PHILIP M. SMALL
Counselor at Law
direct dial: 860-509-6575
psmall@brownrudnick.com

CityPlace I
185 Asylum
Street
Hartford
Connecticut
06103
tel 860.509.6500
fax 860.509.6501

May 2, 2007

VIA EMAIL AND OVERNIGHT DELIVERY

Daniel F. Caruso
Chairman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Connecticut Siting Council Petition No. 805 – Ansonia Generation LLC Petition for a Declaratory Ruling that No Certificate of Environmental Compatibility and Public Need Is Required for the Proposed Construction, Maintenance, and Operation of a 58.4-MW Combined Heat and Power Natural Gas-Fired Electric Generating Facility and Transmission Line Tap Located at 75 Liberty Street, Ansonia, Connecticut

Dear Chairman Caruso:

On behalf of Ansonia Generation LLC ("AnGen"), enclosed are an original and fifteen (15) copies of AnGen's List of Witnesses and Exhibits.

Please contact me with any questions concerning this filing.

Very truly yours,

BROWN RUDNICK BERLACK ISRAELS LLP

Philip M. Small

Enclosures

cc: Service List

40240880 v1 - 026443/0001

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

ANSONIA GENERATION LLC PETITION FOR A DECLARATORY RULING THAT NO CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS REQUIRED FOR THE PROPOSED CONSTRUCTION, MAINTENANCE, AND OPERATION OF A 58.4-MW COMBINED HEAT AND POWER NATURAL GAS-FIRED ELECTRIC GENERATING FACILITY AND TRANSMISSION LINE TAP LOCATED AT 75 LIBERTY STREET, ANSONIA, CONNECTICUT	:	PETITION NO. 805
	:	MAY 2, 2007

ANSONIA GENERATION LLC
LIST OF WITNESSES AND EXHIBITS

In response to the Hearing Notice of the Connecticut Siting Council's ("Council"), dated April 24, 2007, Ansonia Generation LLC ("AnGen") submits the following information:

A. List of Witnesses

AnGen will make the following witnesses available for cross-examination at the hearing of May 9, 2007:

1. Raymond L. McGee – Ansonia Copper & Brass, Inc.
2. Ted W. Verrill – Sasco River Advisors LLC
3. Barry A. Baker – URS Corporation
4. John M. Dayman – URS Corporation
5. Nedal Deeb – Delenova Energy, LLC
6. Michael G. Dennis – URS Corporation
7. Joella L. Posey – URS Corporation
8. William D. Scott – URS Corporation

BROWN RUDNICK
BERLACK ISRAELS LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500

B. List of Exhibits

AnGen's witnesses will not submit pre-filed testimony, but will offer and adopt the following exhibits and will be available for cross-examination at the hearing of May 9, 2007:

1. Petition No. 805, Petition for Declaratory Ruling of Ansonia Generation LLC, dated and filed March 13, 2007 ("Petition").

2. Letter from Philip M. Small to Peter W. Crabtree, City of Ansonia, dated March 13, 2007, re: Ansonia Generation LLC – Location Approval for Electric Generating Facility Pursuant to Section 16-50x(d) of the Connecticut General Statutes Draft Location Approval Letter to Ansonia Planning and Zoning Commission (copy attached).[1]

3. Connecticut Department of Public Utility Control Final Decision, Docket No. 06-11-08, *Application of Ansonia Copper & Brass, Inc. for a Capital Grant and Financing for Customer-Side Distributed Generation Resources* (March 22, 2007) (copy attached).[2]

4. Letter from Karen Senich, Connecticut Commission on Culture & Tourism, to Zana C. Wolf, URS Corporation, dated April 19, 2007, re: Ansonia Generation LLC, 75 Liberty Street, Ansonia, CT (copy attached).[3]

5. Letter from Bartholomew R. Flaherty III, Ansonia Planning and Zoning Commission, to Philip M. Small, dated April 25, 2007, re: Ansonia Generation LLC-Proposed Electric Generating Facility (copy attached).

6. Petition No. 805, AnGen's Responses to Council Interrogatories Q-CSC-1 through Q-CSC-10, dated and filed April 27, 2007.

7. Resumes (copies attached) for AnGen's witnesses:

    a. Raymond L. McGee

    b. Ted W. Verrill

    c. Barry A. Baker

    d. John M. Dayman

---

1 A draft copy of this letter was attached to AnGen's Petition as Exhibit 7.

2 The DPUC's draft decision in Docket No. 06-11-08 was attached to AnGen's Petition as Exhibit 3.

3 This letter was referenced in AnGen's response to Council Interrogatory Q-CSC-9.

BROWN RUDNICK
BERLACK ISRAELS LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500

e. Nedal Deeb

f. Michael G. Dennis

g. Joella L. Posey

h. William D. Scott

Respectfully submitted,

ANSONIA GENERATION LLC

By: _____

Philip M. Small
Michael E. Kozlik
Brown Rudnick Berlack Israels LLP
CityPlace I, 185 Asylum Street
Hartford, CT 06103-3402
(860) 509-6575 (office)
(860) 509-6501 (fax)
psmall@brownrudnick.com
mkozlik@brownrudnick.com
Its Attorneys

40240822 v1 - 026443/0001

BROWN RUDNICK
BERLACK ISRAELS LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500

BROWNRUDNICK

CityPlace I
185 Asylum
Street
Hartford
Connecticut
06103
tel 860.509.6500
fax 860.509.6501

PHILIP M. SMALL
Counselor at Law
direct dial: 860-509-6575
psmall@brownrudnick.com

March 13, 2007

VIA FEDERAL EXPRESS

Peter W. Crabtree
Zoning Enforcement Officer
City of Ansonia
City Hall
253 Main Street
Ansonia, CT 06401-1866

RE: Ansonia Generation LLC – Location Approval for Electric Generating Facility Pursuant to Section 16-50x(d) of the Connecticut General Statutes

Dear Mr. Crabtree:

On behalf of Ansonia Generation LLC ("AnGen"), we are writing: (i) to describe AnGen's proposed state-of-the-art natural gas-fired combined heat and power electric generating facility ("Facility") to be located on Ansonia Copper & Brass, Inc.'s ("ACB") manufacturing plant site at 75 Liberty Street in Ansonia (the "Site"); (ii) to explain the jurisdiction of the Connecticut Siting Council (the "Council") over such facilities; (iii) to explain the role provided by Section 16-50x(d) of the Connecticut General Statutes to municipal zoning commissions and inland wetland agencies to review such facilities; and (iv) to provide an opportunity for the Ansonia Planning and Zoning Commission to issue a location approval for the Facility pursuant to Section 16-50x(d).

The Facility will be designed to generate approximately 58.4 megawatts ("MW") (net) of electricity and approximately 30,000 pounds per hour ("pph") of steam. The Facility is expected to serve the entire on-Site steam and electricity loads. The balance of the electricity generated by the Facility will be exported to the grid. The Facility is expected to allow ACB to better control the energy costs associated with its manufacturing operations. Further, the availability of relatively low-cost steam and electricity from the Facility should allow ACB to consolidate its Waterbury, Connecticut manufacturing operations at the Site and to attract other manufacturing businesses to the Site.

The Facility will also provide also significant benefits to the Southwest Connecticut transmission system. Enclosed is a copy of AnGen's Petition for Declaratory Ruling to the Council, which is being filed today. As described in the Petition, the benefits of the Facility have been recognized by the Connecticut Department of Public Utility Control and The United Illuminating Company ("UI").

The Facility will include: (i) a highly efficient General Electric LM6000 combustion turbine, a heat recovery steam generator with selective catalytic reduction and carbon monoxide catalyst equipment for emissions control, a nominal 12.5-MW induction-extraction condensing steam turbine capable of exporting 30,000 pph process steam, and associated equipment; (ii) an approximately 30-foot by 30-foot switchyard; and (iii) a 1/4-mile 115-kilovolt ("kV") transmission line tap to UI's existing 115-kV Ansonia Substation. The Petition describes the Facility in greater detail and shows the locations of the various components of the Facility at the Site.

The Council has jurisdiction over the AnGen Facility because it is as an electric generating "facility" as defined in Conn. Gen. Stat. § 16-50i(a)(3). Conn. Gen. Stat. § 16-50x(a) provides in relevant part that "the [C]ouncil shall have exclusive jurisdiction over the location and type of facilities and over the location and type of modifications of facilities subject to the provisions of subsection (d) of this section." *See Westport v. Conn. Siting Council*, 47 Conn. Supp. 382, 396 (2001) ("Under the provisions of General Statutes §16-50x(a), the council has 'exclusive jurisdiction over the location and type' of certain statutorily defined facilities."), *aff'd per curiam*, 260 Conn. 266 (2002); *see also Preston v. Conn. Siting Council*, 20 Conn. App. 474, 485 (1990).

