



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

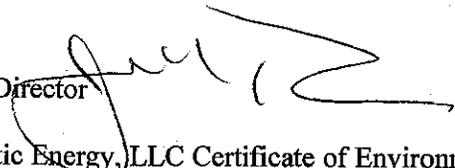
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March 8, 2001

TO: Parties and Intervenors

FROM: Joel M. Rinebold, Executive Director 

RE: **DOCKET NO. 192** - Towantic Energy, LLC Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of an electric generating facility located approximately 4,000 feet north of the Prokop Road and Towantic Hill Road intersection in the Town of Oxford, Connecticut.

PETITION NO. 492 - Town of Middlebury, Citizens for the Defense of Oxford, Trout Unlimited, Inc., William Stowell, and Mira Schachne petition for a declaratory ruling regarding a Development and Management plan as submitted by Towantic Energy LLC, for construction of an electric generating facility in Oxford, Connecticut. (Docket No. 192)

Please find the final staff report and final decision for this petition, approval of the Towantic Energy LLC Development and Management Plan with conditions, denial of the request for a hearing on the electric interconnection, and denial of the request to defer action relative to a Department of Transportation March 21, 2001 hearing on the use of the airport perimeter road.

JMR/laf

c: Dorian E. Hill, Northeast Utilities
Raymond Pietrorazio

Docket No. 192 - Towantic Energy, LLC }
Certificate of Environmental Compatibility and }
Public Need for the construction, maintenance, }
and operation of a proposed electric generating }
facility located north of the Prokop Road and }
Towantic Hill Road intersection in the Town of }
Oxford, Connecticut. Development and }
Management Plan.

Petition No. 492- Petition for a Declaratory Ruling was filed by the Town of Middlebury, Citizens for the Defense of Oxford, Trout Unlimited – Naugatuck Chapter, William Stowell, and Mira Schachne (Petitioner) contending that the D&M plan is inconsistent with the Council's Decision and Order.

Decision
March 1, 2001

Introduction

Pursuant to the Connecticut Siting Council's (Council) June 23, 1999 Decision and Order approving a 512MW gas-fired electrical generating plant in Oxford, Connecticut, Towantic Energy Limited Liability Corporation (Towantic) submitted a Development and Management (D&M) Plan for Council review and approval. Approval of this D&M plan is necessary to ensure that site plans are consistent with the orders and conditions set forth by the Council, and is a prerequisite for commencement of construction.

On November 2, 2000, a Petition for a Declaratory Ruling was filed by the Town of Middlebury, Citizens for the Defense of Oxford, Trout Unlimited – Naugatuck Chapter, William Stowell, and Mira Schachne (Petitioner) contending that certain elements of the D&M plan are inconsistent with the Council's Decision and Order. The petition also claims Eastern CALPINE Corporation (CALPINE) who filed the D&M plan on behalf of Towantic Energy is not the Certificate Holder.

The D&M plan consists of 12 elements: a site plan, engineering details for the electrical interconnection, details for the gas transmission interconnection, provisions for adequate water supply while operating on fuel oil for up to 720 hours per year, plans for landscaping, provisions for architectural treatment, detailed plans for erosion and sedimentation control, air emissions modeling, stack lighting, detailed project schedules, construction spill prevention and countermeasure plan, and construction blasting plan. Those elements that are at issue with the Petitioner include the proper Certificate Holder submitting the D&M plan, site plan, provisions for adequate fuel and water supply while operating on fuel oil for up to 720 hours per year, electrical interconnection, air emissions modeling, and aviation safety.

Certificate Holder

The Certificate Holder, Towantic, remains a valid business entity owned by CALPINE, and we find no reason to believe that this business arrangement is illegal or structured in a manner that would make enforcement of our decision not possible. Furthermore, CALPINE has been forthright in documenting the purchase of Towantic with plans to operate the facility under the Towantic Energy Limited Liability Corporation. Consequently, we reject the claim that Towantic is not the Certificate Holder.

