

THE CONNECTICUT SITING COUNCIL  
DOCKET NO. 272

Application of Northeast Utilities Service Company  
for a Certificate of Environmental Compatibility  
and Public Need for a new 345-kV Electric Transmission Line Facility  
between Scovill Rock Switching Station in Middletown  
and Norwalk Substantion in Norwalk

**Supplemental Testimony of**

**Dr. Eric Grubman**

**On Behalf of**

**Ezra Academy, Congregation B'nai Jacob,  
The Jewish Community Center of Greater New Haven and  
The Jewish Federation of Greater New Haven**

**March 16, 2004**

1 **Q. Dr. Grubman, please state your name, position, and business**  
2 **address.**

3  
4 A. My name is Eric Grubman. I am a cardiac electrophysiologist, a  
5 physician who specializes in heart rhythm disturbances. My business  
6 address is 40 Temple Street, New Haven, Connecticut.

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8 **Q. Have you previously submitted testimony in this proceeding?**

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10 A. Yes, I submitted testimony on February 9, 2004 at the CSC meeting in  
11 Woodbridge, CT.

12  
13 **Q. Does your practice of medicine focus on a population you believe**  
14 **may be impacted by overhead power lines?**

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16 A. Yes. I believe that people who have undergone the implantation of  
17 implantable defibrillators, known as ICDs, are a vulnerable population  
18 who may be affected by exposure to overhead power lines. Many of  
19 my patients are at risk for fatal heart rhythm disturbances. To prevent  
20 their death, they have undergone implantation of ICDs. This device,  
21 when working properly will deliver a life saving shock in the event  
22 the heart stops beating correctly.

23  
24 **Q. How would the exposure to a large electrical field affect such**  
25 **patients?**

26

1 A. Large electrical fields produce electromagnetic fields, which can be  
2 detected by an ICD, as the device attempts to monitor a patient's heart  
3 rhythm. The developers of ICDs have long recognized this potential  
4 problem, and the devices are equipped with selective filters to prevent  
5 electromagnetic interference (or EMI) from affecting the ICD.  
6 However, higher levels of electromagnetic interference can exceed the  
7 capability of even the best filter and cause the ICD to erroneously  
8 interpret the heart's activity. If this happened, the device would  
9 respond by delivering a painful shock. *In addition to being painful,*  
10 *this shock could actually trigger a potentially dangerous heart rhythm*  
11 *disturbance*

12  
13 **Q. Can a high voltage power line present a danger to people with**  
14 **implanted defibrillators?**

15  
16 A. Yes. *High voltage power lines produce radiated electrical fields.*  
17 *These fields can be strong enough to be detected by ICDs.* Field  
18 intensities greater than 1000v/meter are *approaching the range* that  
19 can cause inappropriate ICD shocks.

20  
21 **Q. Are the projected field intensities for the proposed power line**  
22 **through Woodbridge sufficient to pose a danger to people with**  
23 **implanted defibrillators?**

24  
25 A. Yes. The table in Chapter 6 of the Utilities' application reports a  
26 calculated value for the electrical field produced by the proposed lines  
27 to be 2,720 v/meter. *This field level will be enough to overwhelm*

1           *even the best EMI filters currently available and could cause an ICD*  
2           *to deliver a painful, unnecessary shock. This is not a theoretical*  
3           *concern – patients have already received these shocks from other*  
4           *sources of EMF.*

5  
6

7       **Q. Do you have patients that would be directly affected by the**  
8       **proposed power line through Woodbridge?**

9

10     A. Yes. A number of my patients are members of the synagogue in  
11     Woodbridge. Others exercise regularly at the Jewish Community  
12     Center in Woodbridge. They will all be at risk of receiving painful  
13     unnecessary ICD shocks from merely being on either property if the  
14     power lines are upgraded as proposed. The parking lots of both  
15     facilities are directly under the lines, where the electric field is the  
16     greatest. People with defibrillators taking casual recreational walks  
17     through the town could be at risk as they approach the area of the  
18     overhead wires.

19

20     **Q. What is your conclusion as to the health risks posed by the**  
21     **proposed new 345-kV power lines?**

22

23     A. The proposed plan is a serious concern for patients with ICDs. Please  
24     consider these serious ramifications when you evaluate the Utilities’  
25     proposal.

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