

March 16, 2020

VIA *ELECTRONIC FILING*

Office of the Secretary
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

RE: **Docket Nos. F-2019-3008809 and F-2019-3008832**

Enclosed for filing are *ADDITIONAL EVIDENCE SUBMITTED BY COMPLAINANTS TO RESPONDENT, PPL ELECTRIC UTILITIES CORPORATION* in the above-referenced proceeding. These documents originally were submitted for filing on March 13, 2020 at 1:12:11 PM with eFiling Confirmation Number 1872503.

Respectfully submitted,



Handwritten signatures of John Holder and Janet Holder in blue ink, positioned above a horizontal line.

John Holder, Janet Holder

CERTIFICATE OF SERVICE

We hereby certify that true and correct copies of Complainants' *Additional Evidence* (Exhibits), have been served upon the following persons in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant):

VIA USPS CERTIFIED MAIL

(7019 2280 0002 3000 5832)

Kimberly A. Klock, Esq.
Michael J. Shafer, Esq.
PPL Services Corporation
Two North Ninth Street
Allentown, PA 18101

(7019 2280 0002 3000 5849)

Devin T. Ryan, Esq.
Garrett P. Lent, Esq.
Post & Schell PC
17 North 2nd Street
12th Floor
Harrisburg, PA 17101-1601

(7019 2280 0002 3000 5825)

Curtis Renner, Esq.
1901 Pennsylvania Ave NW
Suite 1005 ENS
Washington, DC 20006

(7019 2280 0002 3000 5818)

Administrative Law Judge Elizabeth Barnes
400 North Street
Harrisburg, PA 17120

Date: March 13, 2020



ADDITIONAL EVIDENCE
Submitted by Complainants
to
Respondent, PPL Electric Utilities Corporation

The following items have been submitted by Complainants as additional evidentiary exhibits in the instant case:

1. ***Risks to Health and Well-Being From Radio-Frequency Radiation Emitted by Cell Phones and Other Wireless Devices.*** Anthony B. Miller, Margaret E. Sears, L. Lloyd Morgan, Devra L. Davis, Lennart Hardell, Mark Oremus and Colin L. Soskolne. *Frontiers in Public Health*, August 13, 2019. doi: 10.3389/fpubh.2019.00223 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6701402>)
2. ***Tumor promotion by exposure to radiofrequency electromagnetic fields below exposure limits for humans.*** Alexander Lerchl, Melanie Klose, Karen Grote, Adalbert F.X. Wilhelm, Oliver Spathmann, Thomas Fiedler, Joachim Streckert, Volkert Hansen, Markus Clemens. *Biochemical and Biophysical Research Communications* 2015 Apr 17;459(4):585-90. doi: 10.1016/j.bbrc.2015.02.151.
3. ***Mobile Telecommunications and Health: Review of the current scientific research in view of precautionary health protection.*** Kerstin Hennies, H.-Peter Neitzke, Hartmut Voigt. *ECOLOG-Institut*, April 2000.
4. ***Effects of the Exposure to Mobile Phones on Male Reproduction: A Review of the Literature.*** Sandro La Vignera, Rosita A. Condorelli, Enzo Vicari, Rosario D'agata, and Aldo E. Calogero. *American Society of Andrology, Journal of Andrology*, Vol. 33, No. 3, May/June 2012.
5. ***Effects of ELF Fields on Calcium-Ion Efflux from Brain Tissue in Vitro.*** Carl F. Blackman, Shawnee G. Benane, Linda S. Kinney, William T. Joines, and Dennis E. House. *Health Effects Research Laboratory, U.S. Environmental Protection Agency. Radiation Research* 92, 510-520 (1982). (<https://www.jstor.org/stable/3575923?read-now=1&seq=1>)
6. United States. Congress. House. Committee on Interior and Insular Affairs. Subcommittee on Water and Power Resources. ***Health Effects of Transmission Lines: Oversight Hearing Before the Subcommittee On Water And Power Resources of the Committee On Interior And Insular Affairs***, House of Representatives, One Hundredth Congress, First Session, Serial No. 100-22 ... Hearing Held In Washington DC, October 6, 1987. Washington: U.S. G.P.O., 1988. (excerpt pp. 1, 152-172.) (<https://babel.hathitrust.org/cgi/pt?id=pst.000013370435&view=lup&seq=1>)