Site Plan

The Council required a final site plan that "to the greatest extent possible, reduce the height of facility in conjunction with shifting the proposed site, up to 500 feet south, to maximize placement of facility components within the existing field; preserve the existing natural vegetation on the site; and minimize impacts on inland wetlands." Towantic compacted and shifted some facility components up to 265 feet further south and lowered the elevation of the facility's footprint to address the concerns specified in the Council's order. We agree that the preservation of existing vegetation to the north will augment the buffer north of the site boundary, and the shift decreases site elevation and maximizes the use of the

agricultural field on the site while maintaining the 40-foot Town buffer. The Petitioner contends that the site was not literally moved up to 500 feet south, refusal of such movement negates significant environmental benefit, and that site elevations including changes in stack and building locations warrant an amendment. The Council is cognizant of its orders and conditions in this proceeding and believes the site compaction and re-orientation of facility components will preserve existing vegetation and is in compliance with our decision; and consequently we reject this claim and will approve the site plan as proposed.

Electrical Interconnection Plan

The electric interconnection plan includes a design of a switchyard that will be constructed in accordance with the Electric Safety Code and Northeast Utilities (NU) design criteria. Also, an ISO-New England transmission impact study concluded that the proposed plant could be integrated into the existing electric transmission grid with conditions that certain conductor clearances be raised, conductor ratings improved, and a reactor installed to balance load. The cost to upgrade the transmission system would be approximately 3.2 million dollars and would be borne by Towantic. However, these changes would be subject to future Council consideration and action.

In addition, Towantic evaluated electric and magnetic field (EMF) levels at the point of interconnection of the facility site and along three 115-kV circuit transmission lines within a 110-foot right-of-way (ROW). While electric fields would not significantly change, the magnetic fields would differ dependent on the electric load on the transmission lines. Although magnetic fields along the edge of the ROW increase, these changes are predictable and diminish significantly with distance. Even though the Petitioner requests a hearing and third party evaluation of this electric generating facility's feasibility to interconnect with the electric transmission grid, we believe the analysis conducted by Towantic, NU, and ISO-New England to be satisfactory; and, therefore deny the request for a hearing and third party evaluation. The Council will approve the electric interconnection plan with conditions that system upgrades incorporate the Council's Best Management Practices for Electric and Magnetic Fields where appropriate and require advance Council review and approval; that post-construction measurements for electric and magnetic fields be conducted for maximum facility output with the results of these measurements provided to the Council within six months of commercial operation; and that the interconnection conductors be fully analyzed for optimum phasing prior to operation.

Gas Interconnection Plan

The gas interconnection plan has been revised to make use of an existing electric transmission right-of-way with provisions to cross under this ROW and follow the north fence line of the substation consistent with the electric code and connections to a gas compressor and meter building on the northeast corner of the site. This plan would not disturb the vegetative buffer established on the north end of the site, and therefore, we will approve such plan.

Fuel Oil and Water Supply Contingency Plan

The primary fuel for the facility would be natural gas. As a contingency to a natural gas supply interruption, which could occur at anytime, the facility could operate for up to 30 days (720 hours) in a year on distillate fuel oil and still meet air emission standards. However, in an extended natural gas supply interruption, the proposed facility could only operate continuously for approximately 60 hours at

full load with on-site fuel and water. The Council acknowledged in its June 23, 1999 decision, that four fuel truck tankers per hour would be necessary to operate the facility continuously for up to 30 days, to which the Certificate Holder has proposed to construct a four-tanker unloading station.

To ensure that the facility can remain reliable during extended periods of natural gas curtailment, the Council ordered that the applicant reevaluate the water needed to operate the proposed facility continuously on distillate fuel oil for up to 30 days. Towantic identified the maximum demand for water while operating on fuel oil as 749,000 gallons per day (gpd). Since Heritage Water Company could only provide 218,000 gpd to Towantic, an additional 531,000 gpd was required to be trucked in with four 7,000-gallon trucks per hour. While the Petitioner believes the numerous water mass balance calculations implies a lack of competency, this rigorous exercise has confirmed the water needs for the facility, and therefore we believe Towantic's water mass balance revisions for water supply, demineralization, and water discharge are reasonable.