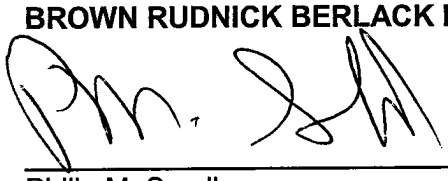
Section 16-50x(d) provides that a "zoning commission and inland wetland agency may regulate and restrict the proposed location of a facility as defined in subdivisions (3) and (4) of subsection (a) of section 16-50i." In so doing, the local commission or agency acts as a special agency of the State, applying general state policy standards involving the balancing of the statewide need for the facility against its local impacts. *See Wilson Point Property Owners Ass'n v. Conn. Light & Power Co.*, 145 Conn. 243, 248-49 (1958) (interpreting virtually identical language in Conn. Gen. Stat. § 16-235); *see also Jennings v. Conn. Light & Power Co.*, 140 Conn. 650, 668-70 (1954); *Preston*, 20 Conn. App. at 484-86.[1]

Although zoning regulations per se do not apply to facilities such as the AnGen Facility, *see Wilson Point*, 145 Conn. at 248-49, we note that the Facility would be located in a Heavy Industrial District and would serve as an accessory use to ACB's on-Site manufacturing operations.

Please contact me if you have any questions or require further information.

Very truly yours,

BROWN RUDNICK BERLACK ISRAELS LLP



Philip M. Small

Enclosures

40239665 v1 - 026443/0001

---

[1] The *Jennings* and *Wilson Point* decisions interpreted Conn. Gen. Stat. § 16-235, which provides that municipal zoning commissions and inland wetland agencies "may . . . regulate and restrict the proposed location" of certain designated facilities. Citing *Jennings* and *Wilson Point*, the Connecticut Appellate Court in *Preston* found that:

> [T]he operative language of General Statutes § 16-50x(d), regarding the function of the council in reviewing local zoning decisions, is virtually identical to the language of General Statutes § 16-235, which governs the similar function of the department of public utility control (DPUC) in reviewing local zoning decisions affecting other public utility facilities. That power of the DPUC has been held to give the DPUC broad authority to override local zoning decisions . . . . The identical language of § 16-50x (d) should be similarly construed.

Preston, 20 Conn. App. at 486 (citations omitted).

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC UTILITY CONTROL
TEN FRANKLIN SQUARE
NEW BRITAIN, CT 06051

DOCKET NO. 06-11-08 APPLICATION OF ANSONIA COPPER & BRASS, INC. FOR A CAPITAL GRANT AND FINANCING FOR CUSTOMER-SIDE DISTRIBUTED GENERATION RESOURCES

March 22, 2007

By the following Commissioners:

Anthony J. Palermino
Donald W. Downes
John W. Betkoski, III

DECISION

I. INTRODUCTION

A. SUMMARY

In this Decision, the Department of Public Utility Control awards Ansonia Copper & Brass, Inc. a capital grant of $28,966,000 for 57,932 kW of customer-side CHP distributed generation in SWCT. The project is eligible for subsidized long-term financing for $45,334,000.

B. BACKGROUND OF THE PROCEEDING

By application received on November 9, 2006 (Application) filed under section 16-243i of the General Statutes of Connecticut (Conn. Gen. Stat.) and Docket No. 05-07-17, DPUC Review of the Development of a Program to Provide Monetary Grants for Capital Costs of Customer-Side Distributed Resources, Ansonia Copper & Brass, Inc. (ACB) through its affiliate, Ansonia Generation, LLC (AnGen), requested the Department of Public Utility Control's (Department) approval for a capital grant for customer-side distributed generation resources.

C. CONDUCT OF THE PROCEEDING

By Notice of Hearing dated December 29, 2006, a public hearing was held on this matter in the Department's offices, Ten Franklin Square, New Britain, CT on January 9, 2007.

The Department issued a Draft Decision in this matter on February 28, 2007. All Participants were afforded an opportunity to file written exceptions to and provide oral arguments on the Draft Decision.

D. PARTICIPANTS

The Department recognized ACB, 75 Liberty Street, Ansonia, Connecticut 06401; The Connecticut Light and Power Company (CL&P), P.O. Box 270, Hartford, Connecticut 06141-0270; The United Illuminating Company (UI), 157 Church Street, P.O. Box 1564, New Haven, Connecticut 06506-0901; Banc of America Leasing & Capital (Banc of America), NJ6-144-02-10, 25 North Maple Avenue, Ridgewood, New Jersey 07450; and the Office of Consumer Counsel (OCC), Ten Franklin Square, New Britain, Connecticut 06051, as Participants to this proceeding.

E. POSITION OF THE PARTICIPANTS

In its Brief, the OCC presented its concerns with this project on issues on financing, capacity rights, the cost of transmission upgrades, and relocation of ACB load from Waterbury to the site. OCC Brief, pp. 2-3. The OCC recommends that the Application be held in abeyance until these concerns are resolved. OCC Brief, p. 4.

II. DEPARTMENT ANALYSIS

A. APPLICATION

An Application for a capital grant and financing for customer-side distributed generation resources was filed on November 9, 2006 by AnGen, an affiliate of UI's electric customer ACB. AnGen filed a revised application on December 12, 2006 to reflect changes in the number of generator units and reduced generation capacity in order to obtain an earlier delivery of generation equipment to ensure attaining the

planned startup date. At the January 9, 2007 hearing, the Department directed AnGen[1] and ACB to amend the AnGen application to designate ACB as the applicant, as ACB has the existing retail electric account as required by Conn. Gen. Stat. §16-243i. On January 16, 2007, ACB submitted Late Filed Exhibit No. 1 which was a revised application naming ACB as the Applicant and included changes to the December 12, 2006 filing. Upon issuance of the Draft decision on February 28, 2007, the docket name was change to Application Of Ansonia Copper & Brass, Inc. For A Capital Grant And Financing For Customer-Side Distributed Generation Resources to accurately identify the instant docket and applicant.

In Late Filed Exhibit No. 1, the Applicant, ACB, applied for a capital grant and long-term financing to install a combined heat and power (CHP) unit. Construction is estimated to begin in April 2007 and the targeted in-service date is April 2008. The proposed generators' nameplate capacity is 59,892 kW by utilizing a 49,447 kW gas turbine and a 10,445 kW steam turbine. Parasitic loads total 1,460 kW. The new generating system will supply all of ACB's internal power electrical needs of 7,550 kW at its Ansonia facility plus 2,000 kW of additional load which will be transferred from its facility in Waterbury. Late Filed Exhibit No. 4. ACB will sell the remaining output to UI or third parties.

ACB will use the plant waste heat in its manufacturing processes and for heating and cooling. Application, Section C. The facility will run a minimum of 4,850 hours per year with a potential operation up to 8060 hours per year in order to supply 296 GWh. Application, Section C. The annual efficiency is expected to be 54 percent. Tr. 1/9/07, p. 51.

B. GRANT AWARD LEVEL

Under the proposed operation of the facility, the maximum Federally Mandated Congestion Charges (FMCC) that can be avoided by the facility would be the net capacity of the generation which is the nameplate rating of the generation reduced by its parasitic load.

The Application stated that the facility has a nameplate rating of 59,892 kW at 54 degrees Fahrenheit. Because generation output varies inversely with temperature thereby decreasing as temperature increases, the Department determines capital grants based on nameplate ratings under International Organization for Standardization (ISO) conditions which establishes nameplate ratings at 59 degrees Fahrenheit. The ACB witness testified that the projects nameplate rating would decrease by approximately 500 kW at 59 degrees Fahrenheit. Tr. 1/9/07, p. 30. Therefore, the Department considers the nameplate rating of the facility under ISO conditions to be 59,392 kW (59,892 kW – 500 kW). The net capacity of the facility is the 59,392 kW ISO nameplate rating less the 1,460 kW parasitic load which is 57,932 kW.

[1] Raymond McGee, President of ACB, is the sole owner of ACB and AW Power Holdings LLC. AW Power Holdings LLC owns 65% of AnGen and Sasco River Advisors LLC owns 35% of AnGen. Tr. 1/9/07, p. 16; Late Filed Exhibit No. 3.

In Docket No. 05-07-17, the Department established the $450/kW grant amount based on full operation from 12:00 PM to 8:00 PM, Monday through Friday during the two winter months of January and February and the four summer months of June through September. ACB testified that it will operate during all the required hours. Application, Section C.

ACB did not claim any thermal use for air conditioning that would replace electric air conditioning load and result in an offset to parasitic use and affect the level of net capacity. The capital grant amount of $26,069,400 for base load is determined by multiplying the generation net capacity by $450/kW {((59,392 - 1460) kW/unit * $450/kW) = $26,069,400}.

The project is located in Southwest Connecticut; therefore, it is eligible for the $50/kW locational supplement. The capital grant amount for locational supplement is determined by multiplying the generation net capacity by the $50/kW as indicated in Docket No. 05-07-17 ((59,392 - 1460) kW * $50/kW= $2,896,600). The total capital grant is the sum of the base load grant and the locational supplement grant which is equal to $28,966,000. The new plant must be in operation no later than April 30, 2008 to receive the $50/kW SWCT locational grant.

The grant approved is based on ACB operating a base load generation unit. This requires the facility to run at an 85% capacity factor from 12:00 PM to 8:00 PM, Monday through Friday during the two winter months of January and February and the four summer months of June through September. ACB shall inform the Department of any changes in operation and construction of its proposed facility. If the proposed operation changes during the construction phase, the DPUC will adjust the grant accordingly.

