

Daniel F. Caruso
Chairman

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Internet: ct.gov/esc

April 14, 2008

TO: Parties and Intervenors

FROM: S. Derek Phelps, Executive Director

RE: **PETITION NO. 834** -- Watertown Renewable Power, LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the construction, maintenance, and operation of a 30 MW biomass gasification generating project located at Echo Lake Road, Watertown, Connecticut.

As stated at the hearing in Watertown on February 5, 2008, after the Council issues its draft findings of fact, parties and intervenors may identify errors or inconsistencies between the Council's draft findings of fact and the record; however, no new information, evidence, argument, or reply briefs will be considered by the Council.

Parties and Intervenors may file written comments with the Connecticut Siting Council on the Draft Findings of Fact issued on this docket by April 21, 2008.

SDP/cm

Enclosure



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| PETITION NO. 834 – Watertown Renewable Power, LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the construction, maintenance, an operation of a 30 MW biomass gasification generating project located at Echo Lake Road, Watertown, Connecticut. | } } } | Connecticut Siting Council April 4, 2008 |
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DRAFT Findings of Fact

Introduction

1. On November 14, 2007, Watertown Renewable Power, LLC (WRP or Petitioner) pursuant to Connecticut General Statutes (CGS) §16-50k as amended by Section 18 of Public Act 05-1, submitted a petition (Petition) to the Connecticut Siting Council (Council) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (Certificate) is required for the construction, maintenance, and operation of a 30 MW biomass gasification generating facility in the Town of Watertown, Connecticut. (WRP 1, p. 12-13)
2. WRP is a Connecticut limited liability company and a Tamarack Energy, Inc. (Tamarack) company. Tamarack is a Delaware corporation and an independently operated, wholly-owned subsidiary of Haley & Aldrich, Inc. (Sprint 1, pp. 4-5)
3. The proposed generating facility qualifies as a Class I renewable resource as defined by CGS § 16-1(a)(26). (WRP 1, p. 6; Administrative Notice Item No. 22)
4. The parties in this proceeding are WRP and the Town of Watertown (Town). The Connecticut Light and Power Company (CL&P) is an intervenor. (Transcript 1 – February 5, 2008, 3:00 p.m. [Tr. 1], pp. 1-2 ; Transcript 2 – February 5, 2008, 7:05 p.m. [Tr. 2], pp. 1-2)
5. Notice of the Petition was provided to all abutting property owners by First Class Mail. (WRP 2, response 1)
6. Notice of the Petition was published in local newspapers. (WRP 1, p. 91)
7. Pursuant to CGS § 16-50l (b), WRP provided notice to all federal, state and local officials and agencies listed therein. (WRP 1, p. 93)
8. On January 26, 2008, WRP placed a sign at the entrance to the site stating the name of the Petitioner, and the date, time and location for the Council’s public hearing on the Petition. (Tr. 1, p. 20)
9. Pursuant to Section 16-50j-21 and 16-50j-40 of the Regulations of Connecticut State Agencies, the Council, after giving due notice thereof, held a public hearing on February 5, 2008 beginning at 3:00 p.m. and continuing at 7:05 p.m. at the Watertown High School, 324 French Street, Watertown, Connecticut. (Tr. 1, pp. 2, 3; Tr. 2, pp. 2, 3)
10. The Council and its staff conducted an inspection of the proposed site on February 5, 2008. During the field inspection, the Petitioner flew a red balloon at proposed site to simulate the height of the proposed smokestack. Weather conditions during the field review were rainy, foggy, and calm. During the field review, the balloon reached a height of 170 feet above ground level (agl). The balloon was aloft from 8:00 a.m. to 5:00 p.m. for the convenience of the public. (Council’s Hearing Notice dated January 10, 2008; Tr. 1, pp. 19-20; Tr. 2, p.42)

