

DOCKET NO. 112 - An application of SNET Cellular, Inc., for a Certificate of Environmental Compatibility and Public Need for a cellular telephone tower and associated equipment in the Town of Colchester, Connecticut.

CONNECTICUT  
SITING **ORIGINAL**  
COUNCIL  
September 8, 1989

FINDINGS OF FACT

1. SNET Cellular, Inc. (SNET) in accordance with the provisions of Sections 16-50g to 16-50z of the Connecticut General Statutes (CGS) applied to the Connecticut Siting Council (Council) on April 14, 1989, for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a telecommunications tower and associated equipment to provide domestic public cellular radio telecommunication service (cellular service) in the Town of Colchester within the New London New England County Metropolitan Area (New London NECMA). (Record)
2. The Council and its staff made an inspection of the proposed Colchester site on June 13, 1989. This inspection was publicly noticed in the Hartford Courant, the New London Day, the Norwich Bulletin, and the Colchester Regional Standard. During the field review, SNET flew a balloon at the proposed site to simulate the height of the proposed tower. (Record)
3. Pursuant to Section 16-50m of the CGS, the Council, after giving due notice thereof, held a public hearing on the proposed tower site on June 13, 1989, beginning at 3:00 P.M., and continuing at 6:30 P.M., the same day. The hearing was held in the gymnasium of the Salem Elementary School, Salem, Connecticut. (Record)

4. The parties in the proceeding are the applicant and those persons and organizations whose names are listed in the Decision and Order which accompanies these Findings of Fact. (Record)
5. The Department of Environmental Protection (DEP) filed written comments with the Council pursuant to Section 16-50j of the CGS on June 2, 1989. (Record)
6. Cellular service consists of small, overlapping broadcast regions, two to ten miles in diameter, known as cells. Each cell is served by a transmitter limited by the Federal Communications Commission (FCC) to no more than 100 watts effective radiated power per channel. Each cell is connected to a central switching point containing electronic apparatus uniting the cells into a system. Mobile units are limited by the FCC to a maximum of seven watts of effective radiated power. (SNET 1, Section II, pp. 1-2)
7. The FCC has determined that the public interest requires two licenses for cellular service be made available in each market of each NECMA. (SNET 1, p. 3)
8. Applicants for FCC cellular system authorizations are not required to demonstrate a public need for the service, since the FCC has pre-empted this issue through the exercise of its primary jurisdiction. (SNET 1, Section III, p. 3)
9. The FCC has pre-empted the States' regulation of cellular service in three major areas: technical standards to assure technical integrity of systems and nationwide compatibility, market structure, and state certification prior to federal application for a construction permit. (SNET 1, Section III, pp. 3-4)

10. The FCC granted SNET cellular radio authorization for the New London NECMA on July 25, 1986. On April 14, 1989, SNET applied to the FCC to construct the proposed Colchester site as an expansion of the New London NECMA. (SNET 1, pp. 3-4; Section VI, p. 32)
11. As part of SNET's overall system, the proposed site in Colchester is planned to overlap with SNET's existing cellular coverage from sites in Norwich and Glastonbury. (SNET 1, Section III, p. 35; SNET 2, Q-5, p. 2)
12. The coverage from the proposed Colchester tower site would include Routes 2, 11, 16, 149, 85, and 354 within the towns of Colchester, East Haddam, Columbia, Hebron, Lebanon, and Marlborough. (SNET 1, Section III, p. 35; SNET 2, Q. 5, p. 2)
13. In its search for a tower site, SNET considered and rejected eight potential sites in the Colchester area. SNET contacted the Connecticut State Police regarding the use of the existing 320-foot State Police tower on Windham Avenue in Colchester. The State Police plan to add four dish antennas and two whip antennas to this tower. To adequately support the additional SNET antennas, a new tower and foundation would be required to replace the existing two-year old tower at a cost of \$200,000. The existing tower would be overloaded if the SNET antennas were added. Neither the State Police nor SNET deemed it financially prudent to make this investment and replace a tower in service less than two years. (SNET 1, Section III, pp.4-5)

14. SNET considered an existing 160-foot tower owned by the Algonquin Gas Company (Algonquin) on Munn Road and requested to lease a portion of Algonquin's 7.6 acre site for an additional tower, but Algonquin declined, citing possible future needs. An existing 200-foot tower on Buckley Hill in Colchester was considered, but a tower at this site would not provide the required coverage along Route 2 to connect with existing coverage from the Norwich site. A parcel of land on Westchester Road was considered, but would not provide coverage along Route 2. The Town of Colchester suggested the use of town-owned property on Halls Hill which contains water tanks of 50 feet and 80 feet. SNET determined that this site would require a 180-foot tower, but rejected the site because it is in a residential area. A 140-foot existing tower at the State Police barracks on Old Hartford Road, was considered, but rejected due to low elevation and inability to provide adequate coverage. An existing 40-foot Department of Transportation tower was evaluated, but rejected due to low elevation and insufficient coverage. (SNET 1, Section VI, pp. 5-7, p. 10)
15. The proposed Colchester tower site is a 100-foot by 100-foot parcel 660 feet west of Chestnut Hill Road on a 72 acre site owned by Stelco Industries. The proposed site is zoned General Commercial. (SNET 1, Section VI, p. 3, p. 7, p. 20)
16. The proposed site is adjacent to and south of Route 2. Most of the proposed site is heavily treed. (SNET 1, Section VI, p. 3)
17. The owner of the 72 acre site is proposing to develop a portion of the site for a lumber and building supply business. (SNET 1, Section VI, p. 3)