This one-time non-recurring grant will be available to ACB for 3 years from the date of this decision. If, for any reason, the project has not become operational within 3 years of the date of this decision, the grant will be subject to changes or revocation based on the current level of grants at the time of the project's in-service date.

C. ELECTRIC SYSTEM UPGRADES

ACB testified that the Ansonia property abuts a 115 kV UI substation, and installation of this generation system would require no new substation construction. Tr. 1/9/07, p. 20. ACB may require one or two towers for overhead transmission lines to upgrade existing lines on ACB property. ACB estimates the interconnection cost will be in the range of $1 to $2 million which includes the cost to upgrade a 115 kV transmission line and connect to the ACB substation. Tr. 1/9/07, pp. 94-95. AnGen will pay for the new line. Tr. 1/9/07, pp. 37-39. ACB will also be responsible for all costs of transmission system upgrades required for its interconnection to the grid. Response to Interrogatory EL-12.

The OCC expressed a concern over issues related to transmission line upgrades. OCC Brief, p. 3, Tr.1/9/07, pp. 137-138. Due to the size of the facility, an ISO-NE interconnection study is required by ISO-NE to determine the impact on transmission equipment and settings. Responses to Interrogatories EL-11 and EL-12. The interconnection study is estimated to be completed in July 2007 and will identify

transmission system upgrades and estimated costs. ACB testified that ACB has to comply with the mandates in the interconnection study. Tr. 1/9/07, p. 94. The Department will require ACB to file a copy of the ISO-NE interconnection study, including ISO's estimate of the costs for system upgrades and interconnection to the grid.

In Docket No. 03-01-15, DPUC Investigation Into the Need for Interconnection Standards for Distributed Generation, the Department approved CL&P and UI Guidelines for Generator Interconnection dated 4/30/2004. The Guidelines state in Sections III.1.0, b and c: The Applicant is responsible for all interconnection equipment costs, including installation and construction. The Applicant is responsible for all associated costs incurred by the Company in designing, constructing, operating and maintaining modifications to the Electric Power System that are required to accommodate the interconnection. Therefore, ACB's affiliates will be responsible for all interconnection costs and T&D utility system upgrades required for the interconnection of this project to the grid.

D. CAPACITY RIGHTS

UI believes that the forward capacity market is extremely complicated. Since the owner will be in control of the facility and the equipment, it is important that the owner is the one who registers his capacity with ISO-NE and enters it into the market. The owner should be responsible for extracting the capacity value for its generator from ISO-NE. UI stated that it does not want to be involved in the customer's operation. Tr. 1/9/07, pp. 130.

CHP projects that are sized to a customer's load reduce demand and provide a direct capacity benefit to all customers. This project however, is sized much larger than ACB's load and ACB will have to bid into the capacity market to receive capacity payments for any excess capacity above its load.

The Department will require that ACB enter into a contractual agreement between itself and UI under which it will turn over the 57,932 (59,392 - 1460) kW capacity rights and/or capacity payments by ISO-NE to UI for fifteen years from the date the facility begins operation in order for the capacity benefits to be returned to ratepayers.

In order to ensure that customers receive the full value of ACB's excess capacity for the full 15 years, the Department shall also require that the term of the surety bond is 15 years.

E. LONG-TERM FINANCING

ACB indicated a desire to apply for Banc of America financing for $74,300,000 over ten years to finance the total cost of the proposed project. Application p. 1, Attachment B-2. ACB testified that they will need funding for the cost of the project during the construction period. Tr. 1/9/07, p. 62.

ACB claims that the Facility, and AnGen as the owner of the facility, should be the recipient of the financing pursuant to Section 9 of the Act which is not restricted to retail end use customers as Section 8 of the Act regarding capital grants is. ACB Brief, p 6. ACB states that project financing is normally provided to single purpose entity that owns the project assets to ensure that the lender has direct access to the project's collateral and insulates the owner from external liabilities. Id.

ACB believes that the financing subsidy should be available for the total costs of the project. ACB claims that neither the Act nor any Department decision has ever dealt with the relationship between the capital grant and long-term financing. Id. p. 7. ACB believes that there is no statutory basis for the amount of the capital grant and the total project finance level being dependent of each other. Id, p. 8.

UI believes the Department should continue to permit financial subsidies for project costs net of the capital grant award. Tr. 1/9/07, p. 122. The customer may seek financing for the remainder of its costs from other sources. UI Brief, p. 2.

The Department agrees with UI's position that the project cost is subsidized through the combination of the capital grant and subsidized interest for a long-term loan. Although only the interest is subsidized for the long-term loan, the total financing allowed for a DG project with subsidized interest will be limited to the cost of the project less the grant award. The Department believes that the recipient of the grant and the borrower of the long-term subsidized loan must be the same entity which would be the retail electric customer who is the applicant for the grant. Since the project is new generation less than 65 MW in size, reduces peak load, begins operation after January 1, 2006, and is in UI territory, the Department finds that ACB is eligible for long-term financing up to $45,334,000, which is the total cost of the project less the total grant award.

F. NATURAL GAS REBATE

ACB raised a concern that the gas rebate would be limited to only the customer's own electric and thermal use and not for the total gas supply to the DG facility. ACB Brief, p.8. ACB states that there is no statutory or regulatory basis to restrict the Section 11 rebate to own-use gas as total gas supply use was not restricted in the Decision in Docket 06-10-19, Application Of Kimberly-Clark Corporation For A Capital Grant And Financing For Customer-Side Distributed Generation Resources, dated January 17, 2007. ACB Brief, p. 8. ACB testified that Yankee Gas Company has a gas compression station in Ansonia and that an abundant supply of natural gas at appropriate pressures exist curbside to the Ansonia property. Tr. 1/9/07, p. 20. UI believes that the gas rebate be limited to the greater of the thermal or electric load of the facility being served. Tr. 1/9/07, p. 126.

The Department believes that the natural gas rebate should be applied to the level of gas supply required for the FMCC's avoided by the facility which is the gas supply needed to generate the grant level capacity and the DG facility's thermal production. Therefore, the ACB gas rebate will apply to the gas supply required to generate its 57,932 kW output and associate CHP thermal production during its first 15 years of operation provided the facility operates with a minimum 85% capacity factor

during the six peak months listed above to receive a 100% gas rebate. If the required 85% monthly capacity factor is not achieved, the annual rebate will be pro-rated based on the actual capacity factors for the six peak months.

III. CONCLUSION AND ORDERS

A. CONCLUSION

Based on the evidence presented, the Department concludes that ACB's project will reduce FMCC and is therefore eligible for a customer-side distributed generation capital grant in the amount of $28,966,000. The ACB project is also eligible for subsidized long-term financing in the amount of $45,344,000. The capital grant is subject to ACB complying with the Orders in this Decision. Upon compliance with the Orders below, the Department will issue correspondence indicating that ACB has complied with the Orders and authorizing the Electric Distribution Company (EDC) to issue the capital grant.

G. ORDERS

1. At the time the project becomes operational and no later than 3 years from the date of this Decision, ACB must submit to the Department a letter of credit or surety bond issued by a creditworthy financial institution in the amount of $14,483,000 for a term of fifteen years that will decrease annually by 6.67%. Such security shall name the State of Connecticut Department of Public Utility Control as Obligee.

2. ACB must certify that the project was constructed and will operate as proposed in its Application for a minimum period of fifteen years at the end-use customer's site. Further it will demonstrate that its project is operational by submitting an affidavit that it has completed final acceptance of the applicable EDC interconnection process, including satisfactory commissioning testing, and is operational.

3. ACB should contact Banc of America to arrange long-term financing for the project.

4. ACB must report to the Department any and all modifications, upgrades, long term outages, or termination of the unit's operation

5. ACB must file a copy of the contractual agreement with UI to transfer capacity rights and/or capacity payments to UI.

6. ACB must file a copy of the ISO-NE interconnection study, including ISO's estimate of the costs for system upgrades and interconnection to the grid within 30 days of the study's issuance date.

DOCKET NO. 06-11-08 APPLICATION OF ANSONIA COPPER & BRASS, INC. FOR A CAPITAL GRANT AND FINANCING FOR CUSTOMER-SIDE DISTRIBUTED GENERATION RESOURCES

This Decision is adopted by the following Commissioners:

Anthony J. Palermino

Donald W. Downes

John W. Betkoski, III

CERTIFICATE OF SERVICE

The foregoing is a true and correct copy of the Decision issued by the Department of Public Utility Control, State of Connecticut, and was forwarded by Certified Mail to all parties of record in this proceeding on the date indicated.

Louise E. Rickard
Acting Executive Secretary
Department of Public Utility Control

March 22, 2007
Date

Connecticut Commission on Culture & Tourism

Historic Preservation
& Museum Division

59 South Prospect Street
Hartford, Connecticut
06106

(v) 860.566.3005
(f) 860.566.5078

April 19, 2007

Ms. Zana C. Wolf
URS Corporation
437 High Street
Burlington, NJ 08016

Subject: Ansonia Generation LLC
75 Liberty Street
Ansonia, CT

Dear Ms. Wolf:

The State Historic Preservation Office has reviewed the above-named project. This office notes that Ansonia Copper & Brass possesses historic, architectural and industrial importance and is eligible for the National Register of Historic Places.