State Agency Comment

11. Pursuant to CGS § 16-50j (h), on January 10, 2008 and February 8, 2008, the following State agencies were solicited by the Council to submit written comments regarding the proposed facility: Department of Environmental Protection (DEP), Department of Public Health (DPH), Council on Environmental Quality (CEQ), Department of Public Utility Control (DPUC), Office of Policy and Management (OPM), Department of Economic and Community Development (DECD), and the Department of Transportation (DOT). (Record)
12. The DPH Drinking Water Section responded to the Council's solicitation, but had no comments. (DPH Comments dated January 15, 2008)
13. The DOT's Bureau of Engineering and Highway Operations responded to the Council's solicitation, but had no comments. (DOT Comments dated February 4, 2008)
14. The DEP submitted comments dated February 1, 2008. (DEP Comments dated February 1, 2008)
15. In its comments, DEP notes that the proposed facility would be consistent with the Connecticut Solid Waste Management Plan, as it diverts clean wood waste material, such as land clearing debris, pallets, spools, silvicultural thinnings and mill residues, from the waste stream and puts them to a beneficial use. (DEP Comments dated February 1, 2008)
16. DEP also notes that the ability of the facility to provide a market for low value forestry products is beneficial. This will improve the quality of forest strands by removing trees of poor form and health. (DEP Comments dated February 1, 2008)
17. DEP has not sampled Turkey Brook for fisheries population data. However, Turkey Brook would likely support a native brook trout population. To protect the water quality and fisheries resources, DEP recommends that a 100-foot wide riparian buffer be maintained along both sides of Turkey Brook. (DEP Comments dated February 1, 2008)
18. The DEP is willing to enter into an easement agreement with WRP for the right-of-way necessary to connect the proposed power plant with one of the two 115-kV transmission lines running through the Mattatuck State Forest just north of the site. This agreement includes the following conditions:
 - a) The transmission lines shall be buried within the right of way area in order to create an unobstructed meadow. This would provide a more scenic landscape and reduce the impact on wildlife in the area.
 - b) Any cleared areas beyond the existing trail must be replanted with a species that is beneficial to wildlife.
 - c) The state will require an annual payment as compensation for the right-of-way. The annual payment will be negotiated based on an appraisal determining the value of the right-of-way.
 - d) The state must be compensated for the value of the timber removed.
 - e) All costs associated with granting the right of way easement including, but not limited to, site surveys, appraisals, title work, etc. will be borne by Tamarack. (DEP Comments dated February 1, 2008; WRP 1, Appendix F)

19. The DEP is also willing to enter into an overhead easement agreement with WRP for the right-of-way necessary to connect the proposed power plant with one of the two 115-kV transmission lines running through the Mattatuck State Forest just north of the site. This agreement includes the following conditions:
 - a) Any cleared areas beyond the existing trail must be replaced with a species that is beneficial to wildlife.
 - b) The state would require an annual payment and/or another form of compensation for the right of way. The compensation must be equal to or greater than the value of the right of way easement. The terms of the compensation will be negotiated prior to granting of the easement.
 - c) The state must be compensated for the value of the timber removed.
 - e) All costs associated with granting the right of way easement including, but not limited to, site surveys, appraisals, title work, etc. will be borne by Tamarack. (DEP Comments dated March 26, 2008; WRP 1, Appendix F)
20. The DEP notes that an application for a New Source Review Permit has been received and is undergoing technical review and modeling. The required emissions reduction credits for nitrogen oxide (NOx) must be acquired by the Petitioner before the issuance of the New Source Review Permit. DEP also notes that a Solid Waste Facility Permit will not be required as long as clean, untreated wood is used to fuel the plant. (DEP Comments dated February 1, 2008)
21. DEP recommends that the proposed retaining wall shown as being directly on the Mattatuck State Forest / Tamarack property line, be pulled back off the property boundary by 20 to 30 feet in order to minimize damage to trees and root systems and to provide a minimal buffer. (DEP Comments dated February 1, 2008)
22. The following agencies did not respond with comments on the application: CEQ, DPUC, OPM, and the DECD. (Record)
23. The University of Connecticut (UConn) College of Natural Resources and Agriculture submitted comments dated January 29, 2008 in support of the proposed facility. (UConn Comments dated January 29, 2008)

Municipal Consultation

24. WRP met with the former Town Manager, Meredith Robson, and other Town staff in March 2005 to introduce the project. Several meetings were held with Town officials during 2006 and 2007. (WRP 1, p. 91 and Appendix L).
25. In August 2007, WRP submitted a technical report to the chief elected official of the Town of Watertown. (WRP 1, p. 91 and Appendix L)
26. WRP held a community open house on October 4, 2007. A public notice with the date, time and location of the open house was published in local newspapers. Approximately 13 members of the Watertown community attended the open house. (WRP 1, p. 91 and Appendix L)
27. Charles Faigon, Town Manager of Watertown, made a limited appearance statement into the record at the February 5, 2008 public hearing in which he expressed support for the proposed project and praised Tamarack for their professionalism during the process. (Tr. 1, pp. 6-7)

28. Elaine Adams, Chairwoman of the Watertown Town Council, made a limited appearance statement into the record at the February 5, 2008 public hearing in which she expressed support for the proposed project and indicated that the project was well planned and thought out. (Tr. 2, pp. 6-8)
29. The Watertown Economic Development Commission and the Watertown Oakville Chamber of Commerce submitted letters of support for the proposed project on November 16, 2007 and January 3, 2008, respectively. (WRP 8 and 14)