While we are concerned over the traffic associated with fuel, water, and demineralization vehicles, this additional traffic is not excessive compared to the traffic created during peak construction that would entail trucks delivering goods and services including as many as 500 workers to the site, and traffic that would be associated with the 2,500-acre industrial park. Moreover, this traffic would only occur when natural gas is not available and is not likely to occur frequently. Consequently we find no compelling reason to reject this plan as a contingency to operate on fuel oil when natural gas is not available.

Landscaping

The landscaping plan has been revised with additional vegetative screening and provisions for plantings after completion of construction. The Council approves of this plan, but will consider its effectiveness after completion of construction to augment landscaping as necessary to provide appropriate vegetative screening of the facility.

Architectural Treatment

An architectural treatment plan has been reviewed by the Town of Oxford and is expected to be consistent with the future industrial park. We approve of this plan with the condition that any changes would require Town and Council review and approval.

Erosion and Sediment Control

Erosion and sediment control plans include placement of silt fencing, vegetative swales, a detention basin, inland wetland mitigation, vegetative stabilization, and inspection and maintenance, consistent with the Connecticut Guidelines for Soil Erosion and Sediment Control. The Council approves of this plan, but will require daily inspection and maintenance of erosion and sediment controls to ensure the protection of soil and water resources.

Air Emissions Modeling

The Council's decision clearly identifies a need to improve air quality in Connecticut, which may be possible through the displacement of older oil and coal-burning generation plants with new efficient gas-fired generation plants. We have examined the air emission modeling and find the facility will displace

older plants to improve both state and regional ambient air quality and the health of Connecticut residents. Although the Department of Environmental Protection (DEP) has the primary responsibility to regulate the air emissions from, and use of pollution control equipment on this facility, we encourage the DEP to establish strict operating standards and to require air pollution control equipment including dry-low nitrogen oxide combustion, selective catalytic reduction (SCR) and water injection with SCR for nitrogen oxide emission control when operating on distillate fuel oil, and a carbon monoxide catalyst, as necessary to minimize air pollution emissions and to maximize the benefits of air quality improvements possible from this facility. We are aware that the DEP has issued a draft permit to construct for public comment. This permit addresses modeling and calculations regarding prevention of significant deterioration of air quality, new source review, acid rain, and hazardous air pollutants from the proposed facility. Consequently objections to this draft permit, emission modeling, emission rates, and pollution control equipment may be presented to the DEP.

Stack Lighting

Towantic proposes stack lighting consistent with Federal Aviation Administration (FAA) criteria. In addition, the FAA issued a final decision denying the Petitioner's petition for reconsideration, and granting an extension for the permit to construct until July 31, 2002. Consequently, the stack lighting plan is approved as consistent with the Council's Decision and Order.

Even though the Petitioner claims that the water vapor plume could significantly affect air traffic safety associated with the Waterbury-Oxford Airport, the Council is aware of the potential for a water vapor plume that could be created during times of cold temperature. However, the FAA has rejected this claim ruling that a water vapor plume is not a criterion in determining air navigation obstruction, and we do not find this to be of any substantial threat to air traffic safety. Furthermore, the prevailing winds from the north, south and northwest of the airport would cause the water vapor plume to flow away from the airport. Therefore we find no significant basis to reassess this line of reasoning.

Project Schedule

The project schedule anticipates construction to begin April 2001 with completion March 2003. This schedule is acceptable, but the Council will require revision as necessary if the project is delayed due to litigation, permits, labor, and engineering or other conditions that could affect the schedule for construction.

Construction Spill Prevention and Countermeasure Plan

The construction spill prevention and countermeasure plan includes provisions for inspection; spill response; and reporting requirements for fuel storage tanks, oil, fuel, and chemical containers, and oil containing equipment. These measures are approved as consistent with the Council's requirement for protection of soil and water resources during construction.

Construction Blasting Plan

While soil test bore data suggests that blasting will not be necessary, this construction blasting plan is acceptable if blasting becomes necessary due to unanticipated bedrock or boulders. Nonetheless, we believe advance notice of such blasting is necessary and will require a 7-day advance notice of any blasting to the Chief Elected Official and Police Departments of Oxford and Middletown, the Oxford Fire Marshall, and to the Waterbury-Oxford Airport.