In the opinion of the State Historic Preservation Office, the proposed adaptive use will effect the historic integrity of Ansonia Copper & Brass. However, this office believes that the proposed actions will constitute no adverse effect upon this important industrial resource. This comment is conditional upon the professional implementation of the following mitigative measures:

- Prior to adaptive use-related activities, Ansonia Generation LLC and/or URS Corporation shall document Ansonia Copper & Brass to the professional standards of the State Historic Preservation Office. Documentation shall consist of narrative text, photographs and/or high-quality digital images, an index of photographs, and a photographic site plan. Photographic coverage should include exterior and interior perspectives and pertinent details including extant machinery, production lines and work spaces. Final documentation shall be provided to the State Historic Preservation Office for permanent archiving and public accessibility.

- Ansonia Generation LLC and/or URS Corporation shall provide, if available, copies of any published corporate history, the production/process book, and the equipment/machinery auction catalog for Ansonia Copper & Brass the State Historic Preservation Office

- Ansonia Generation LLC and/or URS Corporation shall prepare and submit a brief history and description of Ansonia Copper & Brass, including project-related information, photographs and maps, to the *Society for Industrial Archeology New England Chapters Newsletter*.

The State Historic Preservation Office appreciates the opportunity to have reviewed and commented upon the proposed undertaking. This office supports and endorses the proposed adaptive use of this important industrial resource.

This office looks forward to further coordination with all interested parties regarding the expeditious furtherance of the proposed undertaking as well as the professional management of Connecticut's cultural heritage.

For further assistance please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,

Karen Senich
Deputy State Historic Preservation Officer

cc: Mr. Lawrence J. Ford/ACB
Ms. Maria Sinnamon/FSS

City of Ansonia
PLANNING AND ZONING COMMISSION

April 25, 2007

Atty. Phillip M. Small
Brown Rudnick Berlack Israels LLP
185 Asylum Street
Hartford, Connecticut 06103

Re: Ansonia Generation LLC- Proposed Electric Generating Facility
Ansonia's Copper & Brass, Inc. Plant at Liberty Street Ansonia

Dear Atty. Small:

This is to inform you that following your presentation at its meeting of April 23, 2007, the Commission voted to authorize the undersigned to express certain concerns regarding the proposed facility at 75 Liberty Street in Ansonia.

In prefacing the Commission's concerns consideration was given to the following:

1. That (a) the proposed facility would be constructed at a site located at or near the geographic center of Ansonia's downtown district; (b) that the district is heavily built up and densely populated; (c) that the area is and/or will continue to be frequented by an increasing number of residents and shoppers; and (d) that the district has been the subject of a planning program leading to the adoption of the *City Center Plan 2005* which became effective on January 15, 2007 as part of the Town's Comprehensive Plan; and

2. That while changes are unavoidable, the anticipated changes should not be detrimental to present and future residents, workers or shoppers and that said changes should be implemented so as to preserve and enhance the character of the district as a place for living, working and shopping.

3. The facility should be shut down during periods of severe air pollution. And noise levels must be limited as many people live within 500 feet to 1000 feet of the proposed facility.

Based on these considerations the Commission emphasizes that: A. extreme caution must be taken and additional efforts must be made in installing and operating the facility and all related appurtenances, equipment and devices so as to meet and/or exceed Federal and/or State requirements concerning safety, noise emission and water and air pollution; that B. the steam stack be constructed to an elevation sufficiently high to assist in the efficient and rapid dissipation of steam and other fumes and gases emitted; and C. that all site and area security, including but not limited to equipment and

devices, and other representations made to the Commission during the presentation, be properly installed and maintained on a 24/7 basis.

Should you have any questions, do not hesitate to contact me.

Very truly yours,

Bartholomew R. Flaherty III, Chairman
Ansonia Planning and Zoning Commission

cc. (1) Raymond McGee, Ansonia Copper & Brass, Inc.
Ansonia Generation LLC
75 Liberty Street, Ansonia CT 06401

(2) Ted W. Terrill
Sasco River Advisors LLC
75 Sasco River Lane
Southport, CT 06890

(3) Daniel F. Caruso, Chairman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

(4) James T. Della Volpe, Mayor
City of Ansonia

(5) Oswald Inglese
Planning & Zoning Consultant
Ridgefield, CT 06877

(6) Peter Crabtree, Zoning Official
Ansonia, CT 06401

Raymond L. McGee
934 Boston Post Road
Madison, Ct. 06443
Office Phone 203-732-6673
E-mail: rmcgee@ansoniacb.com

October 2001 to Present	President and Owner Ansonia Copper & Brass, Inc. Ansonia, Ct. Multi alloy brass and wire company Annual sales exceed $70 million per year
August 1995 to October 2001	President Zinc Corporation of America Pittsburgh, Pa. Largest domestic zinc producer. Sales exceeded $500 million per year. Privately owned.
July 1989 to August 1995	Group Vice President Marmon Group Chicago, Illinois Managed group of eight companies with global sales averaging $850 million per year.
July 1985 to July 1989	President Lenox China Pomona, N.J. Domestic Fine China manufacturer.
July 1974 to July 1985	Group Vice President New York, N.Y. Managed seven companies with annual sales averaging $275 million per year primarily industrial products. Vice President Precious Metals Manufacturing Fairfield, Ct. and four other sites Managed four plants. Approximately 750 employees. Plant Manager Precious Metals Manufacturing Fairfield , Ct Managed one plant 350 employees
July 1969 to 1974	Chase Brass and Copper Waterbury, Ct. Plant Manager responsible for 400 employees. Multi-alloy brass rod mill
Education:	M.B.A. University of Michigan Ann Arbor, Michigan 1967-1969 BSME Five Year Degree Cornell University Ithaca, N.Y. 1962-1967

Ted W. Verrill

75 Sasco River Lane Southport, CT 06890
203-292-3798 (office) 203-258-6653 (mobile) 203-254-1986 (home)
tverrill@gmail.com

Profile - Deal savvy growth-oriented performer seeks role in originating energy industry transactions.

Sasco River Advisors LLC

President 2005 to Present

Providing advisory and other financial services for the renewable and cleantech energy sectors.

- Arranged sale of 55 MW biomass to energy facility in Benson, MN.
- Raised development and construction financing for two 28 MW biomass to energy facilities in Dalhart and Huntsville TX.
- Arranging debt, mezzanine and equity financing for an 84 million gallon ethanol facility in Dalhart, TX.
- Arranged sale-leaseback financing for a 120 MW gas-fired facility in NV.
- Assisting Japanese biodiesel developer with venture and development capital for US projects.

Allco Finance Corporation

Senior Vice President 2001 to 2005

Responsible for originating, arranging debt and equity, managing and closing domestic and cross-border structured finance, lease finance and project finance transactions.

- Successfully financed rolling stock, water and waste water transactions in the US and Europe valued at over $2 billion.
- Raised equity capital from relationships in banking and finance.
- Assisted with financing and development of wind facilities in New Mexico, New York and Maine.
- Assisted biomass to energy and fuel cell developers in raising development capital.

DaimlerChrysler Capital Services, Inc.

Managing Director 1989 to 2001

Successfully led a team of marketing, accounting, pricing, credit and tax personnel and technical experts. Identified, selected, acquired and managed $5 billion of investment in US, Asian, European and Australian transportation and facility assets. Annual earnings from this activity approached $100 million.

- Negotiated sophisticated multi-party transactions involving commercial aircraft, rolling stock, shipping, pulp & paper, water and waste water facilities, renewable (hydro and waste to energy), fossil fuel (natural gas, coal and oil) and nuclear energy generation facilities, with a working knowledge of the associated tax, accounting, credit, pricing and legal issues.
- Met or exceeded annual budgets and business plans - liaising with credit, finance and tax at Chrysler Corporation in Auburn Hills, MI and DaimlerBenz AG in Stuttgart, Germany.
- Started as Group Counsel for the Lease, Project and Renewable Energy (solar, hydro, cleantech) Finance Groups.

Integrated Resources Corporation

Vice President 1985 to 1989

Successfully negotiated the terms of and acquired $500 million of commercial aircraft from Continental, American, United, Eastern and Delta. Assisted with the development of new products in a changing tax law environment.

Unilease Computer Corporation

Vice President 1984 to 1985

Responsible for treasury functions, including transaction funding, management of credit facilities and funding operations. Assisted in the profitable sale of the company to a large captive financial institution.

Thacher Proffitt & Wood

Associate 1981 to 1984

Engaged in all phases of asset-based and lease finance of transportation and project assets, as well as general corporate finance, tax, banking, securities and real estate law. Represented Comdisco Financial Services, Chemical, Fifth Third and Wells Fargo banks, Emery Air Freight and Livanos Shipping.

Ernst & Young

Tax Staff 1980 to 1981

Involved in researching and providing advice with regard to a variety of domestic and foreign US corporate tax matters.

Price Waterhouse Coopers

Consultant 1976 to 1978

Involved with high-tech venture capital enterprises and the Fidelity group of funds.

