As seen in Figure 2, temperature changes modeled from emissions of greenhouse gases from human activities track observed global temperatures changes, and in fact are dampened 10 somewhat by global cooling effects from atmospheric aerosol pollution and changes in land cover. 11 12 Greenhouse gases warm the climate by absorbing infrared radiation that is emitted by the surface of the Earth. These gases effectively trap radiation that would otherwise escape from the Earth's 13 14 atmosphere to space.



Fig. 2. Simulated (colored lines) and observed (black line) climate from the late 19th century to the early 21st century. The simulations show the individual impacts of human drivers as well as the

combined impact of these drivers. Source: Fourth National Climate Assessment (Hayhoe et al., 2018).

The science of global warming has long been settled. The greenhouse effect was discovered 1 in the 1820s by Joseph Fourier and the connection between climate and fossil fuel burning was 2 3 made by Svante Arrhenius, who won the Nobel Prize for Chemistry in 1903 for this discovery. No serious climate scientist today in 2023 disputes that emissions from burning fossil fuels is the 4 5 primary driver of climate change over the past century. The questions in the field of climate science 6 today focus on very specific issues, such as the impact of global warming on the frequency and intensity of hurricanes and tornados. Another important unknown surrounds tipping points in the 7 climate system, such as rapid collapse of ice sheets and melting of the tundra that would lead to 8 9 release of massive quantities of methane, which would further accelerate global warming.

10 4. Impacts of climate change on Pennsylvania

The effects of climate change on human society and on the ecology of the planet are overwhelmingly negative and, in some cases, extremely severe. It is no exaggeration to call global warming the most pressing problem humanity faces today. Nor will this problem go away any time soon. Even if all nations stopped burning fossil fuels and otherwise emitting greenhouse gases today, we would continue to see the climatic effects of the accumulated greenhouse gases in the atmosphere for many decades to come. However, any reductions we do make today will pay dividends in the form of a stabler and less extreme climate in the coming years.

The global and regional impacts of climate change are already staggering. For example, in 2018, 134 billion potential work-hours were lost globally due to extreme heat, a 34% increase above the 2000 baseline (Watts et al., 2019). Ecosystems we depend on are being severely compromised through the bleaching of coral reefs (Eakin et al., 2018) and the raging of forest fires (Abatzoglou and Williams, 2016). The forest fires in the western U.S. in the summer and fall of 2020 were so bad that even here in Pennsylvania, our skies were darkened by the soot that was generated. Even much more extreme were the impacts of Canadian wildfires this year, which
 severely degraded air quality in many portions of the U.S., including Pennsylvania, forcing
 millions of people indoors.

Over the past 100 years, Pennsylvania has warmed by about 2 °F, in accordance with 4 expectations from rising greenhouse gases, and the warming rate is accelerating (Shortle et al., 5 6 2015). Throughout the Mid-Atlantic region, the impacts of warming on ecosystems are being felt in multiple ways: plants are blooming and leafing out earlier (Lipton et al., 2018), native bees are 7 arriving earlier (Bartomeus et al., 2011), and birds are getting smaller (Van Buskirk et al., 2009; 8 9 Van Buskirk et al., 2010). More threateningly, the larval peak of ticks is arriving earlier (Levi et al., 2015), very likely contributing to the explosion of Lyme disease throughout the Northeast U.S., 10 including Pennsylvania. Warming streams threaten-and may eventually result in the end of-11 both native and stocked trout and other fishing. Many of these impacts of climate change are 12 having increasingly negative economic impacts on Pennsylvanians. 13

14 Warming in Pennsylvania has been particularly significant in the winter, with temperature increases since 1970 exceeding 3 °F in all of the Pennsylvania's counties and reaching as high as 15 5 °F in Philadelphia, as shown in Figure 3. Winter warming has led to more of our precipitation 16 17 falling as rain instead of snow (Feng and Hu, 2007; Shi and Liu, 2021) and fewer days per year with snow on the ground (Ford et al., 2021). These declines in snow are fundamentally changing 18 19 the character of Pennsylvania, threatening winter recreation industries (Wobus et al., 2017), and 20 affecting some of wildlife, like the snowshoe hare, which is contracting in its range due to a loss 21 of snowpack (Diefenbach et al., 2016). Warmer winters are also more likely allowing the wooly 22 adelgid, an invasive insect, to attack our state tree more aggressively, the Eastern Hemlock (Dukes et al., 2009). 23



1

Fig. 3. Average winter temperature (°F) in Philadelphia from 1970 to 2022 (blue line) and the
corresponding linear trend (yellow line), which is used to determine an increase in 5 °F over this
period. Source: Climate Central, <u>https://www.climatecentral.org/climate-matters/2022-winter-package</u>.

6 7

Much more dramatic warming is expected in the coming decades. If greenhouse gas

- 8 emissions continue to rise as they have been rising, the summer climate of Pennsylvania will come
- 9 to resemble that of the southeastern U.S. by the middle of the 21st Century, as illustrated in Figure
- 10 4, which shows projected future summer temperatures in Pennsylvania cities as compared to
- 11 today's summer temperatures in southeastern U.S. cities.



1

Fig. 4. Summer climate projections for Pennsylvania based on the Pennsylvania Climate Impacts
Assessment Report, comparing the summer climate of a historical period (1971–2000) to that of
mid-century (2041–2070) using a "moving cities analogue" (Shortle et al., 2015). For example,
Harrisburg, Pennsylvania has historically had an average summer temperature of 75.9 °F. But if
current emissions trends continue, Harrisburg's average summer temperature for the future period
will increase to 81.3 °F, which is historically Birmingham, Alabama's average summer

9

Another notable impact of warming is on the quality precipitation, which is getting more 10 11 intense with time. Specifically, there has been a 71% increase in the top one percent of rainiest days from 1958 to 2012, as shown in Figure 5. Furthermore, these heavy downpours, which 12 overwhelm the stormwater and sewer systems infrastructure across the Commonwealth, are 13 expected to continue to increase, as shown in Figure 6. The memorable pictures of the massive 14 floods in downtown Philadelphia from Hurricane Ida in 2022 splashed across the news are a 15 glimpse of what may come more often should greenhouse gas emissions trends continue 16 17 unchecked.



1

2 Fig. 5. Change in the top 1% of rainiest days in the U.S. from 1958 to 2022 (Walsh et al., 2014).

3 4



Percent change by 2050s in days > 1"

- 6 Fig. 6. Projected change in the Northeast U.S. of heavy downpours, as measured by the number of
- 7 days per year with precipitation exceeding 1 inch, by the 2050s (Kunkel et al., 2013).

In the Northeast United States, including Pennsylvania, climate models predict that precipitation will increase, mainly in the winter, though summers are expected to be drier, as shown in Figure 7. The combined effect of lower precipitation and higher temperatures during the summer means that soils will most likely be much drier in the future, which will require changes in agricultural practices, including crop choice and irrigation.