Conclusion

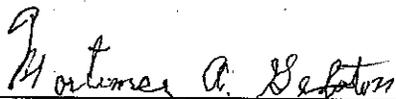
Accordingly, the Certificate Holder, site plan, electric transmission interconnection, gas transmission interconnection, fuel oil and water contingency plan, landscaping plans, architectural treatment, erosion and sedimentation control plans, air emission modeling, stack lighting, project schedules, construction spill prevention and countermeasure plan, and construction blasting plan are consistent with the Council's Decision and Order, are consistent with State policy, are consistent with municipal orders, are protective of the environment, offer reasonable and adequate mitigation, and are approved as conditioned above. Therefore Petition No. 492, a request for a hearing on the electric interconnection, and a request to defer action relative to a Department of Transportation March 21, 2001 hearing on the use of the airport perimeter road are denied.

CERTIFICATION

Based on the foregoing, the undersigned members of the Connecticut Siting Council hereby approve with conditions the Towantic Energy LLC Development & Management Plan, and deny Petition No. 492, a request for a hearing on the electric interconnection, and a request to defer action relative to a Department of Transportation March 21, 2001 hearing on the use of the airport perimeter road, and voted as follows:

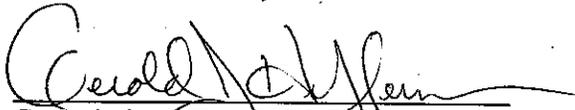
Council Members

Vote Cast



Mortimer A. Gelston, Chairman

Yes



Commissioner Donald W. Downes
Designee: Gerald J. Heffernan

Yes



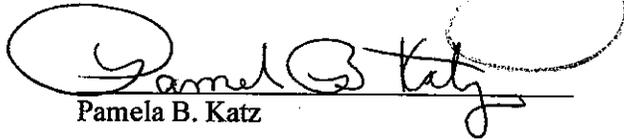
Commissioner Arthur J. Rocque, Jr.
Designee: Brian J. Emerick

Yes



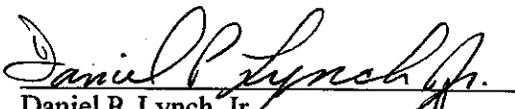
Albert E. Gary

Yes



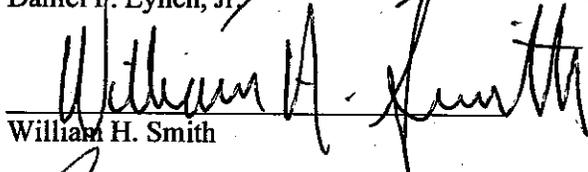
Pamela B. Katz

Yes



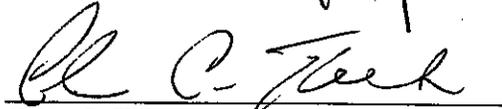
Daniel P. Lynch, Jr.

No



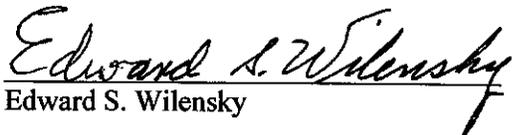
William H. Smith

No



Colin C. Tait

No



Edward S. Wilensky

No

Dated at New Britain, Connecticut March 1, 2001.



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Docket No. 192

Development and Management Plan

Towantic Energy LLC

Oxford, Connecticut

March 1, 2001

The Connecticut Siting Council (Council) approved this 512MW gas-fired electrical generating facility on June 23, 1999. The Decision and Order required Towantic Energy LLC (Towantic) to submit a Development and Management (D&M) Plan, and receive Council approval prior to the commencement of construction. This D&M plan requires the following elements:

