



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

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Petition No. 232  
United Illuminating Company  
Generation and Boiler Equipment  
May 15, 1989

United Illuminating Company (UI), acting under contract as technical developers for Ansonia Copper and Brass Company (AC&B), is requesting a determination from the Council that the refurbishment of two existing electrical generators, the construction of two new steam boilers with attendant equipment, and the relocation of one existing steam boiler into a new extension of the power plant building, would be a modification of an existing facility that would not have a substantial adverse environmental effect and would not require a Certificate of Environmental Compatibility and Public Need.

On April 15, 1989, Harry Covey and William Smith from the Council, and Thomas E. Fanning, Jr. staff of the Council, met with Kate Shanley, David Domogala, and Anthony Vallillo of UI and Robert McGann and Robert Weber of AC&B, at AC&B's plant, 75 Liberty Street, Ansonia, Connecticut, site of the proposed construction.

AC&B plans to upgrade its old inefficient boiler system by adding two new dual-firing natural gas/oil boilers, which would replace two Bigelow Hornsby units. The two Bigelow Hornsby units would be permanently retired in place. In addition, one existing oil-firing Cleaver Brooks boiler would be retrofitted to dual-firing capability.

UI would refurbish the two existing turbine generators as peak shaving units which would be driven by the two oil-natural gas boilers, and by the existing oil-natural gas boiler. AC&B would retain ownership of the equipment and would operate the turbine generator when UI requires generation. UI would benefit from the project by receiving, on demand, 500 hours of generation annually under the terms and conditions of an interruptible load rider rate for this capacity. The combined nameplate output of these two units would be 2.1 MW.

The facility would operate on #6 oil from mid-December to mid-March and on natural gas the remainder of the time. AC&B currently burns 1,050,000 gallons of 1% sulfur #6 oil annually. In addition, a maximum of 15,000 gallons of waste oil is combusted. These amounts are expected to decrease due to improved efficiencies created by the proposed boiler system. Total energy savings are forecast at 51,500 MM BTU annually. This would result in an energy cost savings of \$125,000 due to a 25% reduction in fuel usage expense.

The proposed project would involve the construction of a new building extension; 36 feet wide, 55 feet long, and 24 feet maximum height, onto the existing power plant. All three boilers, with attendant equipment, would be placed into the new building. New natural gas, oil, and water feeders would connect the new installation to existing piping.

Storage of the fuel oil would continue at the existing holding tanks. Natural gas would be provided by a 5 psig tap into an existing six-inch underground line currently serving the plant. A new above-ground pumping and valve pad would be constructed adjacent to the new building.

Water for the two new boilers and condensers would be taken from the Naugatuck River via an existing intake system. New waste water drains would tap into the plant's existing waste water drainage system. The new boilers' average daily water use would decrease due to the improved return and boiler blowdown system used during hours when electricity is not generated. During hours of generation, non-contact cooling water use would increase to 1100 gallons per minute at full output.

Three existing exhaust stacks, approximately 50 feet high above grade, would be dismantled and replaced by three new stainless steel units, each 30 feet above grade. The new stacks would project approximately ten feet above the roof of the new building and below the roofline of the existing building. Two stacks would be 24 inches in diameter and one 20 inches in diameter. Air permits would need to be obtained from the Department of Environmental Protection.

Expected air emissions for SO<sub>x</sub>, NO<sub>x</sub>, and TSP, using either gas or #6 oil, would be below the existing system's emissions.

The estimated life of the new boilers is 25 years. The refurbished turbine-generators could run from seven to ten years.

The cost of the entire project is estimated to be \$1,035,100, of which approximately \$35,000 would be borne by UI for design and construction services.

Construction would commence immediately following the Council's decision and would be completed in approximately five months.

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Siting Analyst

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