Fig. 7. Projections of summer and winter precipitation change in the Northeast U.S. by the 2050s(Kunkel et al. 2013).

10

7

One of the other primary effects of rising temperatures is an increase in the average elevation of the oceans. Figure 8 shows the measured rise in sea levels averaged over the Earth from 1900 to the present. Sea levels have not only risen but accelerated, with the quickest rise being since roughly 1990, at 3.6 millimeters increase per year, 6 times the rate from the first three decades of the 20th century. Rates of sea-level rise vary over space as well, with quite high rates in

Philadelphia, 4.7 millimeters per year since 1991 (Arriola et al., 2022). Sea levels rise not only
 because higher temperatures melt ice, such as in Greenland and Antarctica, but also because
 warming causes water to expand. As with the rise in atmospheric temperatures, the amount of sea level rise is directly related to the amount of greenhouse gases that are emitted.

5 Sea-level rise has caused nuisance flooding to increase dramatically in many cities 6 throughout the U.S., including Philadelphia, as shown in Figure 9. Sea-level rise has also caused 7 the salinity of the Delaware Bay downstream to increase (Ross et al., 2015), which is a cause for 8 concern because if salt intrusion extends further upstream, it will threaten intakes for drinking 9 water and industrial use in the greater metropolitan area of Philadelphia (City of Philadelphia, 2015).




15 Philadelphia, PA Tide Gauge #8545240 Flooding begins at 1.9 ft MHHW (0.58m) 10 5

OA



0

1

NOAA/NOS/Center for Operational Oceanographic Products and Services

969

276

(9⁸)

1990

1991

2004

202

2018

Fig. 9. The number of flood days per year in Philadelphia, as measured by water levels exceeding
1.9 feet about mean high water (MHHW), which is the average of the higher of the two high tides
per day. Source: NOAA.

06

6

7 5. Impact of winter warming on natural gas demand

Climate change will reduce demand for natural gas during peak winter months. Indeed,
given the rapid winter warming of southeastern Pennsylvania over the last 50 years, noted in
Figure 3, climate change must already be reducing demand. The fact that demand has increased
is due to other factors, such as population growth.
Heating fuel demand increases as the number heating degree days (HDDs) increase.
HDDs for a winter season are calculated by first determining the number of degrees that the
average temperature for a winter day is below 65 °F. For example, if the average temperature for

a day is 55 $^{\circ}$ F, then the HDDs for that day is equal to 10. The HDD is zero for any day in which

1	the daily average temperature is above 65 °F. HDDs for a whole winter is simply the sum of
2	HDDs for individual winter days. The Delaware Valley Regional Planning Commission hired the
3	consulting firm ICF to conduct a climate impacts analysis for several counties in southeastern
4	Pennsylvania. The results of their HDD analysis for Delaware County are shown in Figure 10.
5	Compared to the baseline HDDs given by the 1961–1999 period, average HDDs for the 2020–
6	2039 period are projected to decline by 10%, regardless of greenhouse gas emissions scenario.
7	HDDs are projected to continue decline throughout the 21st century, with greater declines for
8	higher emissions scenarios, and as much as a 35% decrease by the end of the century.
9	In contrast, the same analysis by ICF concluded that cooling degree days (CDDs),
10	defined in the same way as HDDs but considering temperatures above 65 °F, are projected to
11	dramatically increase in the future. Thus, installing energy efficient heat pumps to meet both
12	heating and cooling requirements can save consumers money, while reducing greenhouse gas
13	emissions.



Projected Change in Heating Degree Days

From 1961 - 1999 Baseline -- Delaware County

1

2 Fig. 10. Projected heating degree days (HDDs) as a percentage of baseline HDDs (1961–1999

3 period) for Delaware County. Two greenhouse gas emissions scenarios are shown: an optimistic

4 scenario (RCP4.5) and a pessimistic scenario (RCP8.5); RCP = representative concentration

5 pathway and 4.5 and 8.5 refer to the enhanced greenhouse gas heating in watts per meter

6 squared. Source: Delaware Valley Regional Planning Commission,

7 <u>https://www.dvrpc.org/energyclimate/ccmit/</u>

8 6. Necessary reductions in greenhouse gas emissions

9 Although climate change is already having profound adverse effects on Pennsylvania's

10 environment, those effects can be expected to increase and, without reductions in emissions of

- 11 carbon dioxide and other greenhouse gases, could reach disastrous levels. The nations of the
- 12 world, including the United States, have entered into the United Nations Framework Convention
- 13 on Climate Change (UNFCCC), whose objective is to limit greenhouse gas emissions to prevent
- 14 "dangerous anthropogenic interference with the climate system." The nations party to the

1 UNFCCC and the scientific community agree that this will require limiting warming to 1.5 to 2

- 2 °C above historic levels. The scientific community, in a series of consensus studies, agrees that
- this will require the world to reduce greenhouse gas emissions by 50% from 2005 levels by 2030
- 4 and to achieve greenhouse emissions neutrality by 2050 (e.g., see
- 5 <u>https://www.ipcc.ch/report/sixth-assessment-report-cycle/</u>). President Biden has adopted these
- 6 science-based goals, which are reflected in the Federal Sustainability Plan
- 7 (https://www.sustainability.gov/federalsustainabilityplan/).

The Intergovernmental Panel on Climate Change and other scientific bodies have 8 9 concluded that these emissions reductions will require the replacement of fossil fuel combustion with energy sources that do not generate greenhouse gases, increases in energy efficiency, and 10 measures to capture carbon dioxide from the atmosphere and sequester it (e.g., belowground). 11 12 The U.S. Environmental Protection Agency (EPA) has found that where power plants cannot generate electricity from non-fossil sources (e.g., nuclear, wind, solar, hydroelectric, biomass and 13 14 other renewables), fossil-fired power plants can and must capture and sequester carbon dioxide—and the EPA has proposed a rule requiring this. Please see New Source Performance 15 Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-16 17 Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean 18 19 *Energy Rule*, 88 Fed. Reg. 33240 (May 23, 2023). 20 Because electricity can be decarbonized, achieving the reductions necessary to avoid the 21 worst impacts of climate disruption will require (1) discontinuing fossil fuel use in situations 22 where carbon dioxide emissions cannot be captured by pollution control and (2) using electricity

to provide the power for those situations. For the latter, this means that appliances that use