- a) A final site plan showing all roads, structures and other improvements on the site. The final site plan shall, to the greatest extent possible, reduce the height of facility in conjunction with shifting the proposed site, up to 500 feet south, to maximize placement of facility components within the existing field; preserve the existing natural vegetation on the site; and minimize impacts on inland wetlands;
- b) A final site plan and engineering details for the electrical interconnection with measurements of pre- and post-construction electric and magnetic field (EMF) levels, and provisions for optimum phasing and compact spacing to maximize cancellation of EMF to the greatest extent practically possible;
- c) A detailed plan of the gas transmission interconnection showing gas metering and compressor station if applicable;
- d) Provisions for adequate water supply while operating on oil and for adequate oil storage, unloading, and pumping facilities including tanker queuing and turn-around areas sufficient to allow for the arrival of four trucks per hour, to ensure continuous burn on oil for up to 720 hours per year during natural gas curtailment;
- e) Plans for landscaping, including preservation of the existing natural vegetation, configuration of earthen berms, and planting of new coniferous vegetation to provide ecological habitat, visual screening, and acoustical buffers;
- f) Provisions for architectural treatment of all building components, especially, but not limited to those components such as the exhaust stacks, which can be seen from off-site locations, to minimize visual effects on scenic resources;
- g) Detailed erosion and sedimentation control plans, stormwater management plans, and inland wetland mitigation plan with provisions for inspection, enforcement, and revision;
- h) Air emissions modeling to confirm that air quality would not be adversely affected by stack downwash conditions;
- i) Stack lighting configuration of white strobe by day and twilight and red lights at night, consistent with the Federal Aviation Administration criteria;

- j) Detailed project schedules for all work activities to minimize noise, and traffic, and other disturbances to surrounding areas during evening and early morning hours;
- k) A construction spill prevention and countermeasure plan; and
- l) A construction blasting plan.

On October 20, and December 15, 2000, Towantic, owned by CALPINE Eastern Corporation, submitted and seeks approval of all components of the D&M plan.

On November 2, 2000, a Petition for a Declaratory Ruling was filed by the Town of Middlebury, Citizens for the Defense of Oxford, Trout Unlimited – Naugatuck Chapter, William Stowell, and Mira Schachne (Petitioner) contending that the D&M plan is inconsistent with the Council's Decision and Order. In addition, the Petitioner alleges the submission of the D&M plan by Malcolm Jarvis of Eastern CALPINE Corporation is invalid because no evidence identifies Eastern Calpine Corporation as the Certificate Holder.

At a November 2, 2000, public meeting, the Council tabled action on this D&M plan and requested additional information through interrogatories. The Council also asked that parties and intervenors provide comment on the D&M plan as filed October 20, 2000, and on the petition filed November 2, 2000, with comments due no later than November 22, 2000.

On November 21, 2000, the Town of Oxford submitted comments stating it has reviewed and has no comment on the architectural treatment of the facility. Also, the Town of Oxford believes Towantic's efforts to compact and shift facility components is optimal taking into consideration all those concerned and is consistent with the Council's decision.

On November 22, 2000, the Town of Middlebury contended the truck traffic associated with fuel oil and water delivery along rural and residential roads and in the vicinity of a State-operated airport poses serious safety issues.

On November 22, 2000, January 19, January 23, and February 13, 2001, Towantic submitted responses to Council interrogatories and comments on the Petition for Declaratory Ruling; draft air and waste discharge permits; and final Federal Aviation Administration (FAA) determination.

On December 15, 2000 Towantic revised and augmented its D&M plan with service to all parties and intervenors.

On November 22, 2000, the Petitioner submitted information regarding the existing networks of roads in the Town of Oxford and the potential effects that large fuel oil and water trucks may have on this road network. The Petitioner has submitted two filings on January 3, 2001, one about the merits of the Petition for Declaratory Ruling and the other commenting on Towantic's December 15, 2000 D&M plan filing. An additional filing from the Petitioner submitted on January 16, 2001, provides details on the D&M plan and the FAA determination for aviation safety. On January 23, 2001, the Petitioner submitted a copy of a petition filed with the Department of Transportation regarding aviation safety. On February 9, 2001, the Petition requested that the Council hold a hearing on the electric interconnection to the transmission system. On February 13, 2001 the Petitioner submitted a copy of a petition filed with the State Traffic Commission regarding the number of trucks to be used for delivery of fuel oil and water to the site as a contingency during the interruption of natural gas fuel and its effects on traffic safety. On February 16, 2001, the Petitioner provided comments on the electric interconnection, water mass balance numbers, and safety concerns to airport traffic.

Numerous letters from the members of the public were received.

