



NEEDHAM BOARD OF HEALTH



November 14, 2016

Town of Needham, Board of Selectmen
Needham Town Hall
1471 Highland Avenue
Needham, MA 02492

Dear Chair Matthew Borrelli, Vice Chair Marianne Cooley, and Board of Selectmen Members,

At its meeting on October 4th, the Needham Board of Selectmen asked for the Board of Health to review materials and speak to representatives from Eversource, Inc., about the West Roxbury to Needham Reliability Project and any health effects that such a project might have on Needham and its residents. The Needham Board of Health is charged by the Massachusetts General Court to protect the public's health under its authority to make reasonable health regulations¹ and to "examine all nuisances, sources of filth and causes of sickness"².

The Board of Health, at its publicly posted and noticed meeting in the evening on Thursday November 10, 2016, met with representatives from Eversource, Epsilon Associates, Gradient Corporation, and others to discuss the project and its potential health impacts.

In advance of the meeting, the Board of Health and its staff members in the Public Health Division³ reviewed the Draft Environmental Impact Report, the Electrical and Magnetic Field (EMF) Modeling Analysis, and a handful of scientific studies and medical journal articles about EMF and health. The Board of Health also considered a late submission by Claire Fialkov, PhD, including a letter addressed to the Energy Facilities Siting Board and an email addressed to Selectmen Moe Handel about Dr. Fialkov's concerns and the shared concerns of Needham residents on Warren and Grant streets.

Following that research and analysis, as well as the discussion with the Public Health Division staff members and with the representatives from Eversource, Epsilon, and Gradient, the Needham Board of Health found that:

- Modeled EMF values "were all well below the health-based guidelines issued by the International Commission on Non Ionizing Radiation Protection ("ICNIRP") for continuous public exposure to EMFs."⁴
- The modeling "also demonstrated that EMF values at the ROW#3 edges were frequently modeled reduced for the With-Project circuit configurations, as compared to the Without-Project circuit configurations".⁵ Or, to put it more simply, the reliability project will likely reduce the measure EMFs along the project right-of-way.

¹ M.G.L. ch. 111, s.31, available at: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section31>

² M.G.L. ch. 111, s.122, available at: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section122>

³ Director Timothy Muir McDonald, Environmental Health Agent Tara Gurge, and Public Health Nurse Donna Carmichael.

⁴ Epsilon Associates, Inc. "W. Roxbury to Needham Reliability Project". *ESFB Analysis*. (2016) 5-56.

⁵ Ibid.

- The analysis further notes that “the project will contribute to *decreased* electric and magnetic fields at the edges of ROW #3 in West Roxbury and Needham, in particular for the portion of ROW #3 between the Valley Road area in Needham and the Needham Substation of Chestnut Street”⁶, and also that “the magnetic fields associated with the Project operation would be similar along both the Preferred Route and the Noticed Alternative Route.”⁷

Scientific research that is not specifically focused upon this project but rather on the health effects of EMF generally, has categorized power-line EMF as “possibly carcinogenic to humans, which, in the RF and EMF circumstances, refers to limited-to-inadequate evidence of cancer risk in humans.”⁸ It further notes that:

“Power-line EMF has been the focus of considerable research for more than three decades. Over this period of time, the focus has been primarily on the magnetic field component. The three major lines of investigation have involved epidemiology, laboratory animal studies, and biological mechanism studies. The scientific evidence currently accumulated does not support a clear and coherent picture whereby environmental levels of power-line EMF constitute a hazard to human health, primarily because animal studies and mechanistic investigations have not shown a consistent, deleterious effect of typical ambient power-line magnetic fields on biology.”⁹

Based upon the available evidence both specific to this project and upon scientific literature which explores the possible health effects of EMF in general, **the Needham Board of Health concludes that this project does not constitute a clear threat to the health and wellness of Needham residents along the project’s planned route.**

The Board of Health is pleased to be of assistance in this matter, and offers its services to the Town in future hearings or public discussions to help residents understand the health impacts of the proposed project.

Thank you for your attention.

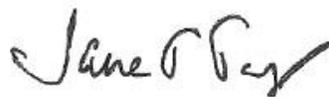
Sincerely,



Edward Cosgrove, PhD



Stephen Epstein, MD, MPP



Jane Fogg, MD, MPH

CC: *Timothy Muir McDonald, Director of Public Health*
Tara Gurge, Environmental Health Agent
Kate Fitzpatrick, Town Manager
Christopher Coleman, Assistant Town Manager/Director of Operations
Jack Lopes, Community Relations Specialist, Eversource

⁶ Ibid.

⁷ Ibid.

⁸ Valberg, Peter. “Electromagnetic Waves (EMF and RF) and Health Effects”. *Hamilton & Hardy’s Industrial Toxicology*, 6th Edition. (2015) 6: 1069-1085. Page 1069.

⁹ Ibid, page 1072.