18. SNET would construct a new 600-foot access road from Chestnut Hill Road into the proposed site. The access road would be 14 feet in width and surfaced with processed stone. Utilities would be brought into the proposed site above ground. (SNET 1, Section VI, p. 20; Tr., p. 45, p. 52)
19. The proposed site has an elevation of 550 feet above mean sea level. The coordinates of the proposed site are  $41^{\circ} 34' 05''$  latitude, and  $72^{\circ} 18' 20''$  longitude. (SNET 1, Section VI, p. 33)
20. There are two homes and a church within a 1000-foot radius of the proposed site. The nearest home is 680 feet from the proposed site. (SNET 2, Q. 1)
21. The proposed monopole tower would be a 180-foot monopole to which a triangular platform would be attached. Between four and six omnidirectional whip antennas would be mounted at the corners of this platform. The antennas and support platform would add 17 feet to the overall height of the tower, thereby resulting in a total structure height of 197 feet. (SNET 1, Section V, pp. 2-4)
22. The proposed tower would be painted a mixed blue-grey color. (SNET 1, Section V, p. 3)
23. Within the proposed site, SNET would construct a single-story 12-foot by 26-foot equipment building to house electronic equipment. Security and fire alarms would be installed within this building. (SNET 1, Section V, p. 1, Section VI, p. 36; Tr. p. 47)
24. An eight-foot high chain link fence would surround the proposed tower and equipment building. (SNET 1, Section VI, p. 36; SNET 2, Q. 12)
25. The distance from the base of the proposed tower to the nearest travel portion of Route 2 would be 156 feet. The only building within the fall zone of the proposed tower would be the electronic equipment building. Approximately 24 feet of tower's 180 foot fall zone would extend on to Route 2. (SNET 2, Q. 6, Q. 12)

26. The proposed tower would be visible from nearby portions of Route 2 and from the Bible Baptist Church on Chestnut Hill Road. The tower would not be visible from the cul-de-sac on Edgewood Drive, or from the intersection of Norwich Road and Chestnut Hill Road. (SNET 2, Q. 11)
27. There are no inland wetlands on the proposed site or route of the access road. However, a point of the western portion of the proposed site boundary touches a wetland and approximately two-thirds of the proposed site is within 75 feet of this wetlands boundary. The Town of Colchester's wetlands regulations consider any construction conducted within this 75-foot area to be a regulated activity. (SNET 2, Q. 2, Q. 14)
28. SNET approached the owner of the proposed site regarding moving the 100-foot by 100-foot parcel farther from the wetlands. The owner refused to consider moving the tower site, citing possible intrusions on his plans to develop the rest of the 72-acre site. (Tr; p. 17)
29. In the construction of the proposed site and access road, SNET would remove 77 trees with a diameter of less than six inches, and 51 trees with a diameter of greater than six inches. (SNET 2, Q. 3)
30. The proposed site is approximately 1500 feet south of a private landing strip, used during daylight hours. This landing strip is oriented in an east to west direction and has an approach approximately 90 degrees from the proposed site. This landing strip was not identified by SNET on any Federal Aviation Administration (FAA) maps. (Tr; p. 30, p. 35, p. 38; SNET Late File 4)
31. SNET requested FAA approval for the proposed site on March 29, 1989. On June 22, 1989, SNET formally notified the FAA of the existence of the private landing strip. To date, SNET had not received any response from the FAA regarding the proposed tower. (SNET Late File 4)

32. Reducing the height of the proposed tower from 180 feet to 150 feet would result in the loss of 1.1 miles of coverage along Route 11, the loss of 2.5 miles along Route 2, the loss of .25 miles on Route 85, the loss of .30 miles on Route 16, the loss of .10 miles on Route 354, and the loss of 2.9 miles on Route 149. (Tr., pp. 19-20)
33. Based on conservative assumptions, the worst case electromagnetic radio frequency power density (power density) level would be  $0.070787 \text{ mW/cm}^2$  at the base of the proposed tower. The American National Standards Institute (ANSI) safety standard for the proposed frequency level is  $2.933 \text{ mW/cm}^2$ . (SNET 1, Section IV, p. 8, Section VI, p. 28)
34. The General Assembly has directed that the Commissioner of the DEP shall by regulation adopt the standards recommended by the ANSI with respect to human exposure to radio frequency electromagnetic fields. (CGS 22a-162(a))
35. Other than the climate control equipment, the proposed tower and equipment building would not be a source of noise. (SNET 1, Section VI, pp. 22-23)
36. There are no existing records of federally endangered or threatened species or Connecticut species of special concern occurring at the proposed tower site. (SNET 2, Q. 10)
37. Construction of the proposed tower and associated equipment building would have no effect on historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places. (SNET 2, Q. 9)

38. Facility costs at the proposed Colchester tower site were estimated as follows:

Radio Equipment	\$179,515.00
Antenna Equipment and Mast	47,880.00
Power and Common Equipment	171,570.00
Land and Building	156,000.00
Miscellaneous (including site preparation and installation)	77,700.00
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Total Cost	\$632,665.00

(SNET 1, Section VI, p. 29)

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