Fordham University/University of Maine Schools of Law, JD, 1981

University of Arizona/Eller School of Management, MBA, Finance, With Distinction, 1975

Bowdoin College, BA, 1971

Member of the Bar, New York 1984, Connecticut, 1991

URS

Barry A. Baker

Project GIS Specialist

Areas of Expertise

Advanced user of ArcInfo, 8.x/9.x and extensions

Development of Enterprise GIS Systems using ArcSDE and ArcIMS

SDSFIE and FGDC Data Compliance and Development

Years of Experience

With URS: 1 Year
With Other Firms: 9 Years

Education

BS (Honors)/Environmental Science/1996/University of East Anglia, Norwich, England

Overview

Mr. Baker has developed numerous desktop to enterprise level GIS projects for Army, Air Force, Navy and commercial clients with particular emphasis on environmental solutions. Projects involved GIS System Design and sizing in addition to all aspects of spatial data management, including data research, data creation and editing, QA/QC through core ArcGIS tools, and general visualization and mapping.

Project Specific Experience

GIS System Design and Spatial Data Management

- Designed and wrote base-wide proposal for sensitive munitions and chemical agent facility - proposal incorporated use of commercial satellite imagery and existing CAD data integration to save in excess of $100,000. System build included purchasing and setting up new servers integrating Windows 2003 Server, IIS 6.0, SQL Sever, ArcIMS, and ArcSDE.
- Implemented geodatabase format for all primary GIS applications, decreasing data errors through appropriate domain and sub-domain development, a critical goal for the Base Re-Alignment and Closure (BRAC) process and assisting with land transfer to new agencies.
- Attributed data using FGDC and SDSFIE data standard's guidelines for enhanced database management and improved query and analysis capabilities; built queries for linking to SQL Server database for sample and other data extraction, analysis and visualization.
- Developed internal infrastructure plan for housing and maintaining ArcIMS system; created and maintained ArcIMS systems allowing remote access for client and internal personnel, lowering costs associated with software licensing, data updates, and training.

3D and Spatial Analyst projects for power facilities, air dispersion modeling, watershed analysis, landfill engineering design, and urban population/economic analysis

- Conducted site analysis and assessment for numerous power siting facilities (Combined Cycle, Peaking, Hydroelectric, and IGCC) along the east coast. Work has involved optimal site location based on proximity to critical infrastructure and right of ways; site layout and design; and environmental impact assessments to wetlands and other critical habitats.
- Created weighted grids for spatial model analysis assessing the economic impact of forestlands and forestry activities on regional development and the importance of these activities to economic growth through the Spatial Analyst map algebra.
- Conducted preliminary comparison analysis of urban and rural census data based on urban density growth model created by David Theobald.

- Creation of TIN and GRID models from point and line data to represent sub-surface geologic layers, pressure and conductivity gradients, in addition to watershed delineation.
- Conducted GIS and risk analysis of land parcels, buildings, and critical infrastructure's susceptibility to flooding and other disasters as part of the Bucks County Hazard Mitigation Plan development.

Primary technical lead on network infrastructure improvement committee. Developing immediate infrastructure requirements, plus short and long-term goals and initiatives.

- Responsible for driver updates, LUN allocation, backup and general system administration of Clariion 4500 SAN, utilizing Windows NT/2000/ and 2003 Server (SAN hosts internal/external websites for clients, GIS datasets, and SQL Server databases.)
- Implemented security management for sensitive environmental and company proprietary data through user/group management in addition to Windows 2000 security templates.
- Technical point of contact for all CMMI activities, including process engineering design, performance and other metric collection, configuration management, and system/software engineering training and development.

Developed two site-wide GIS systems for the US Dept. of Agriculture, integrating aspects of environmental management activities with existing facility management work. Made extensive use of 3D Analyst and Spatial Analyst for contaminant plume modeling and visualization.

- Improved visualization reporting helped regulator understanding of contaminant problem improving regulator review time and reducing associated comments and questions.
- Produced an additional $60,000 for development work through visualization projects.

Managed GIS and AutoCAD design teams for numerous environmental investigations, in addition to developing GIS and CAD standards for all spatial data projects.

- Reduced work time through use of standard symbology and templates.
- Implemented migration from AutoCAD 13 to AutoCADLt 2000, based on application use review, saving approximately $10,000 through software license consolidation.

Researched, designed, and deployed company's small business network with Windows 2000 Server and Professional and support for Windows 98. Installed and configured the domain-based network running Windows 2000 Server with Active Directory services.

- In-house implementation saved over $15,000 in consultant fees.
- Standardization of desktop applications reduced IT costs by nearly 40%.

Additional activities included environmental field management for numerous RCRA and CERCLA site investigations and associated proposal, field documentation and report writing.

Publications

'The Importance of CMMI/DMSO in Subsurface Simulation'/Baker-Deschaine-Regmi-Ades

Chronology

2005 – present/URS Corporation/Project GIS Specialist

2001 – 2005/Science Applications International Corp. (SAIC)/GIS Specialist

1997 – 2001/ENTECH, Inc./GIS Coordinator, Environmental Scientist

1996 – 1997/U.S. Geological Survey/GIS Technician

Contact Information

335 Commerce Drive, Suite 300
Fort Washington, PA 19034-2623
Tel/215.367.2500
Direct/215.367.2560
Fax/215.367.1000
Barry_Baker@urscorp.com

John M. Dayman, P.E.

Sr. Mechanical Engineer

Areas of Expertise

Power Plant Systems Engineering
Raw Water/ Wastewater Treatment Processes
Permit Applications
Corrosion Control & Coatings
Technical Report Preparation
Engineering Program Design/Development
Multi-Discipline Project Team Leadership
Problem Root Cause Analysis

Years of Experience

With URS: 6 Years
With Other Firms: 23 Years

Education

U.S. Military Academy, B.S., Engineering & Applied Science, 1971

Overview

Mr. Dayman has over 25 years of project engineering experience in the design, permitting and operational/ maintenance support of water and wastewater systems in new and existing power generation and industrial facilities. He has been working as part of a multi-disciplinary team to assist a number of clients with determining applicability and developing strategies for implementation of Phase I and II 316(b) regulations. Mr. Dayman has prepared briefing and strategy documents, identified technology options, developed work plans, provided compliance assessments for permit applications, and coordinated with regulators.

Project Specific Experience

- Managed balance of plant systems (including Service Water, Raw and Domestic Water Treatment, Chemical Feed, Wastewater Treatment) at Limerick Generating Station to maintain and improve system health, reliability and efficiency (1999-2000); provided headquarters design engineering, support for PECO Energy generating station water and wastewater treatment systems, and developed/managed engineering programs needed to address broad industry issues (1990-1998). Specific systems/programs include:
  - Closed and open cooling water system chemical treatment for control of corrosion and fouling.
  - Raw water treatment systems including clarification, filtration, biocide application, reverse osmosis, demineralization, boiler chemical feed, and process instrumentation/controls.
  - Domestic water treatment, permitting, and monitoring.
  - Wastewater treatment including neutralization, oil separation, desludging, filtration, ozone application; NPDES permit application preparation, update, and sampling/reporting.
  - Engineering changes and plant modification packages for station customers; performed related activities including project alternatives, cost and schedule analyses, conceptual design, calculations, technical specifications for procurement, safety evaluations, and field support for installation, testing, and startup.
  - Process sampling racks and stations.
  - Corrosion control and coatings for preservation of plant equipment and structures to incorporate state-of-the-art technology and industry experience; material selection.
  - Programs for waste minimization, chemical and spill control.
- Provided services to various utility clients involving design, permitting, and start-up of various projects related to power generation facilities
  - Identified and properly applied regulations for facility siting and plant system design.
  - Designed, specified, and engineered systems for environmental control systems for water and waste pre- and post-treatment

(including those specified above) for protection of environmental and plant owner's investment.
- Resolved field problems after system installation to support start-up of plant.

- Performed as engineer on a team to design a new nuclear power plant with a focus on radioactive and non-radioactive water and waste treatment systems.
  - Prepared mechanical system sizing calculations.
  - Developed flow diagrams and equipment layouts.
  - Prepared technical specifications for equipment procurement

Registrations

Licensed Professional Engineer / Pennsylvania

Chronology

1990 – 2000/Peco Energy Company, Senior Engineer
1979 – 1990/Stone & Webster Engineering Corporation, Environmental Engineer
1977 – 1978/Ebasco Services, inc., Engineer

Contact Information

335 Commerce Drive, Suite 300
Fort Washington, PA 19034-2623
Tel/215.367.2500
Direct/215.367.2570
Fax/215.367.1000
John_Dayman@urscorp.com

DR. NEDAL DEEB

DELENOVA ENERGY, LLC
11350 Random Hills Road, Suite 800
Fairfax, VA 22030
(Tel) 703-622-6735
(Fax) 703-991-3051
e-mail: ndeeb@delenova.com

GENERAL QUALIFICATIONS

Over seventeen years experience in the energy industry. Experience includes project management, project development, negotiating agreements, detailed engineering design and analysis, electrical network transmission and distribution evaluation, energy sector privatization and regulations rule setting, energy market pricing, and strategic investment opportunities in North America and international energy sectors. Experience also includes involvement in US energy de-regulation activities, study of energy source reliability and security, power industry supply, energy demand and pricing fundamentals, regulation impacts on energy production and delivery costs, peak load reduction, energy savings, end-use demand, and commercial and industrial primary and secondary energy supply options. Extensive managerial, team leading, planning and reporting skills throughout successful large scale project development. Possess technical knowledge as an electrical engineer and financial experience as a project economist. Experience also includes communication skills and personal confidence in conducting productive project meetings, public hearings, media interviews, meeting high rank officials, coordination with international commercial officers, and negotiating with potential customers.