natural gas and oil in buildings for heating, cooling, cooking, and hot water be replaced with 1 2 electric appliances, such as energy-efficient heat pumps, induction cook tops, and other electrical 3 appliances whose use has been encouraged by Congress in the Inflation Reduction Act. Decarbonizing also makes sense in a warming climate because of the current and projected 4 5 increases in summer cooling demand and decreases in winter heating demand. Because cooling 6 is generally provided by electricity and heating by fossil fuels, we should expect increased 7 demand for energy that can be decarbonized (like electricity) and a decreasing demand for energy that cannot (like natural gas). 8 9 The need to reduce emissions by 50% by 2030 and to achieve emissions neutrality by 2050 makes it imperative that we not build new infrastructure to expand use of fossil fuels in 10 situations where greenhouse gas emissions cannot be captured and sequestered. 11 7. Impact of the Project on greenhouse gas emissions 12 13 Based on the Findings of Fact, the primary purpose of the proposed Natural Gas 14 Reliability Station is to support expanded use of natural gas based on its "calculated design day demand requirements" (FF 15). The Project is needed to address winter deficits (FF18-20) and 15 16 "customer and usage growth in Delaware County" (FF24). PECO based this growth on a "linear 17 trend analysis," which extrapolates past growth in customer count and usage over the next ten 18 years (FF25-28). PECO did not take account of climate change in its modeling (N.T. 1212-1213, 19 0589A-0590A). If climate change is properly considered, as required in an analysis consistent with Article I, § 27, it can readily be determined that peak winter demand from existing 20 21 customers will be reduced, such that the real intent of the project is to increase distribution and use of natural gas for residential and commercial buildings, increase greenhouse gas emissions 22 23 and lock those increases in for decades to come. 16

1 If infrastructure is built to serve new homes and businesses that are built to use natural 2 gas rather than electricity, there will be two impacts: (1) fossil fuel combustion will increase 3 where emissions cannot be captured and (2) emissions will be locked in for decades to come, 4 with new building and new distribution gas lines. Such impacts are inconsistent with the need to 5 reduce those emissions and achieve emissions neutrality by 2050.

6 The expanded infrastructure can also be expected to result in leaks of methane, a greenhouse gas that is far more potent than carbon dioxide. A review of the literature on methane 7 leaks in U.S. natural gas distribution (Scott et al., 2022) found that leaks from distribution system 8 9 release the greenhouse gas equivalent of 2% of on-road emissions in the U.S. From a monetary perspective, it would make sense to repair such leaks because the climate damages of the 10 released methane are about 5 times the repair costs. However, from the perspective of 11 12 distribution companies, it is not worth it to repair the leaks because the cost of the lost methane to them is relatively small and simply passed on to customers. 13

14 Some will argue that the emissions from the Project do not matter because they are small in comparison to overall world emissions. However, in order for the necessary reductions in 15 16 world emissions to take place, reductions must come from all parties that currently contribute to 17 emissions. Furthermore, every ton of carbon dioxide emitted leads to damage, including loss of human life. By one estimate (Bressler, 2021), every 500 metric tons of carbon dioxide emitted 18 19 now leads to a human death by 2100. For reference, Pennsylvania's CO₂-equivalent emissions in 20 2019 (the most recent estimate available) amounted to 266 million metric tons, which is the 21 equivalent of about 50,000 deaths worldwide by 2100.

According to the Second State of the Carbon Cycle Report (SOCCR2, which I was an
 editor of), human-driven CO₂ emissions are expected to continue to drive changes in climate in

the coming decades and centuries (Cavallaro et al., 2018). In fact, the first key finding of the 1 SOCCR2 report was that emissions from fossil fuel combustion in the North American energy 2 3 sector are a source of carbon to the atmosphere. Reducing the current output of carbon and greenhouse gas emissions is directly tied to limiting global surface temperature change to levels 4 5 that will limit these many harms, as was described in the recent 2022 report of the 6 Intergovernmental Panel on Climate Change. While no one individual state or country policy 7 will singlehandedly solve the problem of climate change and rising temperatures, it is critical that these individual steps be taken in order to contribute to solving the problem collectively. 8

9 8. Conclusions

Humans are massively and rapidly transforming the climate. The overwhelming majority 10 11 of the impacts are negative and will get worse. For example, coral reefs, one of the most important and wondrous ecosystems on Earth, are poised for permanent demise as a result of overheating 12 and acidification. The local ecology is shifting and is likewise poised for permanent and 13 14 irreversible harm and devastation. If we do not act quickly and aggressively to reduce greenhouse 15 gas emissions or remove carbon dioxide from the atmosphere, we will be leaving a planet to our children and grandchildren that is a shadow of its former self. While our knowledge of the climate 16 17 system is not perfect—and never will be—we know enough to act. Fossil fuels have served society 18 very well but they have outlived their usefulness as our sole source of energy, and they cannot be 19 allowed to freely externalize their costs onto society any longer.

It is my opinion that limiting infrastructure that will increase use of fossil fuels, such as the Project, is critical to mitigating the effects of climate change, which is necessary to protect the public interest and the health and welfare of Pennsylvanians and their water, air, and environment and other resources protected under Article I, § 27 of the Pennsylvania Constitution.

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Exhibit "A"

Petition of PECO Energy Company for a Finding)	
of Necessity Pursuant to 53 P.S § 10619 that the)	Docket No. P-2021-3024328
Situation of Two Buildings Associated with a Gas)	(On Remand)
Reliability Station in Marple Township, Delaware		
County, Is Reasonably Necessary for the		
Convenience and Welfare of the Public		

Report of James A. Schmid, Ph. D.

27 October 2023

1. Purpose of this Report

This report is to express my concern and expert opinions regarding what information should be included in a Constitutionally sufficient environmental analysis of the consequences of a proposed gas reliability station proposed by PECO for a site in Marple Township, Delaware County, Pennsylvania, as required by the Commonwealth Court. PECO Gas has sought approval from the Pennsylvania Public Utility Commission (PUC), but has not provided essential information regarding the project area, the proposed construction and operation, or the resulting impacts. This report briefly surveys the extent of environmental assessments that have been generated during the past half century that seek to identify probable damages to the public and to the environment as a result of proposed construction activities. It concludes with a summary of the deficiencies in the existing record for this project, and some of the information that PUC would be expected to include in its independent environmental assessment.

The proposed station is to facilitate the expansion of additional gas supply to expected new PECO customers in Marple Township and elsewhere in Delaware County. Based on my education and experience, I believe that PECO has failed to disclose and analyze how the proposed facility, if approved, will endanger the environment and residents of the Township, will reduce the quality of air and biological resources in the Township, will contribute to global warming and thereby endanger all current and future residents of Pennsylvania, will contribute to indoor air pollution reducing the health of Township and County residents, and will conflict directly with the trustee obligations of all Commonwealth entities that is imposed by Article 1, §27, of the Pennsylvania Constitution to protect the environmental resources of current and future generations of Pennsylvanias. PECO has not provided sufficient information to enable the Public Utility Commission or anyone else to make an independent environmental assessment of the project.

2. Expert Qualifications

I am a biogeographer and consulting ecologist employed full-time in the professional assessment of environmental impacts since 1973. I received my B.A. degree cum laude, ΦBK, from Columbia College in 1966. I received my M.A. and Ph.D. degrees from the University of Chicago. From 1970 until 1973 I taught graduate and undergraduate courses in environmental science, plant ecology, and biogeography as a member of the Biological Sciences Department at Columbia University and Barnard College in New York City. After work as a consulting ecologist for several firms, I founded Schmid & Company in 1980 and serve as its president.

