

DOCKET NO. 61

AN APPLICATION OF APPLIED ENERGY : CONNECTICUT SITING
SERVICES, INC., FOR A CERTIFICATE OF :
ENVIRONMENTAL COMPATIBILITY AND PUBLIC : COUNCIL
NEED FOR THE CONSTRUCTION, MAINTENANCE, :
AND OPERATION OF THE THAMES COGENERATION :
PLANT IN MONTVILLE, CONNECTICUT. : October 20, 1986

O P I N I O N

AES Thames, Inc., (AES) applied to the Connecticut Siting Council (Council) for a Certificate of Environmental Compatibility and Public Need for the construction and operation of a 180 MW cogeneration facility in Montville, Connecticut.

The Council held public hearings on June 11, 1986, July 29, 1986, and August 7, 1986. At these hearings the applicant presented testimony and witnesses to support its contention that the project is consistent with state policy, is necessary, and will have a minimal environmental impact.

Need

The need to utilize diversified, domestic sources of fuel to generate electricity has been declared by state energy policy, the State Department of Public Utility Control, and the Connecticut Energy Advisory Board. A need for the capacity has been established by Northeast Utilities (NU), which has entered into a contract to purchase electricity from the facility. NU projects that the facility would generate capacity that would be needed by the mid 1990's. NU would also benefit from the diversification of fuel. The use of coal, a domestic fuel, would displace oil susceptible to foreign intervention and offer an alternative to nuclear, natural gas, and other forms of energy, thus increasing the reliability of the NU system.

The costs of construction overruns, abandonment, premature retirement, and large capital improvements would be absorbed by the project's private investors. Thus, another advantage of the project is that rate-payers would not bear many of the risks and costs associated with constructing and operating a utility-owned power station.

The Council's primary responsibility is to balance the public need for the project with its environmental impacts, including public health and safety. Although the facility is clearly needed, the Council cannot sacrifice environmental goals disproportionately.

Visual Appearance

The project would improve the appearance of the site by replacing the existing blighted and partially abandoned structures with a new building compatible in appearance with nearby industrial development. In addition, the facility meets the objectives of the local and state coastal zone management program. Nonetheless, because of the facility's prominent position on the Thames River, the Council will order vegetative screening for the facility that will improve the aesthetics from both land and river observation points.

Water Pollution

The Thames River is suitable as a source of non-contact cooling water, to be returned to the river after use. However, as with any large thermal discharge, there is a risk that the increased temperatures within the river could produce broad environmental impacts. Detailed modeling indicates that changes to marine populations and passage areas, dissolved

oxygen content, biological oxygen demand, and other thermally related effects would not justify rejecting this project. Nonetheless, there is a serious concern that the cumulative effects from this discharge and other nearby discharges of warmed cooling water may approach or exceed thresholds of environmental harm to the river. Moreover, modeling studies are not infallible. The Council accepts the contentions supported by the applicant's modeling, but the Council will order monitoring of actual effects of the thermal discharges from the facility on the river. The Council will also order that such effects be mitigated to the greatest extent possible.

The Council has been assured that the proposed facility would not cause any degradation of surface or ground water. While the Council acknowledges that primary responsibility for the regulation of surface and groundwater discharges lies with the State Department of Environmental Protection, the Council will require site specific modifications to minimize the pollution of the Thames River and of the ground water. Such orders will include provisions for erosion and sedimentation control, zero discharge of leachate from the coal stockpile, neutralization basins, run-off basins, drainage basins and spill containment basins, and the monitoring of surface and ground water.

Aquatic Resources

Projections of entrainment and impingement indicate that the number of fish harmed would be small relative to the total population. Nonetheless, the Council is concerned that the absolute number of entrained and impinged fish must be mitigated. The Council cannot ignore

the modeled impingement of over 11,000 fish per year, and will therefore require the placement of fish return equipment on the facility's intake structure.

A mid-winter termination of warmed cooling water could cause the shock and kill of thermally acclimated fish. Although such an occurrence is not likely, the Council will require contingency planning and coordination with NU's Montville Power Plant to minimize the probability of such an event.

Air Quality

Potentially the limiting factor for the siting of coal burning generators, gaseous emissions from the proposed facility have been found by the Council to be acceptable and to meet all applicable standards and regulations. The Council favors the application of technology using diversified abundant coal supplies in an environmentally acceptable manner. Such coal resources might otherwise be unused because of the air pollutant discharge resulting from combustion employing conventional technologies. The Council also notes that the State Department of Environmental Protection is requiring continuous automated telemetering of air emissions for compliance.

Although the Council is satisfied with dust control mechanisms, it is concerned with their long-term maintenance and effectiveness. For this reason, the Council will order a monitoring and maintenance plan for all dust control and stockpile handling operations.

Noise

Although the site is associated with heavy industry, the Council is concerned that the operation of the facility might be a source of unnecessary noise, especially from nighttime coal unloading activities. The Council will, therefore, order noise testing, noise control measures, and coal unloading schedule restrictions to maintain noise levels at or below the state noise regulations and prevent avoidable noise. Construction noise may at times be a source of annoyance to neighbors, but such noise levels will be relatively short-term and within state noise regulations.

Traffic

The Council is satisfied that the desired modes of traffic to and from the facility will not cause any severe impacts upon the community or state. However, the Council finds it prudent, given the potential number of trucks necessary for coal delivery, to limit the number of truck trips per day to the facility to prevent disruption or safety hazards to the local community.

Other Considerations

Other siting factors, including historical, architectural, archeological, and recreational resources; flooding; use of existing services and infrastructure; safety; and reliability have been adequately addressed and are acceptable, given the size and type of facility.

Conclusion

The effects of the project, while individually minor, have the potential for serious environmental disruptions when combined with other industrial operations and discharges to surface waters and the air. However, the Council is confident that careful design, attention to

environmental and community concerns, and on-going environmental monitoring can avoid such disruptions. At the same time, the project represents a significant contribution of diversified, non-oil, electric generation to the state's capacity mix. Together, these factors more than outweigh the potential adverse effects of the proposed facility. In addition, this facility represents an improved method of utilizing a domestic resource and generating electricity in Connecticut, which state statutes direct the Council to encourage.

Based on the foregoing, the Council concludes that a Certificate of Environmental Compatibility and Public Need is warranted for the AES project and hereby directs that such Certificate be issued subject to the terms, limitations, and conditions of the Decision and Order that accompanies this Opinion.