EMPLOYMENT EXPERIENCE

DELENOVA ENERGY, Fairfax, VA, USA
Founder and Senior Partner (February 2002 - Present)

CME NORTH AMERICAN MERCHANT ENERGY, Boston, MA, USA
Co-Owner and Senior Developer (April 2000 – January 2002)

CORNERSTONE ENERGY ADVISORS, Chicago, IL, USA
Senior Manager (April 1999 – March 2000)

SARGENT & LUNDY, Chicago, IL, USA
Senior Business Developer and Analyst (October 1990 – March 1999)

EMPROS SYSTEMS INTERNATIONAL (Energy Management Division of Siemens),
Plymouth, MN, USA
System Designer and Analyst (June 1989 – September 1990)

ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago, IL, USA
Adjunct Professor for Graduate Studies (January 1991 – December 1998) Part Time
Graduate courses covering Power System Analysis, Planning, Operation and Control

EDUCATION

Ph.D. in Electrical Engineering from Illinois Institute of Technology, Chicago, 1989
M.Sc. in Electrical Engineering from Illinois Institute of Technology, Chicago, 1986
B.Sc. in Electrical Engineering from Kuwait University, 1984

List of
Key Qualifications

Delenova Energy

As a co-founder and a senior partner of the company, Nedal is responsible for the identification of energy-related projects, managing the development of current projects, conducting study and evaluation advising projects, company leadership, negotiating business deals, investigating project financing options, attracting investors, and business development and planning. The following is a summary of his current activities and experience in Delenova:

- Just completed a comprehensive energy and financial audit program for a confidential North American independent system operator (ISO). The audit program reviewed the energy and financial practices of a member utility due to declaring one of its large fossil plant as a must run asset for network reliability purposes.

- Currently supporting a large US developer and investor on defining optimal siting for natural gas units in the US northeastern power market. This involves market analysis, recognition of hot spot pricing locations within the grid, transmission network impact evaluation, approaching interconnecting utilities, and working with the regional system operators and power pools. The objective is to install about 1,500 MW of Greenfield or brownfield peaking units.

- Manager of developing a 45MW wind energy project in Jordan (US$70million of potential investment)

  Nedal is the project initiator and the project manager. Since the project identification, Nedal has successfully lobbied the Jordanian Government and Ministries to support the project, successfully attracted the US Trade and Development Agency to co-fund the front-end development efforts, and then successfully attracted and negotiated a Joint Development Agreement (JDA) with General Electric (GE) International. The JDA resulted in immediate management income to Delenova with a development and equipment placement success fee structure. Nedal has also attracted the interest of potential financiers such as US ExIm Bank, OPIC, IFC and other regional banks. He has also initiated discussions with potential energy investment groups and companies in the Middle East. The project team is currently in discussions with a potential regional investor with whom Nedal has identified as a strong local ally.

  Nedal's responsibilities on the project include managing all activities, tasks, contracts and personnel involved in the different tasks. Nedal has so far successfully met all expectations and project schedules within budget. He is currently managing the economic evaluation (project pro-forma) of the project as a basis to negotiate a Power Purchase Agreement (PPA) with the Jordanian Ministry of Energy. Nedal closely works

with GE and reports all activities and plans to GE management. Nedal makes the decisions and recommendations on the day-to-day tasks and efforts needed to increase the success chances of the project. He gained excellent reporting with all Jordanian ministries involved in the project. Nedal has also gained the trust and confidence from the different US agencies such as the Department of Energy (DOE) and the Department of Commerce (DOC).

- Nedal is currently involved in exploring potentials with a Middle Eastern refinery on evaluating potentials for heavy oil gasification technology application to support the refinery's economic and business survival in an open and competitive energy sector in the country. Nedal is leading the discussions and the potential opportunity to utilize the proven gasification technology for electricity generation and for other bi-products.

- Nedal has also recently completed a successful workshop for the World Bank on the Iraqi energy sector. This included conducting presentations and performing discussions with more than 45 Iraqi delegates from different ministries. The workshop was conducted in Granada, Spain.

- Nedal is also involved in other US project related to attractive energy markets for project identification and support. This includes project related to natural gas under load peak conditions, and HFO gasification technology utilization for strategically positioned sites within natural gas volatile centers (mostly metropolitan city centers with river access).

CME North American Merchant Energy

- Initiated and managed the development of more than 4,000 MW of natural gas combined cycle power plant projects in the US energy markets (more than US$2billion of potential investment). The project development involved:

  - Site identification
  - Working with state economic developers
  - Managing natural gas access studies and evaluations
  - Managing electrical interconnection and market access evaluations
  - Negotiating tax and investment deals and incentives with state and county offices
  - Perform public hearings for local communities
  - Issue news wires for local project development updates
  - Conduct media interviews
  - Negotiate agreements
  - Manage dealings with banks and potential investors

  Above efforts on five large scale combined cycle projects successfully resulted in the following:

  - Negotiated and signed four Joint Development Agreements (JDA's) with large US development companies such as Calpine and Dominion Energy
  - Successfully lobbied local communities and project neighbors in support of the projects. For example, on a Michigan project, Nedal conducted a three-hour public hearing in front of 350 local residents and groups against the project.

- Nedal conducted subsequent educational sessions for few months and obtained the full support needed for the project.
- Negotiated and signed a development funding agreement with GE on a North Carolina power plant project.
- Managed a complete permitting of the North Carolina project that was concluded within schedule and budget.
- Attracted US investors toward several opportunities.

- Supported CME team on negotiating deals with the Tunisian Government on developing a flared gas power plant project as the first Independent Power Producer (IPP) project in the country. Nedal supported the team to develop a plan for accessing the electrical network and discussed potential project utilization for higher capacities. The project was successfully developed.

Cornerstone Energy Advisors

Nedal was attracted to Cornerstone, as a startup company, to offer an energy system advising role as part of the advisory team within the company. Within one year of engagement, Nedal developed a new business trend that resulted in more than US$1.25million of advising and consulting that supported three full time employees. Clients included, but not limited to:

- Calpine
- Duke Energy North America
- Sempra
- Reliant
- Avista
- BP Amoco
- Sithe Energies
- ABN AMRO Bank
- Peoples Energy
- Southern Energy

Offered services included the following:

- Project identification including power plant and Cogeneration facilities within refineries
- Project evaluation
- Project management support
- Project financing support
- Market analysis
- Economic and project pro-forma support
- Market access evaluation
- Fuel access (mainly natural gas)
- Public hearing support

Sargent & Lundy (S&L)

Nedal spent the first six years with S&L as a senior electrical analyst in the Electrical Analytical Division of the company. In 1996, S&L's partners and owners decided to form a Management Consulting Group that consisted of eight individuals selected from about 3,000 employees in the company. Nedal was selected as one of the first core group to start the new division.

As a senior electrical analyst, Nedal performed the following duties and responsibilities:

- Nuclear plant design, engineering and evaluation. This included major work on US and South Korean nuclear plants projects.
- US and international fossil plant design, engineering and evaluation.
- Support asset acquisition for US utilities and investors interested in international energy markets. This included assets in China, India, and Latin America. Nedal made trips to countries, met with officials, supported evaluation teams, conducted client presentations, and made recommendations for potential investments.
- Led teams of engineers to design electrical transmission and distribution networks
- Conducted numerous refinery studies on potential cogeneration and fuel options
- Performed numerous engineering studies for complicated energy-related problems using computer programs and simulations
- Successfully conducted training sessions to US and international clients
- Actively reported to his peers and recognized with self-motivation. Nedal was promoted on a very fast track for his commitment and abilities to deliver and exceed expectations (as was always noted in his annual evaluations)

As a business developer and analyst in the energy management group, Nedal performed the following duties and responsibilities:

- Developed new business by reaching to new clients, conducting marketing efforts and business campaigns, meeting with clients at their offices, and making presentations.
- Supported the US reliability counsels in defining new energy market trends, pricing, access rules, security and reliability indices, and fuel options.
- Performed a comprehensive market analysis covering the entire US energy markets using different fuel types (natural gas, coal, nuclear, hydro, etc.)
- Supported large number of US energy developers and investors on vast number of opportunities
- Extensively supported Sithe Energies in their acquisition of Boston Edison assets
- Supported the evaluation of several privatization options for generation and distribution companies in the US and overseas including Egypt and Argentina
- Supported financial banks on their review of projects' financing potentials
- Built a new business in the division and expanded its employment to triple the number of the core team within the first two years.

Empros Systems International

Nedal was responsible for designing and modeling the electrical DC link between Britain and France as part of the overall Energy Management System (EMS) for the National Grid Company's five control centers in Britain. Nedal has successfully modeled and tested the functionality of the developed model and simulation for the energy control operators.