Site Description

30. The site is a 33-acre parcel owned by Industrial Development Group and is located off of Echo Lake Road in Watertown, Connecticut. The site is located in an industrial zone (General Industrial, I G-80). It is bordered by industrial-zoned (I G-80) land to the west and south. To the north and east of the site is the Mattatuck State Forest. (WRP 1, pp. 18-20; WRP 2, response 2)
31. The site is located approximately one mile west of Route 8. (WRP 1, p. 18)
32. The Town Zoning Regulations allow the installation of public utility buildings and facilities within the I G-80 zone. (WRP 1, p. 19)
33. The site is undeveloped and was cleared approximately 10 years ago. The surrounding area is heavily wooded with grey birch and goldenrod being the dominant species, with lesser amounts of red oak, red maple, black locust, black oak, and white pine. (WRP 1, Appendix 1; WRP 2, response 8; DEP Comments dated February 1, 2008)
34. Turkey Brook and associated wetlands occupy the central portion of the property. (WRP 1, p. 19)
35. Development of the project would require the acquisition of an easement from DEP across a portion of the Mattatuck State Forest for the electric interconnection. (WRP 1, p. 38; WRP 13)
36. There are no residences within 1,000 feet of the site. (WRP 1, p. 19)
37. The nearest residence is located in an industrial-zoned area approximately 1,300 feet to the west of the subject property boundary. (WRP 1, p. 19)
38. The nearest residential zone is approximately three-quarters of a mile from the site. (WRP 1, p. 19)
39. Other nearby properties to the west along Echo Lake Road include a Connecticut Resource Recovery Authority waste transfer facility, an automotive scrap yard, UPS and FedEx distribution centers, and several light manufacturing industries. (WRP 1, p. 19)

Power Plant Description

40. The WRP project will utilize a highly automated wood fuel receiving, storage and conveyance system to deliver chipped wood fuel to an advanced fluidized bed gasification system that includes a boiler that generates steam to drive a conventional condensing steam turbine with a nominal output of 30 MW. (WRP 1, p. 26)

41. 15 MW of power output would be sold to CL&P under the terms of a 15-year electricity purchase agreement that resulted from the Connecticut Clean Energy Fund's Project 100 Solicitation. Approximately 3 MW would be used to supply internal plant loads. The remaining power would be sold directly to ISO New England, Inc., (ISO-NE) or via separate, long-term contracts. (WRP 1, pp. 6, 28)
42. The facility would include a 115-foot by 477-foot wood storage area, two truck dumpers, an 88-foot by 187-foot by 137-foot high boiler building, a 170-foot exhaust stack, an 82-foot by 144-foot by 59-foot high plant building, a baghouse, cooling tower, and a fenced substation (approximately 30 feet by 40 feet) to boost the output voltage to 115-kV. (WRP 1, Attachment D)
43. The facility would utilize clean wood chips derived from whole trees, chipped clean pallets, urban wood waste and mill residue. The facility would not use wood chips derived from painted or treated materials. (WRP 1, pp. 21-22)
44. Wood fuel would be delivered by tractor-trailer trucks, which would be unloaded by two truck dumpers into a receiving hopper. Wood fuel would be moved by conveyor to an outside storage pile capable of holding enough fuel for 17 to 20 days of operation. (WRP 1, p. 26)
45. Approximately 40 to 50 truck loads of fuel would be delivered each day. (WRP 1, pp. 74-75)
46. Wood fuel would be delivered from the storage pile to the fluidized bed boiler using a series of conveyors. (WRP 1, pp. 26-28)
47. Natural gas would be the start-up fuel for the fluidized bed boiler prior to introducing wood fuel into the furnace. (WRP 1, Exhibit 25)
48. The facility would have the capability to maintain 40 percent of its total capacity on natural gas in the event of a wood fuel handling system failure during critical grid load periods. (WRP 1, p. 25)
49. A new distribution gas line branch would be routed to the proposed site by Yankee Gas. (WRP 1, p. 25)
50. The plant would have one exhaust stack, 170 feet tall. (WRP 1, p. 40)
51. The facility is expected to have a service life of more than 30 years. (WRP 1, p. 20)
52. The facility would not have black start capability. (WRP 2, response 3)
53. The facility would produce baseload power and would have an annual capacity factor of approximately 92 percent. (WRP 1, p. 20)
54. Access to the site would begin at Echo Lake Road (at a width of 30 feet), continue for about 215 feet, and then fork into two access drives (approximately 1,050 feet long and 15 to 20 feet wide each) to allow trucks to enter and exit the site. (WRP 1, Attachment L; Tr. 1, p. 23)
55. The total installed cost of the project is expected to be between \$100 million and \$105 million. This includes approximately \$90 million to \$95 million for the plant plus \$10 million for financing costs. (WRP 1, p. 38)

56. If approved, WRP anticipates commencement of construction in the third quarter of 2008. The construction process would take approximately 18 months. The commissioning and start-up of the plant is anticipated in November 2010. (WRP 1, p. 12; Tr. 1, p. 11)
57. Pursuant to the Standard Electricity Purchase Agreement (SEPA), the original scheduled operation date for the facility would be December 31, 2009 (but may be extended up to two years if necessary for permitting and construction). Penalties may be incurred if the Petitioner is unable to meet such deadline. (WRP 10, pp. 1 and 6)