My clients include industrial organizations and individuals seeking environmental permits to construct many kinds of facilities, conservation-oriented groups that question proposed developments, and federal, state, and municipal regulatory agencies seeking project environmental reviews, program regulatory assistance, and policy guidance. I have written and supervised preparation of many dozens of environmental impact statements following the guidelines of several agencies, as well as permit applications for proposed development projects. I have prepared impact statements issued by the US Army Corps of Engineers and the Interstate Commerce Commission, as well as the US Environmental Protection Agency. I have acted as senior scientist on many contracts involving multidisciplinary teams preparing program guidance for agencies such as the New Jersey and Pennsylvania Departments of Environmental Protection, the National Oceanic and Atmospheric Administration and the Council on Environmental Quality. My personal research specialties are wetlands, water resources, and urban vegetation. I hold certification as a Senior Ecologist from the Ecological Society of America and as a Professional Wetland Scientist from the Society of Wetland Scientists, and I have served on the professional accreditation committees of both those organizations. My publications include ten books on urban vegetation and on the plants of the mid-Atlantic states, as well as numerous book chapters and professional reviews of publications. I routinely perform fieldwork, as well as write reports and offer expert testimony before federal and state courts, including the Pennsylvania Environmental Hearing Board and the New Jersey Office of Administrative Law, and various other public boards and

commissions. I have worked on identifying potential impacts from several major pipelines and power lines in Pennsylvania, and I prepared a general technical review of pipelines in the context of Lycoming County, Pennsylvania, for the Pennsylvania League of Women Voters under contract to the Pipeline and Hazardous Materials Safety Administration of the US Department of Transportation. Over the years I have made numerous presentations at academic and professional conferences, and I have delivered guest lectures at several colleges and universities. My report titles, listed in my attached curriculum vitae, cover many pages of fine print.

Of particular relevance in the present context, I was project manager and principal author of a 270-page report titled "Effects of the National Environmental Policy Act on Corporate Decisionmaking" for the US Department of Commerce Office of Environmental Affairs (Contract T35614) and the Council on Environmental Quality (CEQ). My case studies in this report detail several dozen projects across the United States for which Environmental Impact Statements were prepared because they involved Federal permits, Federal financial support, or controversial activities. The report identified numerous ways to increase the effectiveness and efficiency of National Environmental Policy Act (NEPA) reviews as the CEQ was preparing its first update of guidelines. I presented a workshop on my findings to the CEQ in Washington. A summary of the report was circulated by the Business Roundtable, and the entire report was published by the National Technical Information Service.

I also have participated in public service. For some 30 years I served on the Marple Township Environmental Advisory Board, many terms as chair or vice-chair. Since 2017 I have served on the Citizens Advisory Council to the Pennsylvania Department of Environmental Protection pursuant to gubernatorial appointment. I currently am a voting member of the Environmental Quality Board (elected by the Council), and also of the Mining and Reclamation Advisory Board. I thus am bound by oath to support the Constitution of the Commonwealth of Pennsylvania, including Article 1, §27.

I have resided on Cedar Grove Road for more than 48 years, so its intersection with Sproul Road, where the reliability station is proposed, is a place I must visit daily. I also am familiar with the surrounding neighborhood. On weekends I take my grandchildren through that intersection to play at Russell Elementary School one block away, a school which their fathers attended. I patronize Freddy's restaurant next to the 2090 Sproul Road reliability station site and other, adjacent commercial establishments along Sproul Road.

3. The Proposed Project

As I understand it, PECO (the local gas utility) proposes to construct a gas reliability station on the west side of Sproul Road (PA 320) on the south side of its intersection with Cedar Grove Road at the lowest possible cost to its investors. This is proposed to be a "city gate" facility with the purpose of reducing the pressure and raising the temperature of natural gas (primarily methane, CH₄) dispatched from Conshohocken via a new 12-inch (nominal diameter), relatively high-pressure pipeline before transfer of the gas into an old main trunk gas distribution line 16 inches in diameter. This station involves a 0.61 acre site, and is part of a 16.89 acre project in Marple Township to increase gas supplies for future users. Most of the project acreage apparently consists of pipeline construction.

PECO states that gas supplies to Marple Township and nearby sections of Delaware County at present are adequate in volume and pressure to supply natural gas to existing customers. However, the utility hopes and expects demand to increase on the part of new users in the future, based on its actual experience of increased demand from 2011 to 2020. The proposed station is intended to make additional gas available in the future for consumption by new commercial and residential users in Marple Township and Delaware County at the least possible cost.

PECO states that the optimal location for adding gas to its old 16-inch pipeline is at the intersection of Sproul Road with Lawrence Road, 0.46 mile south of the proposed location. At that point the 16-inch line, which receives input at its north end in Conshohocken Borough, Montgomery County, and at its south end in Brookhaven

Borough, Delaware County, has the lowest pressure experienced along its length, with gas reaching its "null" point there from either direction at various times.

The new 12-inch pipeline is to receive gas from liquid storage in Conshohocken. This new pipeline has a maximum authorized operating pressure (MAOP) of 525 psig (pounds per square inch above atmospheric pressure). Insertion pressure at Conshohocken is expected to be operated typically at 475 psig and to drop within the 12-inch pipeline over the 11.5 miles down to about 150 psig at the proposed facility. At the station the piped gas will be heated by burning gas, and its pressure will be reduced to 99 psig before discharge into the 16-inch line. Currently the 16-inch line is operated at a typical target pressure of 99 psig, and its actual pressure ranges down to 65 psig at non-peak usage hours. The proposed reliability station will provide the additional gas needed by prospective new customers served by the 16-inch line at forecast times of peak demand.

PECO has not stated the quantities or schedule for air pollutants to be released from the proposed station's heaters and valves, the levels or schedule of noise that will be produced, or the outdoor light levels that will be maintained at night. It has not discussed the project's compliance with municipal zoning. It has not identified the proposed site and surroundings in detail, or discussed factors of the public interest either locally or globally.

4. Environmental Information presented by PECO

The major part of PECO's information concerning the proposed reliability station is presented in the testimony of Mr. Keith Kowalski, a PA-registered professional geologist, dated 22 September 2023 and attached documents. On behalf of PECO Mr. Kowalski assesses environmental impacts using a 70-question PECO Environmental Checklist to ascertain environmental requirements for permits that would be needed by proposed facilities. As Senior Manager of Environmental Management, he also obtains permits and manages remediation and mitigation activities. He mentions no experience preparing environmental assessments or impact statements dealing with public interest reviews during his work for other private sector firms prior to joining PECO.

