

Burlington Ward 1 Special Meeting:

3/8/2007, 7 p.m., Burlington School District Conference Room
(150 Colchester Ave.)

Follow-up on East Avenue Loop Transmission Upgrade Project

1/10/07 NPA meeting concerns:

- 1) **Q.** Why is it necessary to double the number of transmission wires within the existing VELCO right of way between Williston and Burlington?

A. The doubling of these lines creates a redundant electrical path, which is necessary to improve electric reliability. Now, if one line is damaged, blackouts in Burlington could easily occur during times of high usage (generally, hot summer days). The two lines provide the backup that is needed to assure continued service under these circumstances. The replacement wires are being sized to meet the reliability need and serve expected growth in the area, not to double the capacity. The main goal of these lines is to improve reliability.

- 2) **Q.** Around the East Avenue substation, what's the difference between the proposed and existing electric wires and which ones will be undergrounded?

A. The existing feed to VELCO's East Avenue substation is one 115 kV circuit, and the proposed feed would be two 115 kV circuits.

The existing five distribution circuits exiting BED's East Avenue substation, which is fed from VELCO's substation, are all 13.8 kV. Each exits the substation underground to a pole that connects the underground cables to existing overhead circuits: two toward Colchester Avenue via Centennial Field's driveway, two toward East Avenue via University Road and one toward Centennial Woods. It is important to note that decisions to underground are generally based on safety and not on aesthetics.

Four of the existing 13.8 kV distribution circuits will not change significantly in the proposed design. The one circuit that will change is the circuit through Centennial Woods. This circuit will be rerouted along University Road to East Avenue, which means University Road will have one new underground distribution circuit.

A new 34.5 kV circuit will exit the proposed VELCO East Avenue substation. It will run underground along the same path as the existing aerial 13.8 kV distribution circuits running along Centennial Field's driveway to Colchester Avenue; the 34.5 kV circuit will remain underground until north of Colchester Avenue. For the section north of Colchester Avenue, one of the existing 13.8 kV overhead lines will be removed and the other 13.8 kV overhead line will be placed underground with the new 34.5 kV line to BED's pole P2534 at the bottom of the ravine behind #222 Riverside Avenue just before the basketball



court, at which point both the new 34.5 kV circuit and the remaining 13.8 kV circuit will go overhead until just south of Riverside Avenue.

From this point, the new 34.5 kV circuit will be placed in the same underground conduit as the existing 13.8 kV distribution circuit along Riverside Avenue until the intersection of Intervale Road. At Intervale Road, the new 34.5 kV and existing 13.8 kV distribution circuits from Riverside Avenue, along with an existing 13.8 kV distribution circuit from North Prospect Street, will be overhead, and all three circuits (one new 34.5 kV, two existing 13.8 kV) will run along the existing pole path north on Intervale Road and west across Queen City Steel. Some poles will be replaced with taller poles to accommodate the 34.5 kV circuit running above the 13.8 kV circuits. Finally, directly south of the McNeil Substation, the new 34.5 kV circuit and existing 13.8 kV circuits will run north into the McNeil Substation via new poles. The two existing 13.8 kV distribution circuits running along the south of McNeil substation will be intercepted and run “in/out” of a new substation at McNeil, for a total of five circuits running north into McNeil (one 34.5 kV and four 13.8 kV circuits). Two of the four circuits will continue south and run up to Manhattan Drive via new poles.

- 3) **Q.** Regarding the coordination between UVM and VELCO foresters in Centennial Woods, how far outside of the right of way would “danger trees” need to be removed? And how many trees?

A. Danger trees are the trees outside of the right of way that pose a threat to electric lines due to their height and poor health. Fifteen to 16 trees outside of the right of way have been identified as needing to be removed during the normal four-year vegetation management cycle. An additional 14 trees outside of the right of way have been identified as needing to be removed due to the proposed project. There were also some other trees, not specifically counted, identified as needing to be removed along the eastern and northern edges of the right of way.

“Aerial Map 7 - Centennial Woods” and photos from the VELCO and UVM field investigation of 1/25/07, both within the project pre-filing package, contain further details on quantities, location, and types of trees that would be removed regardless of the project and those that would need to be removed due to the project. The map and photos are available via the following links:
<http://www.velco.com/Files/East%20Ave%20Prefiling/EastAveaerialmap8.pdf>

Also, please see presentation materials on VELCO’s Vegetation Management Plan and East Avenue project impacts for general information on how vegetation is maintained within VELCO’s rights of way.
[http://www.velco.com/Files/East%20Ave%20Prefiling/3.7%20Public%20Safety%20&%20Reliability%20\(Vegetation\).pdf](http://www.velco.com/Files/East%20Ave%20Prefiling/3.7%20Public%20Safety%20&%20Reliability%20(Vegetation).pdf)



- 4) **Q.** Can you provide more information on Electric and Magnetic Fields (EMF)?

A. Some preliminary modeling has been done on some sections of the proposal for replacing the H-frame structures carrying one 115 kV line with two single-pole structures, each carrying one 115 kV circuit. Although the EMF levels near the center of the right of way increase significantly, the fields at the edges of the right of way are only slightly elevated and in some cases slightly lowered.

Scientists have studied the potential effects of exposure to electric and magnetic fields for more than 20 years. Some epidemiology studies have reported weak and inconsistent associations between surrogate markers of EMF exposure and childhood leukemia. However, the results are poorly linked to actual measured exposures. It is not clear whether other factors might have accounted for the increased association. No laboratory or animal studies have been shown to connect EMF and cancer risk, and scientists have not been able to establish any cause and effect. Studies linking EMF and health effects are weak and inconsistent. In addition, scientists have not been able to determine what levels of fields or types of exposure, if any, could cause health effects.

Please see the booklet and EMF document within section 4.4 of the project pre-filing package; available at <http://www.velco.com/Files/East%20Ave%20Prefiling/4.4%20Electric%20and%20Magnetic%20Fields.pdf>

Also, please see the website linked from VELCO.com: Electric and Magnetic Fields Research and Public Information Dissemination (RAPID) Program, coordinated by the National Institute of Environmental Health Sciences (NIEHS) and the Department of Energy (DOE). This website contains a vast amount of information on the effects on biological systems of exposure to 60 Hz electric and magnetic fields produced by the generation, transmission and use of electric energy, including a booklet on common EMF questions and answers. <http://www.niehs.nih.gov/emfrapid>

- 5) **Q.** Can this project detail and other information be posted to the Internet to allow for all to see?

A. Yes. Detailed information on the project is now available at <http://www.velco.com/eastavenueloop> within the table of contents of the project pre-filing package. Also, this Q & A listing shall be posted shortly to the public information section for this project, along with updates and further information when possible.