7. ***Comments on the US National Toxicology Program technical reports on toxicology and carcinogenesis study in rats exposed to whole-body radiofrequency radiation at 900 MHz and in mice exposed to whole-body radiofrequency radiation at 1,900 MHz.*** Lennart Hardell, Michael Carlberg. *International Journal of Oncology* 54: 111-127, 2019. DOI: 10.3892/ijo.2018.4606. Accepted October 3, 2018. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6254861/>)
8. ***Comments on the National Toxicology Program Bioassay on RF GSM-and CDMA-Modulated Cell Phone RFR, NTP TR 595, March 12, 2018, submitted on behalf of Environmental Health Trust*** (https://ntp.niehs.nih.gov/ntp/about_ntp/trpanel/2018/march/publiccomm/environmental-health-trust20180312.pdf)
9. ***Actions from Peer Review of the Draft NTP Technical Reports on Cell Phone Radiofrequency Radiation March 26-28, 2018.*** (https://ntp.niehs.nih.gov/ntp/about_ntp/trpanel/2018/march/actions20180328_508.pdf)
10. ***National Toxicology Program Peer Review of the Draft NTP Technical Reports on Cell Phone Radiofrequency Radiation, March 26-28, 2018.*** National Institute of Environmental Health Sciences. (https://ntp.niehs.nih.gov/ntp/about_ntp/trpanel/2018/march/peerreview20180328_508.pdf)
11. ***Evaluation of Carcinogenicity of Cell Phone Radiation: NTP Draft Technical Reports (TR 595, TR 596) vs. Expert Panel Vote.*** Results Tabularization by Joel M. Moskowitz, PhD, School of Public Health, UC Berkeley, March 30, 2018. (<https://drruscio.com/wpcontent/uploads/2018/12/180330summaryofNTPexpertpanelrecommendations.pdf>)
12. ***Biological Effects of Electromagnetic Radiation (Radiowaves and Microwaves) - Eurasian Communist Countries.*** Ronald L. Adams, R.A. Williams. U.S. Army Medical Intelligence and Information Agency, Office of the Surgeon General. Approved by the Directorate for Scientific and Technical Intelligence of the Defense Intelligence Agency, U.S. Department of Defense. DST-1810S-074-76 (1976).
13. ***The Contribution of In Vivo Mammalian Studies to the Knowledge of Adverse Effects of Radiofrequency Radiation on Human Health.*** Andrea Vornoli, Laura Falcioni, Daniele Mandrioli, Luciano Bua and Fiorella Belpoggi. Ramazzini Institute. *International Journal of Environmental Research and Public Health* 2019, 16, 3379; doi:10.3390/ijerph16183379 (<https://www.mdpi.com/1660-4601/16/18/3379/pdf>)
14. ***Evaluation of the Genotoxicity of Cell Phone Radiofrequency in Male and Female Rats and Mice Following Subchronic Exposure.*** Stephanie L. Smith-Roe, Michael E. Wyde, John R. Bucher, et al. *Environmental and Molecular Mutagenesis* 61:276-290 (2020). (<https://onlinelibrary.wiley.com/doi/full/10.1002/em.22343>)
15. ***Partial Results of NTP Chronic Carcinogenicity Studies of Cell Phone Radiofrequency Radiation in Rats.*** Linda S. Birnbaum, Director, National Institute of Environmental Health Sciences (NIEHS), National Toxicology Program. January 24, 2017, Israel Institute for Advanced Studies, Hebrew University, Jerusalem. (<https://ehtrust.org/wp-content/uploads/Linda-Birnbaum-.pdf>)