Mr. Kowalski prepared the PECO Environmental Checklist for a gas reliability station on land at 1900 Sproul Road (the corner of Reed Road). Subsequently the identical Checklist information apparently was applied to land at 2090 Sproul Road (the corner of Cedar Grove Road). He testified that the Checklist Assessment was the "same regardless of the precise location ultimately selected for the station" (Q. 14). It yielded the same results for both sites (Q. 15). Nowhere does Mr. Kowalski suggest that he followed any guidelines or outline of contents for a thorough environmental assessment or impact statement such as prepared by any public agency.

Mr. Kowalski included material relevant to applications for a National Pollutant Discharge Elimination System (NPDES) stormwater discharge approval and to an approval of sediment and erosion control plans from the Delaware County Conservation District. He concluded that no permit approval was needed for air pollutant discharges, for wetlands not present onsite, or for any species of rare wild plant or animal. He mentioned that municipal zoning required a special exception approval for public utility use, but provided no information suggesting that the proposed station satisfies municipal concerns. He also oversaw Phase I and Phase II investigation and cleanup of contaminated soils after the 2090 Sproul Road site was acquired by PECO.

The information provided is insufficient to enable preparation of a Constitutionally sufficient analysis by the Pennsylvania Public Utility Commission.

5. Guidelines for Environmental Impact Assessments and Statements

This is the National Environmental Policy of the United States of America:

The Congress ... declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans. [Excerpted from Title I, Section 101 (a) of the National Environmental Policy Act of 1969 (NEPA, PL 91-190), effective 1 January 1970]

NEPA established the obligation of every American to protect and enhance environmental quality. Conservation groups and concerned individuals are keenly aware of the long history of environmental problems that led to the passage of NEPA. To insure that at least those private actions needing Federal approval or financial support conform to the National Policy, NEPA required that each proposal be reviewed prior to its approval. NEPA thus brought about a monumental overhaul of Federal agency procedures.

Congress succinctly outlined a basic environmental ethic for society as a whole and for individual citizens:

- Each generation is the trustee of the environment on behalf of succeeding generations [Section 101(b)]
- Each person needs to be able to enjoy a healthful environment, but each person also is expected to preserve and enhance the environment [Section 101 (c)].

NEPA was further defined by Executive Order 11514, and the Council on Environmental Quality issued general guidelines for use by all agencies when preparing detailed environmental statements that comprehensively disclose the consequences of pending approvals [40 CFR, Chapter V, Part 1500]. Agency environmental analyses of private sector projects are produced independently, based on information provided by project sponsors. Specific project impacts are to be discussed in proportion to their significance. Agencies may collect additional data or perform additional analyses beyond those offered by a project sponsor. Documentation of project planning and the formal recording of reasons for rejecting alternatives deemed not viable are basic to the environmental review process. Both construction and project operation aspects must be considered. To the extent that baseline data on existing features in an affected area are unavailable, any determination of impact significance lacks a substantive foundation. Some Federal agencies have adopted more detailed environmental review guidelines emphasizing the recurring issues with which they must deal, within the overall CEQ framework. Environmental Impact Statements (EISs) are prepared and circulated in draft form, then revised to incorporate comments received.

Environmental Assessments are less formal documents covering the contents specified by CEQ. But they, too, are expected to fully disclose all aspects of pending approvals, not just compliance with specific permit requirements. Rather, they specifically solicit review by other agencies and by the public of aspects that might otherwise be overlooked by permit reviewers. Both Environmental Impact Statements and Environmental Assessments can be prepared for agencies not only by agency staff but also by independent contractors. Third-party assessments paid for by applicants can be successful, if independently controlled by agencies.

In 1971, §27 was added to Article 1 of the Pennsylvania Constitution:

The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people. [May 18, 1971, P.L.769, J.R.3]

By intent, this language is similar to that of NEPA, cited above. It was approved unanimously by two successive General Assemblies and received a 75% favorable vote from the electorate statewide.

Unlike NEPA, however, this language was not specifically implemented by executive order across Pennsylvania agencies. No statewide general guidance was issued for environmental reviews implementing Article 1, §27. State environmental permits by regulation specify separately the minimum information to be submitted when seeking various kinds of approvals. Compliance with permit requirements long was deemed sufficient evidence of compliance with §27. But recent decisions of the Pennsylvania Supreme Court, and of Commonwealth Court in this very case, direct that environmental analysis should not be limited solely to permit compliance. Given standard practice in environmental assessment for the past 50 years, it is hardly necessary to reinvent the wheel when considering what should be appropriate analysis.

Thus it is appropriate to consider the contents of federal environmental reviews as traditionally prepared pursuant to CEQ guidelines. Over the years, individual Federal agencies have adjusted their environmental review guidelines to reflect the specific technical concerns within the CEQ guidelines. The CEQ guidelines themselves have

been updated to reflect newer environmental concerns, such as global warming. But the seven basic substantive elements have remained the same:

- •Description of the Proposed Action
- •Description of the Environment to be Affected
- •Relation to Plans, Policies, and Controls for Land Use
- Alternatives
- •Adverse Effects which Cannot be Avoided
- •Relationship between Local Short-term Uses of the Environment and the Maintenance and Enhancement of Long-term Productivity
- •Irreversible and Irretrievable Commitments of Resources

CEQ in recent years has been issuing subject-specific supplemental guidance. In January 2023 the CEQ issued new "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change" [88 *Federal Register* 5:1196 ff.]. According to those guidelines, Americans are now in a "climate crisis, and there is little time left to avoid a dangerous—potentially catastrophic—climate trajectory. Climate change is a fundamental environmental issue, and its effects on the human environment fall squarely within NEPA's purview. ... Climate change is a defining national and global environmental challenge of this time, threatening broad and potentially catastrophic impacts to the human environment. It is well established that rising global atmospheric GHG concentrations are substantially affecting the Earth's climate, and that the dramatic observed increases in GHG concentrations since 1750 are unequivocally caused by human activities including fossil fuel combustion." (I omit CEC's lengthy citations to the scientific literature.)

Thus the CEQ insists that reasonably foreseeable, direct and indirect greenhouse gas (GHG) emissions be quantified for proposed projects and their alternatives including noaction. "Given the urgency of the climate crisis and NEPA's important role in providing critical information to decision makers and the public, NEPA reviews should quantify proposed actions' GHG emissions, place GHG emissions in appropriate context and disclose relevant GHG emissions and relevant climate impacts, and identify alternatives and mitigation measures to avoid or reduce GHG emissions. CEQ encourages agencies to mitigate GHG emissions associated with their proposed actions to the greatest extent possible, consistent with national, science-based GHG reduction policies established to avoid the worst impacts of climate change."

The CEQ insists that "NEPA requires more than a statement that emissions from a proposed ... action or its alternatives represent only a small fraction of global or domestic emissions. Such a statement merely notes the nature of the climate change challenge, and is not a useful basis for deciding whether or to what extent to consider climate change effects." Environmental reviews thus are to "present the environmental and public health effects of a proposed action in clear terms and with sufficient information to make a reasoned choice between no action and other alternatives and appropriate mitigation measures."