Transmission Interconnection

58. WRP filed a revised Large Generator Interconnection Application with ISO-NE on December 22, 2006 requesting to connect to either CL&P's 115-kV Frost Bridge to Campville Line No. 1191 or the 115-kV Frost Bridge to Carmel Line No. 1238, both of which occupy a right-of-way between 500 and 1,000 feet north. (WRP 1, p. 37; WRP 13)
59. On October 3, 2007, WRP received a Qualification Determination Notification letter from ISO-NE for the Forward Capacity Market indicating that significant system upgrades would not be required for the interconnection. (WRP 1, pp. 37-38; WRP 11)
60. On January 14, 2008, based on discussions with ISO-NE and CL&P and their concerns about the reliability of an underground connection, WRP requested that DEP consider granting an easement for an overhead interconnection, rather than underground as proposed. DEP has not yet responded to that request. (Tr. 1, pp. 31-32; WRP 13)
61. Overhead transmission lines are strongly preferred by CL&P because a fault in a buried line takes much longer to locate and repair than a similar fault in an overhead line. A fault in an underground cable would impact the long-term reliability of the project as well as the CL&P transmission circuit. (WRP 13)
62. CL&P estimates that the cost of installing an underground cable is eight to ten times as much as an overhead connection. (Tr. 1, p. 87)
63. To minimize the impact on the Mattatuck State Forest, CL&P is willing to allow a configuration that utilizes a single line of poles with a right of way width of 90 feet, as opposed to the double pole, with a right of way width of 110 feet. Also, the orientation of the interconnected route has been adjusted to reduce the total length of the right of way to approximately 500 feet, rather than 1000 feet. (WRP 13)
64. The existing CL&P right of way is 350 feet wide. (Tr. 1, p. 81)
65. According to CL&P design standards, a suitable switchyard housing the circuit breakers and switches necessary to complete the interconnection would require an approximately 210-foot by 160-foot fenced area located within the state forest and adjacent to the existing CL&P right of way. For safety reasons, an approximately 30-foot wide zone outside the fence would be cleared and maintained. This fenced area is required regardless of whether the transmission line is overhead or underground. (WRP 13)
66. If the switchyard were placed on the subject property, it would have a net increase in the impact on state land because with separate lines coming in and out of the facility, it results in a wider right-of-way requirement. (Tr. 1, p. 28)

67. CL&P would not recommend placing the switchyard within its existing right of way because it could interfere with future development of the right of way. However, the switchyard could abut the CL&P right of way. (Tr. 1, p. 82)
68. The overhead configuration would require two or three poles, plus two at the termination. The poles would probably not be taller than the existing tree line height of 60 to 70 feet. (Tr. 1, pp. 41-42)
69. An underground configuration would use a solid dielectric cable, which is a proven, reliable technology. (Tr. 1, p. 81)
70. An underground right of way would be approximately 50 feet wide. (Tr. 1, p. 47)
71. An underground configuration would require two transition structures. (Tr. 1, p. 85-86)
72. The total impacted area of an overhead interconnection would be 1.7 acres versus 1.5 acres for an underground interconnection. (WRP 13)
73. The interconnection cost (for an overhead configuration) including the switchyard, substation, and the 500 feet of transmission line, is about \$6 million. (Tr. 1, p. 30)
74. CL&P has provided WRP with its standard conditions for transmission easements. Under these conditions, CL&P requests that the Petitioner provide the Council with a certification from CL&P to the effect that CL&P is satisfied as to the following conditions:
 - a) The transmission line design and studies of potential electric effects be completed by the Petitioner's qualified consultant, by CL&P's consultant, or by CL&P employees, and comply with applicable engineering, safety and other related laws, rules, regulations, standards and practices.
 - b) The Petitioner has demonstrated to CL&P's satisfaction that the Petitioner has acquired all rights necessary to enable CL&P to access, construct, operate, repair, replace and maintain the transmission line.
 - c) There are no underlying encumbrances, environmental impairments or other obstacles to the construction and maintenance of the transmission line.
 - d) All such necessary rights are assignable to CL&P.
 - e) The Petitioner has undertaken, by agreement satisfactory to CL&P, to indemnify and protect CL&P against any expenses resulting from the exercise of the property owner (i.e. the State of Connecticut, acting through DEP) of any right to require relocation of the line. (CL&P 1, p. 4)
75. WRP indicated that it would accept, as a condition of approval, a requirement to provide the Council with a certificate indicating CL&P's approval of any easement obtained by DEP. (CL&P 1, p. 4; Tr. 1, pp 32-33)
76. On February 29, 2008, ISO-NE issued an interconnection feasibility study concluding that the proposed interconnection would have no significant adverse impacts on the transmission system that may require transmission upgrades or system reinforcements. (WRP 17, p. viii)