16. ***Partial Results of NTP Chronic Carcinogenicity Studies of Cell Phone Radiofrequency Radiation in Rats.*** Linda S. Birnbaum, Director, National Institute of Environmental Health Sciences (NIEHS), National Toxicology Program. Presented by Dr. Ronald Melnick, Ph.D Senior Scientist (retired), National Toxicology Program, NIEHS, NIH. January 24, 2017, Israel Institute for Advanced Studies, Hebrew University, Jerusalem.
(<https://ehtrust.org/science/key-scientific-lectures/2017-expert-forum-wireless-radiation-human-health/>)
18. ***Radiations and Male Fertility.*** Kavindra Kumar Kesari, Ashok Agarwal, and Ralf Henkel. *Reproductive Biology and Endocrinology* (2018) 16:118 (<https://doi.org/10.1186/s12958-018-0431-1>)
19. ***Changes of Clinically Important Neurotransmitters under the Influence of Modulated RF Fields—A Long-term Study under Real-life Conditions.*** Klaus Buchner and Horst Eger. Original study in German: Buchner K, Eger H (2011) *Umwelt -Medizin-Gesellschaft* 24(1): 44-57.
(<https://ecfsapi.fcc.gov/file/7521095891.pdf>)
20. ***Evidence for Disruption by the Modulating Signal.*** (2017.) Carl F. Blackman, PhD, Founder, Former President and Full Member of the Bioelectromagnetics Society and U.S. Environmental Protection Agency scientist.
(https://bioinitiative.org/wp-content/uploads/pdfs/sec15_2007_Modulation_Blackman.pdf)
21. ***A Summary of Recent Literature (2007-2017) on Neurological Effects of Radiofrequency Radiation.*** Henry Lai. In “*Mobile Communications and Public Health*” Markov, M. (ed.), CRC Press, 2018, Chapter 8, pp.187-222.
(<https://ecfsapi.fcc.gov/file/10916020933093/Neurological%20effects%20of%20RF%20Henry%20Lai%20chapter%20Markov%202018.pdf>)
21. ***A Summary of Recent Literature (2007-2017) on Neurological Effects of Radiofrequency Radiation.*** Henry Lai. In “*Mobile Communications and Public Health*” Markov, M. (ed.), CRC Press, 2019, Chapter 8, pp.187-222.
22. ***Mobile Communications and Public Health.*** Markov, M. (ed.), CRC Press, Taylor & Francis, Boca Raton, FL (2019).
23. ***Interphone’s Provocative Analysis of the Brain Tumor Risks.*** Microwave News, May 17, 2010.
(<https://microwavenews.com/Interphone.Appendix2.html>)
24. ***RF Cancer Promotion: Animal Study Makes Waves; Germany's Alex Lerchl Does A U-Turn.*** Microwave News, March 14, 2015.
(<https://microwavenews.com/news-center/rf-animal-cancer-promotion>)
25. ***Scientists Sue FCC for Dismissing Studies Linking Cell Phone Radiation to Cancer.*** Colin Kalmbacher, Law & Crime, February 4, 2020.
(<https://lawandcrime.com/administrative-law/scientists-sue-fcc-for-dismissing-claims-that-cell-phone-radiation-causes-cancer/>)

26. ***Environmental Health Trust, et al. v. The Federal Communications Commission and the United States of America.*** Petition for Review in the U.S. Court of Appeals for the District of Columbia. 445591201 January 31, 2020. (<https://www.scribd.com/document/445591201/FCC-Cell-Phone-Case#>) (<https://lawandcrime.com/administrative-law/scientists-sue-fcc-for-dismissing-claims-that-cell-phone-radiation-causes-cancer/>)
27. ***Children's Health Defense, et al. v. Federal Communications Commission and the United States of America.*** Petition for Review in the U.S. Court of Appeals for the Ninth Circuit, February 2, 2020. (<https://childrenshealthdefense.org/wp-content/uploads/02-02-2020-CHD-v.-FCC-Petition-for-Review-For-Public.pdf>)
28. ***Lawsuit filed against Apple, Samsung after Chicago Tribune tests cellphones for radiofrequency radiation.*** Joe Mahr, Chicago Tribune, August 29, 2019. (<https://www.chicagotribune.com/investigations/ct-cell-phone-radiation-lawsuit-apple-samsung-met-20190829-ye5h7fw6yvvauxpo367vqeg7pju-story.html>)
29. ***Andrew Cohen, et al. v. Apple, Inc. and Samsung Electronics America, Inc.,*** Class Action Complaint in the United States District Court for the Northern District of California, San Jose Division. Case 5:19-cv-05322, August 23, 2019. (<https://www.documentcloud.org/documents/6354255-Cellphone-lawsuit-August-2019.html>)
30. ***Santa Fe Alliance for Public Health and Safety, et al. v. City of Santa Fe, New Mexico, Hector Balderas, Attorney General of New Mexico; and the United States of America*** in the United States District Court for the District of New Mexico. Case No. 1:18-cv-01209-LF-JHR, First Amended Complaint, January 29, 2019. (<https://www.cellphonetaskforce.org/wp-content/uploads/2019/01/Doc-19-First-Amended-Complaint.pdf>)
31. Response of Dr. Ron Melnick and Dr. Devra Davis to matters concerned with FCC's action of December 4, 2019 in which the agency declined to update its 1996 human exposure limits for radiofrequency radiation. Environmental Health Trust, February 1, 2020. (<https://www.youtube.com/watch?v=Dr1O5wlq2iA>)
32. ***Exploring the Spectrum: The Effects of Natural and Artificial Light on Living Organisms.*** Dr. John Nash Ott, Hon.DSc., Documentary film, 1975 (excerpt). (<https://www.youtube.com/watch?v=018C2oG2Rcs>)
33. ***Civil Action No. 4:15-CV-40116-TSH*** in the United States District Court, District of Massachusetts. Complaint seeking injunctive relief, filed August 12, 2015. (<http://www.casewatch.net/civil/wifi/complaint.pdf>)
34. ***Civil Action No. 4:15-CV-40116-TSH*** in the United States District Court, District of Massachusetts. Memorandum and Order on Defendants' Motion to Exclude Plaintiffs' Experts (Docket No. 58) and Defendants' Motion for Summary Judgment (Docket No. 95). September 29, 2017. 282 F.Supp.3d 381 (2017). (https://www.casewatch.net/civil/wifi/130_order_excluding_experts.pdf)