Under this assignment, Nedal worked as part of a large team involved in developing all functions of the EMS and was recognized, by his peers, for his delivery on schedule.

AREAS OF EXPERTISE

- Air Quality Environmental Permitting
- Air Quality Dispersion Modeling and Health Risk Assessments
- Air Quality Regulatory Compliance Audits and Assessments
- Air Quality and Meteorological Data Analysis
- Emission Inventory Development

EDUCATION

MS, Meteorology, City University of New York

BS, Meteorology, City University of New York

PROFESSIONAL HISTORY

URS, Senior Project Manager, 2003 – Present

ENSR Consulting and Engineering,

Chas. T. Main, Inc.,

City University of New York,

REPRESENTATIVE EXPERIENCE

Mr. Dennis is a Senior Air Quality Scientist providing clients with a broad range of services in air permitting and environmental compliance. With over 25 years experience, he manages all phases of air quality permitting, including PSD, NNSR, Title V, and complete preparation of application packages, emission inventories, defining offset needs, dispersion modeling assessments, defending permit applications and expediting permit approval, negotiating conditions, and providing appeal support.

AIR PERMITTING - POWER GENERATION PROJECTS

City of Vineland – Environmental Permitting. Project Manager for the site selection, preliminary engineering, and environmental permitting of a 100 MW combined-cycle combustion turbine project in Vineland, NJ. The project involved selection of both a primary and secondary site, equipment identification and selection assistance, and conceptual/preliminary engineering, construction cost estimation, complete development of air, land use, and water permits, and local permitting assistance with local planning board and zoning commission. Air permitting tasks included: regulatory review, agency interaction, dispersion modeling, control technology review and development of the air permit application and all supporting information. Land use tasks and permits included wetlands delineation and necessary permits, threatened and endangered species, and cultural resources environmental assessment. Water permitting included: NJPDES, Soil Erosion and Sediment Control Plan, Storm water, SPCC, and DPCC.

Conectiv – Air Permitting. Task Manager for the air permitting of a 550 MW mid-merit combined-cycle combustion turbine project in Bordentown, NJ. The project involved complete development of air permit and supporting information, including: control technology reviews (LAER, BACT, SOTA), dispersion modeling protocol, NAAQS and PSD increment modeling, a Class I area analysis with the CALPUFF modeling system, and development of the NJ-RADIUS air permit.

Reliant Energy – Environmental Permitting. Project Manager for the environmental permitting of a 510 MW simple-cycle combustion turbine project in Colts Neck, NJ. The project involved complete development of 1) air permit application (including regulatory review, agency interaction, dispersion modeling, control technology review and development of the air permit application and all supporting information), 2) land use permits (including wetlands delineation and necessary permits, threatened and endangered species, and environmental assessment), and 3) water permitting (including NJPDES, Soil Erosion and Sediment Control Plan, Stormwater, SPCC, and DPCC), and local permitting (including noise and site plan approvals). A key to the air permitting process was the development of federally enforceable emission limits to allow the facility to avoid PSD review.

PG&E National Energy Group – Air Permitting. Deputy Project Manager and Air Permitting Task Manager for a 1,100 MW combined cycle facility in Linden, NJ. The project involved agency interaction, complete development of air permits and supporting information, including: control technology reviews (LAER, BACT, SOTA), dispersion modeling protocol, NAAQS and PSD increment and multi-source dispersion modeling, a net air quality benefit analysis for the use of CO emission offsets developed from the electrification of ground support equipment at Newark International Airport, and an

assessment of cooling tower fogging and icing impacts.

Empire State Newsprint/Besicorp. Task manager responsible for the PSD Class I area analysis and Senior Reviewer of PSD air permit application. The project, a 500 MW combined cycle natural gas/distillate oil fired facility located south of Albany, NY, was required to follow the IWAQM and FLAG Class I area guidance to estimate PSD increment consumption, visibility and acidic deposition. The analysis include the development of a multi-station meteorological data base for input to the CALMET model and refined multi-source modeling with CALPUFF.

Sithe Energies – Air Permitting. Air Permitting Coordinator for the air permitting of a combined-cycle and simple-cycle facility in NJ and a combined-cycle facility in PA. The project involved PSD and NSR applicability determinations, agency interaction, development of dispersion modeling protocols, air permit applications and all supporting information, including control technology reviews (LAER, BACT, SOTA), dispersion modeling, justification of meteorological data bases and ambient background data, and PSD other impacts assessment.

Coastal Power – NSR Permitting/Consulting. Project Manager. Coastal was interested in upgrading their existing Eagle Point Cogeneration facility in West Deptford, NJ. The project objectives included a review of the various upgrade options and an analysis of the NSR/PSD and state air permitting implications for each option.

Hoechst Celanese Corp. - Air Permitting. Project Manager for the air permitting of a natural gas-fired cogeneration turbine in Bridgewater, New Jersey. The project involved agency negotiations, wind direction dependent building downwash, source interaction modeling, state-of-the-art control technology review, and preparation of technical support documents for the air permit application.

RTC Properties - Air Quality Consulting and Permitting. Project Manger on air quality studies in support of the New Jersey air permit application for a cogeneration facility burning scrap wood and tire chips in Kearny, New Jersey. The project included agency interactions, dispersion modeling of criteria and non-criteria pollutant emissions, a screening health risk assessment based on the inhalation pathway, and a review of the proposed emission controls.

Solar International Trading Corp. - Cogeneration Permitting. Project Manager on air quality studies in support of the air permit for the Morrisville (PA) Electric Company cogeneration facility. This 10 MW facility will fire waste paper not suitable as pulp mill feedstock and will utilize process sludge from de-inking operations at the adjacent pulp mill as a fluidized bed additive in the boiler. Study efforts included development of facility emission rates, dispersion modeling, and a screening level health risk assessment.

AIR PERMITTING - GENERAL

Church & Dwight Co., Inc. Project Manager on air quality studies in support of various preconstruction air permits applications to the facility operating permit. Projects entailed estimation of emissions, development of the RADIUS application and technical support document for submittal to the NJDEP.

Coastal Eagle Point Oil Company. Project Manager on air quality studies in support of two PSD permit modifications at the CEPOC facility in West Deptford, NJ. The focuses of the projects were: (1) to increase the capacity of the FCCU unit and (2) facility modifications related to the Tier 2 sulfur-in-

fuels program. Each of these projects included a review of related upstream and downstream production increases. The project tasks include: agency interaction, PSD and nonattainment New Source Review netting analyses, development of a dispersion modeling protocol, PSD and NAAQS compliance analyses, and Class I area impact analysis using the CALPUFF modeling system.

AK Steel - PSD Permitting. Air Quality Task Manager. Responsible for all air quality tasks supporting the PSD permit application for the construction of a steel rolling and finishing mill in southern Indiana. Initially, the project involved the investigation of sites in both Indiana and Ohio. Technical and management responsibilities included directing the air quality modeling analyses, identifying strategies for assessing and demonstrating compliance with ambient standards and PSD increments, regional ozone modeling using the RPM model, and preparation of technical support documentation for the PSD permit application.

Air Products - Air Permitting. Project Manager for the air permitting of two landfill gas-fired turbines in Monmouth County New Jersey. The project involved complete development of the air quality permits and supporting information including LAER and SOTA requirements, NAAQS dispersion modeling assessment, development of non-criteria pollutant emissions and an inhalation based risk assessment, and review of available emissions offsets.

Cogeneration Partners of America - Medical Waste Incinerator Permitting. Project Manager on air quality studies in support of the operating permit for the Crozier Chester (PA) Medical Center medical waste incinerator. Project objectives included: review of compliance stack test results for acid gases, trace metals, and dioxins, air engineering consulting concerning deficiencies in operating practices, stack height sensitivity analysis, and compliance modeling for air toxics.

Air Products and Chemicals, Inc. - Air Permitting. Task Manager and Principal Investigator on air quality studies in support of the PSD permit application for the Cambria cogeneration facility in Ebensburg, Pennsylvania. The air quality model analysis included stack height optimization study, SO2 and NO2 PSD increment consumption analysis, and NAAQS compliance analysis.

American Ventures - Air Quality Studies. Task Manager and Principal Investigator on air quality studies and documentation at a Monongahela, Pennsylvania site, in support of a request for a waiver of preconstruction monitoring as required by the PSD regulations. The project involved the analysis of five existing industry-operated SO2 monitors and the adequacy of these monitors with respect to areas of maximum SO2 impacts, both current and future.

Merck & Co., Inc. - Medical Waste Incinerator Permitting. Air quality technical manager for air permitting of a new medical waste incinerator at their Rahway, NJ site. Responsible for the coordination of air permitting efforts. Project tasks included engineering review of proposed incinerator design, air pollution control technology analysis, development and review of non-criteria pollutant emission factors, air quality dispersion modeling, health risk assessment, and preparation of the air permit technical support document and air quality portion of the Environmental and Health Impact Statement.