The CEQ guidelines go on to observe that climate change "is a particularly complex challenge given its global nature and the inherent interrelationships among its sources and effects. Further, climate change raises environmental justice concerns because it will disproportionately and adversely affect human health and the environment in some communities, including communities of color, low income communities, and Tribal Nations and Indigenous communities." The guidelines contain full citations to Executive Orders addressing environmental justice, and direct that environmental justice issues be discussed early in project planning as well as recorded in environmental documentation.

In short, long-established practice in environmental assessment has established appropriate contents for agency documents aimed at informing decisionmakers and the general public. Across the nation, most State and local assessment requirements follow the general substance of the venerable CEQ guidelines. As Pennsylvania establishes practices for environmental review within this Commonwealth, it would be prudent to follow the practices adopted nationwide and by many other State and local jurisdictions.

It also would be prudent to incorporate the ongoing guidance of the CEQ to address other environmental issues now recognized as warranting specific concern, including but not limited to greenhouse gases, climate change, and environmental justice. The Commonwealth also should guard against "piecemealing" projects in efforts by applicants

to secure permits for initial phases that portend approval of subsequent phases, unless the potential impacts of the entire project are addressed up-front.

6. Deficiencies in PECO Information

I am not aware that the Public Utility Commission has conducted any environmental review of the proposed reliability station pursuant to any guidelines at all. Thus I shall comment on the adequacy of environmental information provided in PECO's submission. For the reasons set forth below, I believe that PECO has failed to provide the minimum information necessary for PUC to complete an independent review. I follow the sequence of information normally used in environmental impact statements. PECO's information is deficient at the local, regional, and global levels of analysis.

Description of the Proposed Action

PECO has provided some information regarding its proposed reliability station. Any permit applicant would be expected to focus on its project's benefits, rather than potential adverse impacts. So environmental analysis are done by public agencies. It has not provided clear quantitative information on all the air pollutants that will be released from the reliability station, from associated methane leaks, and from the downstream releases into residential and outside air of combustion products from new users facilitated by the proposed station. It has not identified the noise levels that will be produced by station equipment operations or the noise levels that will result at the edge of the 2090 Sproul Road project site. It has not addressed nighttime lighting, or the number of foot-candles that will be cast at the edges of the site. It has not addressed the remaining 16.28 acres of the project mentioned in permit applications, which appear to consist of pipeline construction within public roadways. It does not address hazards of combustion and explosion to the public posed by the station and pipeline.

Description of the Environment to be Affected

PECO has provided no information on the population density or socioeconomic characteristics of the project site and its surroundings. It has not identified the distances to existing homes and businesses on adjacent properties. It has not mentioned the existence of an Environmental Justice Area identified by the Pennsylvania Department of Environmental Protection (PADEP) immediately across Sproul Road from the property. It essentially has ignored the local surroundings of its station and pipeline.

This proposed heavy industrial facility is adjacent to homes and to Freddy's restaurant, where it will create an unnecessary and unwise risk to human safety, physical health, and mental health along with increased noise, air pollution, and possibly nighttime light from facility operations for numerous pedestrians and residents. Homes are present on the adjacent lots to the east, north, and west of the facility site, and sidewalks run along two of its sides (**Figure 1**). There are half a dozen homes and one restaurant within 200 feet. The food services along this stretch of Sproul Road draw much pedestrian traffic from children and adults, as well as patrons arriving by automobile. None of the surrounding structures was constructed with fireand explosion-proof protection measures on walls that face the transfer facility or the high-pressure gas pipeline that is to feed it. Despite the relatively low probability of a major



Figure 1. Residences in Marple Township surrounding the intersection of Cedar Grove Road with Sproul Road (PA Route 320). Proposed 2090 Sproul Road reliability station site is the lot west of Sproul Road, south of Cedar Grove Road, and north of Freddy's, in the center of this image. North is up in this June 2022 aerial photo from Google Earth.

explosion, the potential for lethal damage to resident and transient people unavoidably will be increased if the facility is constructed in this densely populated area. Heavy industrial facilities belong in districts zoned for industrial use (such exist in Marple Township).

Damage risk increases with pipeline diameter and operating pressure and decreases with distance. Modeling for pipelines such as those constructed here for the current project by PECO shows that damage would be expected in a broad zone adjacent to them. The new 12-inch PECO pipeline has a risk corridor 1,200 feet wide, centered on the pipeline, that

includes numerous residences and the Russell Elementary School (**Figure 2**). For a 16inch diameter pipeline south of the proposed station operated at about 100 psig, the risk corridor narrows by 40% to 730 feet (only 365 feet wide on each side). Additional distribution pipelines will be needed somewhere to reach new customers beyond the present pipeline terminus within additional lands that also are densely settled, thereby further extending currently existing hazards.

The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) uses a simple, industry-sponsored formula for modeling potential impact radii (PIRs) for use in high consequence areas such as schools and densely populated settlements (C-FER Technologies. 2001. A model for sizing high consequence areas associated with natural gas pipelines. Gas Research Institute Report GRI-00/0189).

Persons in the 60- to 80-year age bracket (and others with impaired mobility) resident within these distances would be expected to experience a mortality rate greater than 50% in the event of a pipeline explosion, according to another report to the Gas Research Institute by DEATECH Consulting Company (2008. Analysis of Report No. GRI – 00/0189 on 'A model for sizing high consequence areas associated with natural gas pipelines.' DEATECH Consulting Company. Montgomery TX. 44 p.).

The current PHMSA PIR formula yields the following distances from the PECO Sproul Road pipelines in Marple Township: for new 12-inch diameter, 180 feet at 475 psig [its MAOP is 525 psig], 101 feet at 150 psig; for old 16-inch diameter, 110 feet at 99 psig. This formula ignores several applicable conservative assumptions and does not consider wind effects (National Transportation Safety Board. 2022. Enbridge Inc. natural gas transmission pipeline rupture and fire [Danville KY, 2019]. Pipeline Investigation Report NTSB/PIR-22/02. Washington DC. 56 p.). When the current PHMSA PIR formula is applied, fatalities and damage at distances well beyond its predictions have been observed across the nation. Thus the National Transportation Safety Board has recommended that PHMSA revise its PIR formula to generate larger, more realistic distances for the limits of adjacent areas at risk from pipeline impacts.



Figure 2. Location of part of the new 12-inch pipeline in Sproul Road (orange line) in Marple Township south from Russell Elementary School to the site of the proposed transfer station. Yellow lines show the 600-foot limits of "minimum evacuation distance" modeled to meet US Department of Housing and Urban Development recommendations for burn protection, if this line were operated at 475 psig. At 150 psig the limit narrows to 320 feet, on each side of the pipe, still encompassing many homes. This October 2020 airphoto is from GoogleEarth.

Relation to Plans, Policies, and Controls for Land Use

PECO has indicated that the proposed reliability station does not conform with local zoning until a special exception is approved. No information on zoning approval was provided.