Details for each section of the D&M plan and the Petitioner's contentions are as follows:

- a) A final site plan showing all roads, structures and other improvements on the site has been provided. No facility components would be constructed within a 40-foot buffer as established by the Town's zoning regulations. The final site plan reflects a compaction and shift of facility components up to 265 feet south with a reorientation of the switchyard to be closer to the turbines and transmission right-of-way (ROW).

The elevation of the plant and switchyard was initially proposed at 834 feet above mean sea level (amsl) and 848 feet amsl respectively. Towantic now proposes that both the plant and switchyard will have a site elevation of 830 feet amsl.

The compaction and shifting of facility components will avoid the clearing of a 150-foot by 400-foot area of existing trees and maximizes a buffer zone on the north end of the site. Approximately 1.4 acres of the 20-acre site would remain in vegetation. The relocation and compact design will slightly increase noise to the south and slightly decrease noise to the north; however, no violation of State noise standards is expected. This site plan incorporates a shift of the facility, retention of vegetation, and a lower footprint elevation consistent with the Council's Decision and Order. Towantic also contends that the design stage for development of the Town's industrial park and a road that would connect the airport access road to the new Woodruff Hill Road has been completed, consistent with the development of the 2,500-acre industrial district.

The Petitioner contends that the record in this proceeding required a movement of the project site as a whole, not merely the re-arrangement of components of the facility within the existing project site, and that Towantic failed to identify or evaluate any movement of the project site to the south into the existing agricultural field contiguous to it. The Petitioner requests the Council to determine that the refusal to move the project site south forfeits materially significant environmental benefits and would require an amendment to the Certificate.

The Petitioner also claims that moving the stacks 265 feet south from elevation of 834 to 830 feet amsl; raising the stacks from 146 feet to 150 feet; lowering the condenser building height from 120 feet to 116 feet; re-orienting the condenser building along an east-west axis and moving it from the south mid-center to the southwest corner; and increasing stack exit heat and velocity by 12 percent while operating on oil are changed conditions that warrant reconsideration within a contested case.

- b) Towantic would construct the proposed switchyard in accordance with National Electric Codes, and Northeast Utilities (NU) design and maintenance requirements. NU has reviewed and commented on the conceptual design of the switchyard. Upon completion of construction and connection to the transmission system, ownership of the switchyard would be relinquished to NU.

The ISO-New England transmission impact study, as provided in accordance with Condition No. 7 of the Council's D&O, concluded the proposed interconnection, with certain line changes results in a net increase in the total generation that can be dispatched in southwest Connecticut. These changes include installation of a 4 percent reactor within the Towantic facility substation, conversion of approximately 15 spans on the 1580 circuit from a vertical stress insulator configuration to a horizontal strain insulator configuration, and a conductor upgrade to the 1585 circuit with conversion of 6 spans to a horizontal strain insulator configuration. The cost to upgrade the transmission system

would be approximately 3.2 million dollars and would be borne by Towantic. However, these changes would be subject to future Council consideration and action.

Evaluation of electric and magnetic field (EMF) levels at the point of facility interconnection at the three 115-kV circuit transmission lines within the 110-foot right-of-way (ROW) consisted of measuring existing electric and magnetic fields and modeling values with and without the facility. Electric fields would not significantly change; however, the magnetic fields would differ dependent on the electric load on the transmission lines. Magnetic fields at the three circuits along the edge of the ROW and south of the proposed facility site would increase from an existing average level of 6.5 milligauss (mG) from an average load of 120 amperes (amps) to an average value of 60 mG from a facility load of 3,000 amps. Magnetic fields at the three circuits along the edge of the ROW and north of the proposed facility site would increase from an existing average level of 5.1 mG from an average load of 120 amps to an average value of 72 mG from a facility load of 3,000 amps. Towantic has completed pre-construction EMF measurements as provided in the D&M plan and is committed to post-construction measurements. The Council may seek further analysis for optimum phasing to minimize EMF at the interconnection.

On February 9, 2001, the Petitioner requests that the Council hold a hearing on the electric interconnection portion of the D&M plan and to allow for a third party evaluation to confirm proposed upgrades to the electric transmission system.