Wood Fuel Supply

77. The WRP plant would consume 310,000 tons per year of clean chipped wood with an average moisture content of 40 percent. (WRP 1, p. 21)
78. Several independent studies have concluded that between 500,000 and 1,000,000 tons of clean waste wood is currently available each year in Connecticut. (WRP 1, pp. 23-24)
79. A project-specific study for WRP has confirmed that a sufficient long-term supply of wood is available for the project. (WRP 1, pp. 23-24).
80. The wood fuel supply for the project is expected to consist of approximately 44 percent whole tree chips, 39 percent pallet waste, 16 percent urban waste, and 1 percent mill residue. (WRP 1, p. 24)
81. Most of the wood fuel would be supplied by sources within a 50-mile radius of the site. (Tr. 1, p. 51)
82. Wood fuel deliveries would occur between the hours of 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays as needed. (Tr. 1, p. 50)
83. WRP would enter into a long-term contract for the supply of wood fuel with a company that would act as a procurer of fuel from hundreds of sources. (WRP 1, p. 46; Tr. 1, p. 58-59)
84. Wood fuel would be provided by qualified suppliers. The quality of the supply would be confirmed by source inspections and testing at the facility upon receipt of the fuel. (Tr. 1, p. 60)

Water Requirements

85. The WRP project would require 500,000 to 600,000 gallons of water per day to support its steam turbine cooling system, boiler water make-up, fire protection and other domestic uses. (WRP 1, p. 35)
86. Water for this project would be provided by the Watertown Municipal Water System subject to the terms of a Water Connection and Service Agreement dated January 24, 2008. (WRP 1, p. 35; WRP 16)
87. The Watertown Water and Sewer Authority has a long-term agreement with the City of Waterbury for the supply of 3 million gallons per day, while the average daily water consumption for the Watertown Municipal Water System has been just over 1 million gallons per day. (WRP 1, p. 35)
88. The project would utilize a conventional wet cooling tower for the purposes of condensing the steam from the turbine generator. (WRP 1, p. 33)
89. A 12-inch water main that terminates 1,200 feet west of the proposed site along Echo Lake Road would be extended to the facility. (WRP 1, p. 36)

Waste Generation

90. Fly ash would be generated at a rate of approximately 1.5 tons per hour. Fly ash is non-hazardous and can be used as a soil additive (fertilizer) or used in concrete. Excess sand captured from the fuel would be periodically removed from the sand hopper and may be used as a building material. All residues would be handled, stored and disposed of in accordance with all applicable laws and regulations. (WRP 1, pp. 36-37; Tr. 1, pp. 51-52)

Environmental Considerations

Wetland Impacts

91. The site contains one wetland area which occupies 6.96 acres in the central portion of the site and consists of Turkey Brook, associated riparian wetlands and a narrow and shallow swale that extends into the southeastern portion of the site. (WRP 1, p. 80)
92. The project would maintain an existing natural riparian buffer along both sides of Turkey Brook equal to or greater than the 100 feet recommended by DEP, except in two areas where the buffer would be 75 to 80 feet wide. (Tr. 1, p. 24)
93. It is feasible to move the proposed retaining wall that is on the state forest/Tamarack property line away from the property line to minimize damage to trees and their root systems. How far the retaining wall could be moved would depend on the results of a geotechnical evaluation. (Tr. 1, p. 25)
94. Wetland impacts are limited to filling in 4,000 square feet of shallow swale. (WRP 1, p. 81)
95. WRP applied for and received a permit to conduct the proposed wetland activities from the Watertown Conservation Commission. (WRP 1, p. 81; WRP 2, response 5).
96. Mitigation measures in the form of two forebay sediment traps and a water quality basin are proposed. (WRP 1, p. 81)
97. The use of revegetation planting plants, standard best management practices, and other mitigating measures are also proposed. (WRP 1, p. 81)

Site Clearing

98. No trees with a diameter at breast height (dbh) of six-inches or greater would be removed during the construction of the facility and access. The majority of the trees at the site are one to two inch dbh. (WRP 2, response 8)
99. Approximately 77,000 cubic feet of cut and 70,000 cubic feet of fill would be required to develop the proposed site. (WRP 2, response 7)
100. Due to the presence of shallow or outcropping bedrock, it is likely that some blasting would be necessary for the construction of the project. The extent of the blasting required is not known at this time. Any blasting would be performed according to best management practices. (WRP 2, response 9)
101. Blasting may also be required for an underground transmission interconnection depending on the results of geotechnical studies. (Tr. 1, pp. 39-40)

Air Emissions

102. Wood burned by the plant would release carbon dioxide, a greenhouse gas. However, if the trees were to remain and decompose, they would release methane, a greenhouse gas that is 25 times more potent than carbon dioxide. (Tr. 1, pp. 21-23)