Some of the land adjacent to the proposed reliability station site has been designated by the Pennsylvania Department of Environmental Protection as an Environmental Justice Area (**Figure 3**). Such areas are most likely to be damaged by additional sources of air pollution and hazardous facilities. Marple residents will get more volatiles and organic carbons to



Figure 3. Red arrow in the center of the map shows the proposed new reliability station site at the intersection of Cedar Grove Road with Sproul Road, surrounded by small, residential streets and the alleyway of the commercial strip. The adjacent dark blue census tract immediately to the east is an Environmental Justice Area (score 81 out of maximum impairment value of 100). There are numerous other Environmental Justice areas in Delaware County. Graphic from https://gis.dep.pa.gov/PennEnviroScreen/, accessed September 2023.

breathe, affecting the asthma of far too many neighbors. Environmental Justice Areas also warrant expanded public participation when projects are planned (Environmental Justice Office. 2023. Environmental justice policy. Document 015-0501-002. PA Department of Environmental Protection. Harrisburg PA. 27 p. Also, CEQ 2023 guidance cited above.).

Additional electric energy to power the additional air conditioning would be needed by everyone in Marple and Delaware County to offset the temperature increased by PECO's new

gas customers via its proposed reliability station. Most affected, of course, will be residents of Environmental Justice areas in Marple Township and elsewhere in Delaware County.

There is no space for functional or aesthetic landscaping between the proposed industrial facility and pedestrians, vehicles, or homes. PECO proposes to reduce operational noise by enclosing its equipment within structures and providing an eight-foot-tall fence with some kind of noise buffering properties. It has not reported the noise levels to be generated at the facility or indicated the expected noise levels at its property lines. Thus the significance of the noise increase cannot be estimated. Noise levels decrease logarithmically with distance from a noise source at the rate of 6 decibels (dBA) per doubling of distance. Relatively small distances sometimes enable significant drops in noise levels. Whether the industrial facility will increase neighborhood light levels at night is not clear.

Alternatives

PECO did not consider the socially and environmentally appropriate, no-action alternative for the reliability station. Many measures are available to discourage natural gas use, which must be curtailed as rapidly as practicable, such as offering incentives for the preferable alternative appliances for electric heating and cooking. Without new gas customers, there is no need for the proposed station.

An alternative site, however, could reduce local impacts. PECO states that the completed engineering for the proposed reliability station allows its location to be practicable within 0.5 mile of the "null point" of the 16-inch pipeline, that is, 0.5 mile from the intersection of Lawrence Road with Sproul Road. The proposed site is 0.46 mile north, at Cedar Grove Road on the west side of Sproul Road at 2090 Sproul Road. An alternative site initially was considered by PECO. It would appear to provide significant reduction in danger from station operations and from explosive potential to residents of Marple Township. This location is 0.47 mile south of the null point along the east side of Sproul Road (**Figure 4**). This location is on



Figure 4. Alternative site for a gas reliability station along an existing trunk gas pipeline beneath Sproul Road in Marple Township, Delaware County, Pennsylvania. The yellow circle represents a 0.5-mile radius from number (1) on a GoogleEarth aerial photograph prepared as PECO Exhibit RL-4. I have added labels in orange. My purple numbers are (1) PECO's ideal null point for injection of gas into the old 16-inch trunk pipeline at Lawrence Road; (2) PECO's proposed station location at Cedar Grove Road; and (3) an alternative location south of Reed Road. PECO considered and rejected alternative sites between numbers (1) and (2). Placement of a station at number (3) could reduce local adverse impacts.

vacant land across a wide segment of Sproul Road from one existing home and from a cemetery. It is across Reed Road at a significantly greater distance from the Wendy's restaurant than the proposed station is from Freddy's restaurant. PECO offered no engineering reasons why this would not be an acceptable location for its reliability

station. A location here would be dramatically farther from existing homes and other facilities than the proposed site enabling reduced impacts on residents of Marple Township and screening from adjacent uses. But it would entail another mile of 12-inch pipeline construction in Sproul Road.

PECO rejected----as too costly----undertaking alternative transfer station designs and installation of a larger diameter pipeline that could enable expansion of the radius of search for an alternative transfer station site such as within the industrially zoned district of Marple Township. It acknowledged the "significant disruption of traffic patterns" and delays over the months of pipeline construction which resulted when it installed the 12-inch pipeline prior to securing the necessary approvals for its proposed reliability station.

Adverse Effects which Cannot be Avoided

PECO prepared no summary of adverse impacts which cannot be avoided.

Operation of the proposed reliability station facility itself will generate outdoor air pollution from two sources at a location where ambient outdoor standards are not being met. One is the onsite combustion of the natural gas (primarily methane) to heat products moved through the pipelines. Natural gas combustion is just as damaging to climate as byproducts of the other fossil fuels---coal and oil. The other source is the valves which control the flow of products through the pipeline, and which typically leak methane. These discharges will increase the amounts of carbon dioxide, methane, nitrogen dioxide, and other air pollutants discharged into Marple Township for residents to breathe. Outdoor air in Delaware County currently is classified as not attaining national air quality standards (NAAQS) for nitrogen dioxide (NO₂), ozone (O₃), and fine particulate matter (PM 2.5). There is no proposed offset of warming by greenhouse gases to be discharged from the service area.

Approval of the proposed gas reliability station will promote adverse impacts on the health of Marple Township and Delaware County residents and employees by facilitating the proliferation of gas appliances used indoors in buildings increasingly insulated against air leaks. As a result of indoor gas leaks, persons occasionally die of asphyxiation by carbon monoxide, and fires are caused by flammable methane. Gas appliances often leak methane even when turned off. The ordinary use of natural gas appliances indoors causes many health

problems via release of air pollutants generated during the combustion of methane, such as nitrogen dioxide, super-fine particulate matter, carbon monoxide, and others. Some, but not all, gas appliances to be used indoors are required to be equipped with ventilation flues to reduce the harmful byproducts of gas combustion. Gas ranges, space heaters, and fireplace logs, however, are <u>seldom</u> required to be vented. After installation, ventilation requires maintenance to function effectively, and noisy ventilation fans may discourage actual use by consumers. Thus indoor air quality where gas-fired appliances are used often exceeds the concentrations of pollutants allowed by regulation outdoors (Figuroa, Laura A., and J. Lienke. 2022. The emissions in the kitchen: how the Consumer Products Safety Commission can address the risks of indoor air pollution from gas stoves. Center for Policy Integrity, New York University Law School. New York NY. 19 p.).