35. **Letter from Dr. Martha Herbert, PhD, MD, in the matter of *Civil Action No. 4:15-CV-40116-TSH (G v. Fay School, et al.)*** and concerning the "pathophysiological impacts of EMF/RFR," dated September 12, 2015 and filed as 'page 40 of 59' of 'Document 26' in that case on December 8, 2015.
(<https://electromagnetichealth.org/wp-content/uploads/2016/01/herbert.pdf>)
36. **Letter from Dr. David O. Carpenter, MD, in the matter of *Civil Action No. 4:15-CV-40116-TSH (G v. Fay School, et al.)*** and "concerning potential adverse health effects associated with exposure to radiofrequency / microwave (RF / MW) radiation," dated July 28, 2014 and filed as page '48 of 59' of 'Document 26' in that case on December 8, 2015.
(<https://electromagnetichealth.org/wp-content/uploads/2016/01/carpenter.pdf>)
37. **Letter from Dr. Martin Blank, PhD, in the matter of *Civil Action No. 4:15-CV-40116-TSH (G v. Fay School, et al.)*** and expressing concern for the "known risks," "in light of the cellular and DNA science," of "non-thermal frequencies, pulsing, signal characteristics" of wireless radiofrequency radiation, dated July 25, 2014 and filed as page '50 of 59' of 'Document 26' in that case on December 8, 2015.
(<https://electromagnetichealth.org/wp-content/uploads/2016/01/blank.pdf>)
38. **Letter from board certified cardiologist, Dr. Steven T. Sinatra, MD, F.A.C.C., F.A.C.N., in the matter of *Civil Action No. 4:15-CV-40116-TSH (G v. Fay School, et al.)*** and concerning unwise exposure of children and teachers to WiFi RF given that "[t]he heart is a delicate and complex electromagnetic organ that can be adversely affected by exogenous signals from wireless technology and microwave radiation," dated July 16, 2014 and filed as page '52 of 59' of 'Document 26' in that case on December 8, 2015.
(<https://electromagnetichealth.org/wp-content/uploads/2016/01/sinatra.pdf>)
39. **Letter from Dr. Olle Johansson, PhD, in the matter of *Civil Action No. 4:15-CV-40116-TSH (G v. Fay School, et al.)*** and concerning children who "are physically being impacted by radiation from WiFi antennas," dated July 24, 2014 and filed as page '54 of 59' of 'Document 26' in that case on December 8, 2015.
(<https://electromagnetichealth.org/wp-content/uploads/2016/01/johansson.pdf>)
40. ***Laura Sunstein Murphy v. PECO Energy Company***, PA PUC Docket No. C-2015-2475726. Main Brief of Laura Sunstein Murphy, September 25, 2017.
(<http://www.puc.state.pa.us/pcdocs/1538124.pdf>)