103. The project would utilize an advanced fluidized bed gasification system designed to operate at low temperatures and low excess air to minimize the formation of nitrogen oxide (NO_x) emissions. (WRP 1, p. 29)
104. The fluidized bed gasification system ensures efficient mixing, gasification and combustion of fuel particles which would minimize the formation of carbon monoxide (CO), unburned hydrocarbons or volatile organic compounds (VOC). (WRP 1, p. 29)
105. The addition of alkaline materials such as limestone, lime or dolomite to the fluidized bed would control sulfur and other acid gas constituents. (WRP 1, p. 29)
106. The project would utilize selective catalytic reduction (SCR) technology to control NO_x emissions. (WRP 1, p. 30)
107. The project would utilize a fabric filter baghouse to control the emission of particulates and trace metals. (WRP 1, p. 30)
108. The project would utilize a Continuous Emission Monitoring System to demonstrate compliance with emissions limits. (WRP 1, p. 30)
109. The project is considered a major stationary source of air pollutants due to its emissions of NO_x and CO. (WRP 1, p. 64)
110. The plant is subject to the New Source Review requirements of the Clean Air Act including the Prevention of Significant Deterioration (PSD) program and the non-attainment New Source Review (NSR) programs (NNSR). (WRP 1, p. 67)
111. The project is subject to and would meet the applicable emissions standards of performance for Industrial-Commercial-Institutional Steam Generating Units. (WRP 1, p. 67)
112. On September 27, 2007, WRP submitted an application to DEP for a permit to construct and operate the plant and demonstrating compliance with the Best Available Control Technology, Lowest Achievable Emissions Rates control technology requirements and Maximum Allowable Stack Concentrations for DEP regulated hazardous air pollutants. (WRP 1, p. 63)
113. On October 31, 2007, WRP submitted an air quality impact analysis using analytical dispersion models to DEP demonstrating compliance with state and federal Ambient Air Quality Standards and applicable Prevention of Significant Deterioration increments. (WRP 1, pp. 64-65)
114. To comply with NNSR requirements, WRP would be required to acquire 176 tons of NO_x Emission Reduction Credits to offset the potential NO_x emission by a ratio of 1.2:1 prior to the DEP's issuance of a permit to construct and operate. (WRP 1, p. 69)
115. The project would be subject to DEP's Title V Operating Permit regulations and would be required that a Title V permit application be submitted to the DEP at least twelve months before the commencement of operation or within 90 days of receiving notice from DEP that an application is required. (WRP 1, p. 72)
116. The project would be subject to DEP's Acid Rain program and would require an acid rain permit, continuous emissions monitoring and holding sufficient sulfur dioxide (SO₂) allowances. (WRP 1, p. 72)

117. Potential annual air emissions and applicable regulatory criteria are provided in the tables below:

| Pollutant | <u>PM/PM₁₀</u> | <u>NO_x</u> | <u>SO_x</u> | <u>CO</u> | <u>VOC</u> | <u>LEAD</u> | <u>HCL</u> | <u>MERCURY</u> |
|--|---------------------------|-----------------------|-----------------------|-----------|------------|-------------|------------|----------------|
| Emissions from Project (tpy) | 38.45 | 146.66 | 66.77 | 191.58 | 19.24 | 0.19 | 9.54 | 0.014 |
| Major Source thresholds (tpy) | 100 | 50 | 100 | 100 | 50 | 10 | 10 | 10 |
| PSD Significant Emission Rate Thresholds (tpy) | 25/15 | 40 | 40 | 100 | 25 | 0.6 | - | 0.1 |

| Pollutant | <u>PM_{2.5} FILTERABLE</u> | <u>PM_{2.5} CONDENSIBLE</u> | <u>PM_{2.5} TOTAL</u> | <u>SULFURIC ACID</u> | <u>AMMONIA</u> | <u>DIOXINS</u> |
|--|------------------------------------|-------------------------------------|-------------------------------|----------------------|----------------|----------------|
| Emissions from Project (tpy) | 38.43 | 32.44 | 70.87 | 5.34 | 24.29 | 1.4E-07 |
| Major Source thresholds (tpy) | - | - | 100 | 100 | - | 10 |
| PSD Significant Emission Rate Thresholds (tpy) | - | - | 15 | 7 | - | 3.5E-06 |

(WRP 1, p. 64)

Wildlife Impacts

118. DEP's Natural Diversity Database maps do not indicate the presence of any state or federally recognized endangered or threatened species, or any state species of special concern at the proposed site. However, DEP indicated in a letter to WRP that a threatened species, the American Kestrel, occurs in the vicinity of the site, approximately 1.25 miles to the northeast of the site. Based on a site-specific analysis of habitat at the site, suitable habitat for the American Kestrel is not present at the site. (WRP 1, Appendix I)

Cultural Resources

119. The proposed facilities would have no effect upon historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places or upon properties of traditional cultural importance to Connecticut's Native American community. (WRP 1, p. 82 and Appendix J; WRP 12)

Odors

120. No burning wood odor would emanate from the exhaust stack due to the complete combustion of the fuel and the air pollution controls. (Tr. 2, pp. 44-46)

Noise

121. The nearest and most sensitive noise receptor is the Mattatuck State Forest, a Class B receptor under the state noise regulations. The worst case projection for noise levels from the plant with appropriate mitigation measures was 62 dBA, which is below the 66 dBA noise limit for Class B receptors. (WRP Exhibit 1, pp. 75-77)

Magnetic Fields

122. The design and operation of the project would be consistent with the Council's Best Management Practices for Electric and Magnetic Fields (EMF). (WRP 1, p. 82)
123. An EMF profile for the project has not yet been completed because the final configuration of the transmission interconnection is not yet known. (Tr. 1, p. 27)
124. The dominant source of magnetic fields would be from the existing CL&P transmission and the transmission interconnection. (Tr. 1, p. 27)
125. As a condition of approval, WRP would provide an EMF profile as part of a Development and Management Plan. (Tr. 1, p. 28)