The resulting impacts are greatest on children. They may cause various short-term physical symptoms---most often contributing to asthma---as well as damage long-term mental health. The proportion of childhood asthma in Pennsylvania that could be theoretically prevented if gas stove use was not present is estimated as 13.5% (Gruenwald, Talor, B.A. Seals, L.D. Knibbs, and H.D. Hosgood III. 2023. Population attributable fraction of gas stoves and childhood asthma in the United States. International Journal of Environmental Research and Public Health 20[1]: 75). Hence New York City and Ithaca, New York; Berkeley, California; and the state of Victoria (Australia) have banned the use of gas appliances in new construction (Bambrick, Hilary, K. Charlesworth, S. Bradshaw, and T. Baxter. 2021. Kicking the gas habit: how gas is harming our health. Climate Council of Australia, Limited. Potts Point, Australia. 48 p.). The United States Consumer Products Safety Commission has been requested to evaluate the need for nationwide restrictions on gas-fired appliances in the United States (Krishnamoorthi, Raja. 1 August 2022. Letter to CPSC. U.S. House of Representatives, Committee on Oversight and Reform, Subcommittee on Economic and Consumer Policy. Washington DC. 5 p.). Again, the most likely persons to be affected are residents of Environmental Justice areas who may rent and may not be able to afford upgrading appliances or ventilation equipment (WE ACT for Environmental Justice. 2023. Out of gas, in with justice: studying the impacts of induction stoves on indoor air quality in affordable housing. New York NY. 68 p.).

This is precisely the kind of facility that should NOT be constructed: it is to provide gas to new users. PECO claims that it has sufficient capacity to serve this vicinity without any new pipeline or reliability station. Instead of expanding gas consumption, PECO should be removing gas infrastructure and instead increasing electric energy supplies, primarily from renewable sources, to replace existing gas uses.

Relationship between Local Short-term Uses of the Environment and the Maintenance and Enhancement of Long-term Productivity

PECO prepared no discussion of short-term versus long-terms uses of the environment. The impacts of greenhouse gases are very long-term. PECO did not discuss the likelihood of stranding shareholder assets by constructing additional gas distribution facilities as public policies shift away from gas use because of global warming.

Under business as usual, <u>annual average</u> temperatures in Pennsylvania by 2050 are projected to be about 6° F. above the baseline average for the 1971-2000 period (Pennsylvania Department of Environmental Protection. 2021. Climate impacts assessment. ICF. Fairfax VA. 143 p.). The state's climate report labels the clearly predictable added heat mortality, Lyme disease increase, and rises in violent crime as <u>critical</u> impacts that result from global warming. They describe the resulting impacts as <u>catastrophic</u> on Pennsylvania forests, wildlife, and ecosystems. These include reduced dissolved oxygen in the waters of our freshwater streams as well as the Delaware River estuary as consequences of global warming to which this proposed PECO facility will contribute. During 2023 our region experienced unhealthy concentrations of smoke from distant wildfires induced by global warming.

Irreversible and Irretrievable Commitments of Resources

Finally, PECO did not seek to summarize irreversible and irretrievable commitments of resources, should the gas reliability project be constructed.

This proposed PECO gas heating and transfer station is NOT reasonably necessary for the convenience and welfare of the public. Its negative, short- and long-term impacts on public welfare are both local and global. Its basic purpose is to facilitate additional future use of natural gas, which should be reduced instead to benefit public health and safety as well as potential new customers. This reliability station is badly sited in a high consequence area that is contrary to township zoning and much too close to existing residences, businesses, and pedestrians. Its appearance would detract from the aesthetic values of the community. It would be a dangerous nuisance that threatens public safety close to an elementary school. As an industrial facility it would exacerbate documented air quality issues that are particularly relevant to residents of an adjacent Environmental Justice zone. The impact of its air pollution on public health, its on-going noise and nighttime light, would contribute stress degrading to both mental and physical health of station neighbors.

Under business as usual, <u>annual average</u> temperatures in Pennsylvania by 2050 are projected to be about 6° F. above the baseline average for the 1971-2000 period (Pennsylvania Department of Environmental Protection. 2021. Climate impacts assessment. ICF. Fairfax VA. 143 p.). The same report tells us that Environmental Justice communities in PA will suffer twice as much increase in 90° F. or hotter days as will the state as a whole. We shall experience crisis summer heat waves, more rainfall delivered as frequent and intense thunderstorms separated by drought periods, and increased flooding in the Darby Creek basin. Downstream communities in our basin also will get runoff from the proposed impervious construction, and Marple (unlike Philadelphia), does not collect any fee for stormwater management.

This proposed gas reliability station and pipeline are precisely the kind of facilities that should NOT be constructed anywhere in Marple Township or Delaware County. Their stated purpose is providing additional gas supply to new users, as cheaply as possible to encourage additional gas consumption. Instead of expanding gas use, PECO instead should be removing gas infrastructure and increasing electric energy supplies, primarily from renewable sources, to replace existing gas uses. Fossil fuel use is not sustainable, if the earth is to remain habitable.

A peer-reviewed report from the International Energy Agency (2021. Net zero by 2050, a roadmap for the global energy sector. International Energy Agency. Paris, France. 224

p.) details how governments, business, investors, and citizens all must be investing now in new ways to <u>cut</u> fossil fuel use, if there is to be any hope of avoiding increasingly disastrous impacts on climate.

Our municipalities should be prohibiting the issuance of all building permits for new buildings to be served by natural gas and requiring solar panels and electric appliances instead. We do not permit new urban or suburban outhouses, after all. Pennsylvania municipalities should ban gas appliances and heating in new construction. Municipalities should refuse to accept dedication of new roadways serving new developments that burn gas. Our utilities should be offering incentives to replace natural gas with renewable electric energy. They should <u>not</u> be risking their shareholders' dollars to expand natural gas supplies whose use and price are going to decline. Our governments should be raising taxes on gas, not subsidizing PECO's efforts to strand capital assets in new gas distribution facilities while it chases short-term profits and engineering convenience as it imposes public nuisances on established communities. Instead, to advance public health and welfare, PECO should be subsidizing sustainable replacement items like heat pumps, induction stoves, and solar panels.

7. Concluding Opinions Summary

Preparation of an independent, comprehensive environmental analysis by the PUC pursuant to relevant CEQ guidelines would document the reasons to deny approval of the reliability project, which will comprise a long-term public nuisance, not a desirable facility.

Denying approvals for this PECO project will not solve the global climate crisis, but it will avoid the genuine, adverse, cumulative effects of one more proposed source of environmental damage badly sited in Marple Township and Delaware County. Each bit of natural gas use reduction helps and is vitally important to current and future generations of residents. From my experience participating for decades in environmental regulation, Pennsylvania appears to like rhetoric on paper in environmental laws and regulations that might promote sustainable life in our Commonwealth, but loopholes and non-enforcement usually assure that the soothing recommendations on paper are not actually applied in specific cases.

Marple Township's zoning hearing board and commissioners should be commended for denying municipal approval for PECO's proposed gas transfer station. State regulators and the judicial system should stand behind such local efforts to protect residents of Marple, of Pennsylvania, and of our beleaguered earth.

James A. Schming

James A. Schmid, Ph. D. 26 October 2023