- c) Detailed plans of the gas metering and compressor station including details of the gas transmission line interconnection have been provided. The gas transmission line interconnection would parallel the NU ROW 150 feet south turning east and crossing perpendicular to the ROW, consistent with electric code, then continuing 300 feet east adjacent to the north fence of the substation to the gas metering station. The vegetative buffer would not be disturbed.
- d) To ensure continuous burn on oil for up to 720 hours per year during natural gas curtailment Towantic would need 26,400 gallons of fuel oil per hour or four 7,000-gallon tanker trucks per hour as identified in Council Finding of Fact #41. Towantic proposes to construct an oil unloading area equipped to unload four tanker trucks simultaneously transferring the oil to one of two fuel oil storage tanks. Each fuel unloading area contains a fuel oil transfer pump, an in-line strainer, a positive displacement flow meter, and associated piping and valves. The fuel oil unloading area is surrounded by a retention curb designed to retain the capacity of 20,000 gallons and contains an oil collection sump. The fuel oil storage tanks each have a capacity of 886,000 gallons and would have an exterior steel wall as secondary containment.

Towantic would require the use of 749,000 gallons per day (gpd) or 520 gallons per minute (gpm) of water during combustion on fuel oil. Heritage Water Company is committed to provide a maximum 218,000 gpd or 151 gpm of water to Towantic. The additional balance of water needed by the facility while operating on fuel oil would be 531,000 gpd or 369 gpm. Towantic would obtain the additional 531,000 gpd from other sources such as Bridgeport Hydraulic and Connecticut Water Company. Four 7,000-gallon trucks per hour and a demineralizer unit every 12 hours would be needed to provide the necessary water when operating on fuel oil.

The water mass balance has been revised as shown in the following table.

Water Mass Balance (gallons /day)
For two combustion turbines operating at full
load with an ambient air temperature of 59 degrees

	Facility operating on natural gas*	D&M Plan (contingency while operating on fuel oil up to 720 hrs/yr.)
Total water supplied	38,900 Heritage (avg.) (27 gpm) not to exceed 100,000 gpd (70 gpm)	218,000 Heritage 151 gpm <u>531,000</u> trucked to site 369 gpm 749,000 (maximum) 520 gpm
Potable water uses	2,100	3,000
Plant and equipment use	5,000	7,000
Neutralization tank	2,100	20,000
Demineralized steam cycle	21,700 / 4,300 evaporated	31,000 / 6,000 evaporated
Demineralized water produced	21,000 (15 gpm)	175,000 (122 gpm) on-site <u>531,000</u> (369 gpm) portable 706,000 (491 gpm) total
Demineralized NO _x Injection	0	675,000 evaporated
Boiler blowdown	17,400 steam cycle reuse	31,000 steam cycle reuse
Wet surface cooler	8,000 raw water/17,400 reuse/ 21,600 evaporated	5,000 raw water/47,000 reuse/ 48,000 evaporated
Process waste water	10,900	10,000
Waste water to POTW	13,000	21,000
Total water used	38,900	750,000/ rounded to nearest thousand

* Refinement during application for DEP air emission permit (less than the proposed 59,000 gpd)

Additional truck traffic would consist of four fuel oil trucks per hour (8 trips) and four water trucks per hour (8 trips) with two to three deliveries (6 trips) of a demineralization unit per day or 390 vehicle trips per day. Moreover, traffic created during peak construction would entail trucks delivering goods and services including as many as 500 workers to the site. The average one-day peak hour traffic at the intersection of Prokop Road and Towantic Hill Road was 49 vehicles.

Petitioner contends that Towantic may have an agreement with Heritage Water Company to provide up to 230,000 gallons of water per day and more if available. This could have implications regarding drawdown on the Pomeraug River drainage basin potentially causing environmental damage. The Petitioner also argues that the 491 gpm of water to be used while operating on fuel oil is described by Towantic as an approximate four fold increase above normal plant water usage on natural gas which implies 166, 000 gpd and contradicts the proposed 59,000 gallons per day and not to exceed the 100,000 gpd threshold as proposed in the application for natural gas operation. The Petitioner identifies a discrepancy between the on-site demineralized water-processing rate of 126 gallons per minute versus 70 gallons per minute in Council Finding of Fact # 66. Finally, the plan to truck water (four trucks per hour) in conjunction with fuel oil (four trucks per hour), with a mobile water demineralization unit once every 12 hours or more, depending on suspended solids, would not be safe or efficient. On February 28, 2001, the Petitioner requests the Council to defer action relative to a Department of Transportation March 21, 2001 hearing on the use of the airport perimeter road.