Visibility

126. The 170-foot exhaust stack would be visible year-round from the nearest residence at 1020 Echo Lake Road. (WRP 1, Attachment H)
127. The exhaust stack would also be visible year-round from the nearest residence from the residential zone. (WRP 1, Attachment H)

Permits and Approvals

128. This project would require the following permits and approvals:
 - a) DEP Permit to Construct and Operate
 - b) DEP Title V Operating Permit
 - c) Title IV Acid Rain Permit
 - d) DEP Wastewater Discharge Permit
 - e) DEP General Permit for the Discharge of Stormwater Associated with Construction Activities
 - f) DEP General Permit for the Discharge of Stormwater Associated with Industrial Activities
(WRP 1, pp. 89-91)

Safety and Reliability

129. The 170-foot exhaust stack does not require notification to the Federal Aviation Administration nor would it require any marking or lighting. (WRP 1, p. 40)
130. A distributed control system would allow the plant operator to monitor and control virtually all power plant and fuel yard systems from a station in the control room. (WRP 1, p. 48)
131. The plant control system would function to notify the plant operators of any issues and automatically shut down the gasifier in the event of an emergency. (WRP 1, p. 48)
132. Prior to commercial operation, WRP would invite members of local emergency management and response agencies to the plant to allow them to become familiar with the plant, its operations, and procedures for dealing with emergencies. (WRP 1, p. 48)

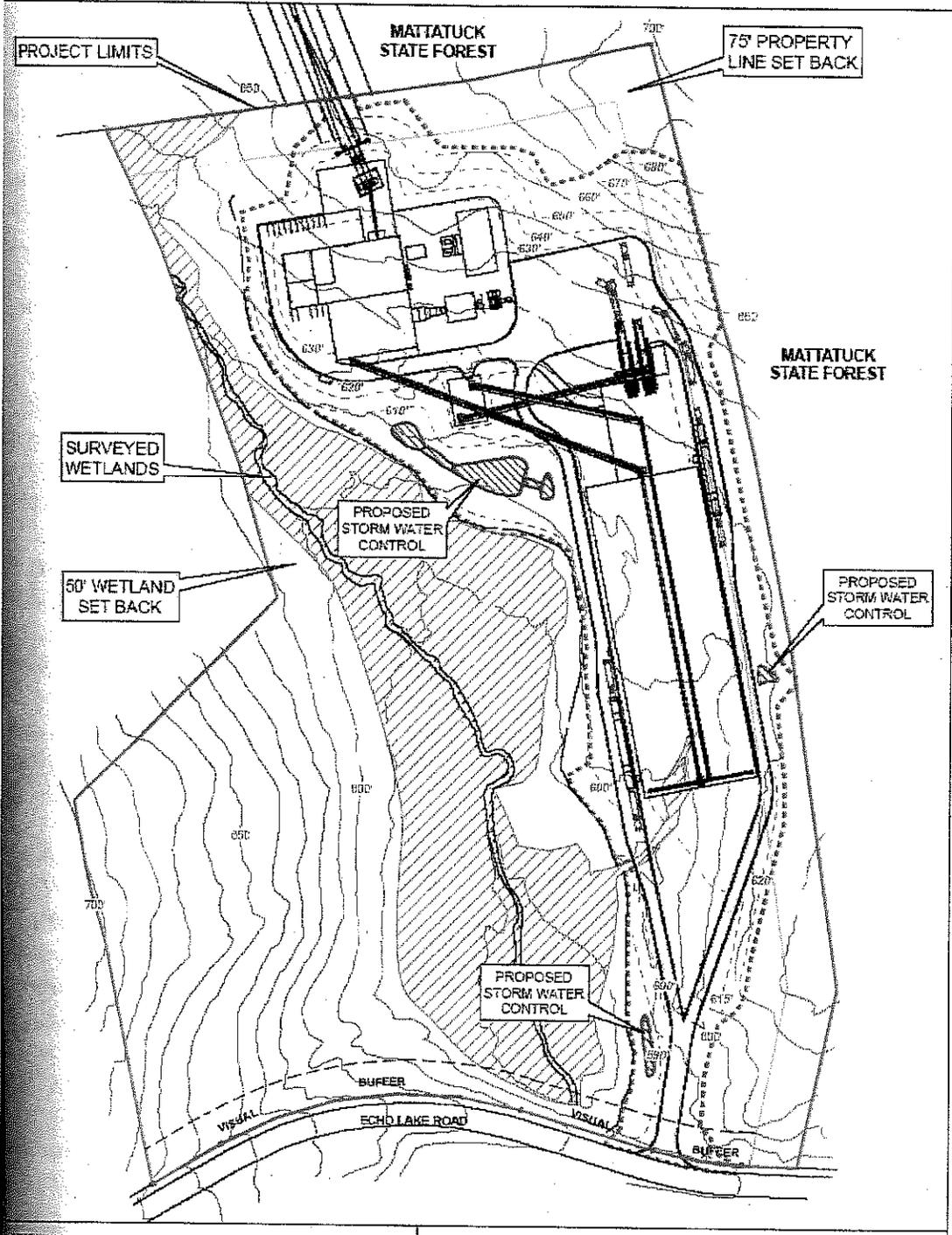
133. A diesel-fueled emergency boiler feed pump would be provided to comply with the National Fire Protection Association requirements. The pump would continue to supply water to the boiler after a power failure so that the boiler is not exposed to excessive heat due to poor water circulation. (WRP 1, p. 49)
134. The facility would employ both automatic and manual fire protection systems, with targeted systems and emergency procedures for the gasifier, steam turbine, electrical systems, fuel handling systems, and the wood storage area. (WRP 1, p. 52)
135. An eight-foot fence would surround the north portion of the subject property. (Tr. 1, p. 26)