- e) Plans for landscaping include various plantings of deciduous and coniferous trees and shrubs at the entrance to the facility, a 600-foot linear section between the transmission ROW and entrance road of the site, along the top of the slope between the substation and existing vegetative buffer on the northeast corner of the site, and a 400-foot linear section along the southwest property boundary of the site. Towantic would also add plantings in the northwest and southeast corners of the site and reserve future plantings upon completion of construction as recommended by Council staff.
- f) Towantic has proposed provisions for architectural treatment to include painting all major structures beige with an accent stripe of blue-grey at the base and top. The stacks and air-cooled condensers would be painted all beige. All exterior tanks except stainless steel would be painted grey. While this painting scheme slightly differs than what was proposed, the Town of Oxford has reviewed and offers no comment on this architectural treatment plan.
- g) Provisions for placement, inspection and maintenance of all soil erosion and sedimentation controls are consistent with the *Connecticut Guidelines for Erosion and Sediment Control*. Stormwater will be carried via a system of vegetated swales and underground piping to an on-site detention basin at the southwest end of the site and to a new wetland to be constructed on the northwest corner of the site. The inland wetland mitigation plan has provisions for inspection, enforcement, and revision by either a certified soil scientist or inland wetland biologist for a period of two years.
- h) Air emissions modeling has been provided; however, the Department of Environmental Protection (DEP) has not issued a ruling on Towantic's application for Prevention of Significant Deterioration of air quality, new source review, acid rain, and hazardous air pollutants Permit and Permit to Construct. A draft permit from the DEP is available for public comment.

The Petitioner argues that Towantic's permit applications to the DEP include numerous revisions with emission data and calculations, the potential non-compliance with emissions of particulate matter 10 microns or less in size and hazardous air pollutants, and the technology to control nitrogen oxide emission is unconvincing.

- i) Stack lighting for each of the 150-foot stacks will include dual lighting with red lights for nighttime hours and medium intensity flashing white lights for daytime hours. Lights will be installed in accordance with U.S. Department of Transportation, FAA, Advisory Circular AC No. 70/7460-1K dated March 1, 2000. Towantic has also provided the FAA determination concluding no hazard to air navigation with conditions in accordance with Condition No. 6 of the Council's D&O. Towantic filed for an extension of this decision, which was granted and expires July 31, 2002.

The record in this proceeding identified the 427-acre state-owned Waterbury-Oxford Airport located 0.6 miles west of the proposed site at an elevation of 727 feet amsl. A plume of water vapor would be visible from the stacks up to 500 feet assuming an ambient air temperature of zero degrees Fahrenheit and 60 percent humidity. At 59 degrees Fahrenheit the plume would disappear. Predominant wind directions are from the south, northwest and north.

On January 31, 2001, the FAA denied the Petitioner's claim that the water vapor plume could be an obstruction to air navigation safety because this is not a FAA criterion used in determining a potential obstruction to air navigation safety.

- j) The project construction schedule has outlined five construction phases and milestones for site clearing and grading; placement of concrete foundations; building erection; equipment installation; and equipment testing. Towantic expects construction to begin April 1, 2001 and end March 31, 2003.
- k) The Construction Spill Prevention Control plan provides guidance for inspection, spill response, and reporting requirements relative to fuel storage tanks, oil, fuel, and chemical containers, and oil containing equipment during construction. This draft plan will be finalized after a construction contractor is selected.
- l) The construction blasting plan would be used if large rocks or boulders were encountered that require blasting. The plan requires the construction contractor to comply with Connecticut Regulations, Chapter 29-349-106 through 378, Storage, Transportation, and Use of Explosives and Blasting Agents, as well as receive local Fire Marshall approval. However, Towantic does not expect construction blasting will be necessary because soil borings indicate bedrock 75 feet below grade.