Site Location



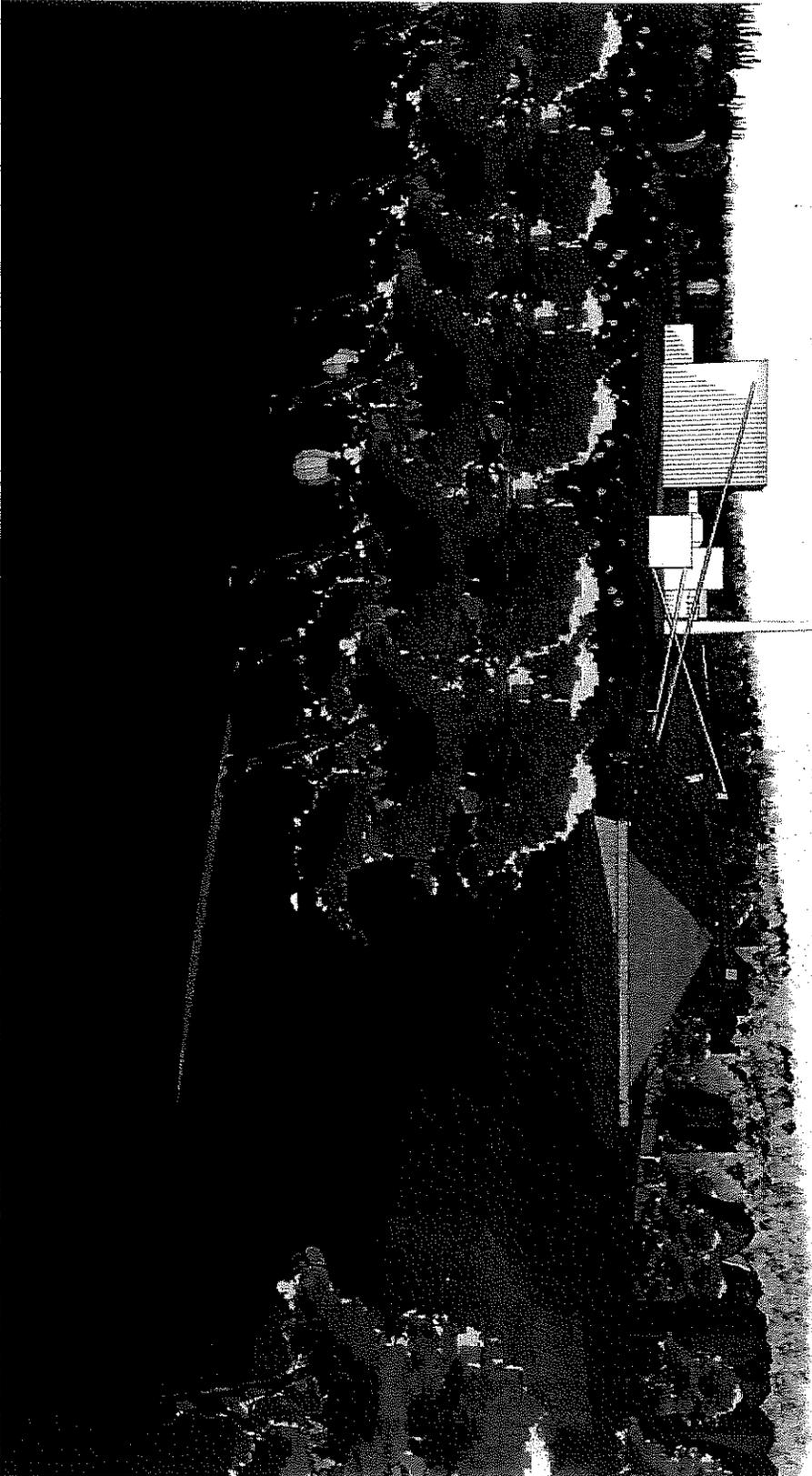
(WRP 1, Attachment I)

Site Plan



(WRP 1, Attachment L)

View from Echo Lake Road



View from Echo Lake Road Entrance

(WRP 1, Attachment B)