Hoffmann-La Roche Inc. - Medical Waste Incinerator Permitting. Air quality technical manager for air permitting of a new medical waste incinerator at the Nutley, NJ site. Responsible for the coordination of air permitting efforts. Project tasks included engineering review of proposed incinerator design, air

pollution control technology analysis, review of noncriteria pollutant emission factors, air quality dispersion modeling, health risk assessment, and preparation of the air permit technical support document and air quality portion of the Environmental and Health Impact Statement.

Fisher Scientific - Air Quality Permitting/Consulting. Project Manager on air quality consulting/permitting projects. The individual project objectives included: permitting of a chemical packaging facility, completion of state air emission inventory forms at two facilities in New Jersey, VOC control technology reviews, and review of the potential for participation in the early reductions program under Title III of the CAAA.

SCM Chemicals - Air Quality Study. Project Manager. The project objectives included assessing facility compliance with ambient air quality standards for SO2 and Maryland Toxic Air Pollutant regulations for H2S and H2SO4. Key negotiations with the Maryland agency included the use of hourly air quality monitoring data, and a reduced scope in the modeling analysis.

Millenium Inorganic Chemicals – Dispersion Modeling. Project Manager for a number of dispersion modeling efforts for the MIC facility in Ashtabula, OH. Pollutants of interest included both criteria and non-criteria pollutants.

Pharmaceutical Manufacturer - Feasibility Study. Project Manager of a feasibility study that investigated the potential air permitting requirements and constraints for installation of cogeneration and/or additional boiler capacity at an industrial facility in New Jersey. The study included a regulatory review, PSD applicability analysis, review of potential control technology requirements and emission limitations and a screening level dispersion model analysis of various source configurations and stack heights.

E.I. du Pont de Nemours and Co. - Air Quality Study. Project Manager on air quality studies in support of a modification to the New Jersey air permits for two 131 MMBtu/hr residual oil-fired boilers in Gibbstown, New Jersey. The study included a dispersion model analysis of the proposed modification and a SOTA control technology review that focused on nitrogen oxide emissions.

Potlatch Corp. - Air Quality/Permitting Application. Task Manager for air quality studies in support of a PSD permit application for the Cloquet, Minnesota pulp mill expansion and modernization project. Technical and management responsibilities included directing the air quality modeling analyses, identifying strategies for assessing and demonstrating compliance with ambient standards, health risk assessment, and preparation of technical support documentation for the PSD permit application.

New York City Department of Sanitation - Air Quality/Resource Recovery Study. Deputy Project Manager on air quality studies in support of PDEISs for four resource recovery facilities in New York City. The project involved development of detailed air quality impact assessment protocols, interaction with the New York City and New York State environmental agencies, development of source inventories, air quality dispersion modeling analyses, preparation of air quality baseline and impacts sections for the PDEIS and software development to estimate deposition of fine particles.

COMPLIANCE AUDITING AND DUE DUILIGENCE PROJECTS

Confidential Client – Multi-media Compliance Audit. Air Quality Auditor. The project objective was complete a health, safety and environmental (HSE) audit for a specialty aluminum manufacturing facility in

Michigan. As the air quality auditor, the focus was compliance with federal and state Clean Air Act regulations and requirements, review of state air quality permits and requirements, ODS compliance, and SARA 312/313 requirements.

Confidential Client – Multi-media Compliance Audit. Air Quality Auditor. The project objective was to complete a health, safety and environmental (HSE) audit for a pharmaceutical research facility in the eastern US. As the air quality auditor, the audit focus was compliance with federal and state Clean Air Act regulations and requirements, Risk Management Plan requirements, ODS compliance, and SARA-312/313 requirements.

Confidential Client – Multi-media Due Diligence Audit. Air Quality Auditor. The project objective was complete a health, safety and environmental (HSE) assessment for a natural gas plant in the western US in preparation for potential divestiture. As the air quality auditor, the focus was compliance with federal and state Clean Air Act regulations and requirements, Risk Management Plan requirements, and SARA 312/313 requirements.

Confidential Client – Air Quality Due Diligence Audit. The project objective was to complete an air quality audit of a coal-fired power plant in PA as part of a due diligence assessment for a prospective buyer. The audit included both a review of historical compliance and an investigation of potential future environmental liabilities.

Confidential Client – Environmental Permitting and HSSE Fatal Flaw Assessment. The project objectives were to assess the environmental permitting and HSSE issues associated with a major refinery expansion at four refineries. The intent of the environmental assessment was to identify the major regulatory permitting programs that would impact the project, assess the requirements and level of burden that each of the programs place on the project, customize the review based on site specific factors, and, where possible, identify means of reducing the regulatory burden. The HSSE assessment reviewed current and historical practices, as they would relate to the proposed expansion projects.

Confidential Client – Multi-media Audit. Air Quality Auditor. The project objective was a multi-media facility audit at a coal-fired cogeneration facility in PA. The air quality task included an audit of the facility's compliance with all Title V requirements, and other state and federal monitoring, record keeping and reporting requirements.

Sithe Energy – Multi-media Audit. Air Quality Auditor. The project objective was a multi-media facility audit of Sithe's Kennelworth, NJ cogeneration facility. The air quality task included an audit of the facility's compliance with all Title V requirements, and other state and federal monitoring, record keeping and reporting requirements.

GENERAL AIR QUALITY CONSULTING PROJECTS

USS Gary Works - PM10 SIP. Project Manager. Study objective was to provide USS with air quality consulting services regarding the development of information and recommendations to be provided to IDEM in support of the agency's efforts to develop the Lake County PM10 SIP. Study efforts included the development of a complete facility-wide PM10 emission inventory, identification and development of alternative data bases for use in the characterization of ambient background, development of dispersion modeling techniques and inputs, performance of air quality dispersion modeling, and identification of alternative operating scenarios, controls, and

fuel use options, for demonstrating compliance with ambient standards.

USS Gary Works – SO2 SIP. Project Manager. Study objective was to provide USS with air quality consulting services regarding the development of information and recommendations to be provided to IDEM in support of a modification to the Lake County SO2 SIP. Study efforts included the development of a complete facility-wide SO2 emission inventory, development of dispersion modeling techniques and inputs, performance of air quality dispersion modeling, and identification of alternative operating scenarios, controls, and fuel use options, for demonstrating compliance with ambient standards.

USS Gary Works - Clean Air Act Consulting. Project Manager on a CAAA general consulting project. Project objectives are to assist the facility in compliance with Titles I (Nonattainment), III (Air Toxics), and V (Operating Permits) of the CAAA. Project tasks include: review of state regulations implementing CAAA requirements, development of compliance strategies, development of a facility-wide criteria pollutant/HAP emissions inventory, regulatory applicability analysis, facility compliance assessment, development of periodic/enhanced monitoring procedures, and completion of operating permit program application.

USS Fairless Works. Project Manager. This project involved the development of facility-wide annual emission estimates for both criteria pollutants and hazardous air pollutants and the completion of annual emissions inventory forms for submittal to the Pennsylvania Agency.

Sun Company, Inc. - Clean Air Act Consulting. Project Manager on a Clean Air Act Amendment general consulting project. The project included the development of a Clean Air Act Amendment Corporate Strategy document and development of facility-wide criteria pollutant and HAP emissions inventories at two of Sun's refineries, a marketing and distribution facility, and a pipeline terminal.

Nebraska Public Power District - Climatological Studies. Task Manager, responsible for a climatological study to provide estimates of weather related factors that were considered in the design of the MANDAN 500 kV transmission line. This study involved the development of statistical, meteorological and data base software and the assembly and analysis of suitable data bases to determine the effects of extreme values of wind, ice, snow, temperature, and humidity for the design of the transmission line.

AIR TOXICS PROJECTS

Merck & Co. Inc. – Health Risk Assessment. Project Manager. The project objective was to identify potential offset impacts from soil remediation activities on a contaminated site in Hawthorne, NJ. The main site contaminant was mercury. The project involved the development of an emissions inventory attributable to the proposed remediation activities, an air quality dispersion modeling analysis using the Industrial Source Complex dispersion model, and an inhalation-based risk assessment.

U.S. Steel – Risk Management Program. Project Manager. The overall objective of this program was to develop a consistent approach to determining the applicability of the EPA Risk Management Program to each of U.S. Steel's facilities. Recommendations were developed concerning applicability and methods for implementing a cost-effective program at each facility. Following the applicability phase, Risk Management Plans (RMP) were developed for 2 facilities, the Gary Works (Indiana) and Fairless Works (Pennsylvania). The RMP development included, a process hazards analysis,

development and review of operating and maintenance procedures, and offsite consequence analysis of potential accidental releases.

GPU International – Risk Management Program. Project Manager. The overall objective of this program was to develop the Risk Management Plan for two cogeneration facilities that utilized aqueous ammonia to control NOx emissions. The project involved performance of a process hazards analysis, review of safety information and procedures, and offsite consequence analysis of potential accidental releases

Firestone - Air Toxics Compliance Plan. Project Manager for a project to develop Air Toxics Compliance Plan required under Louisiana's state air toxics program for the Firestone facility in Lake Charles. The program included a review of air toxics emissions, a MACT review, agency interaction, and a dispersion modeling/health risk assessment.

PPG Industries - Air Quality/Clean Air Act Consulting. Project Manager on air quality studies related to completion of PPG's specialty operating permit and Louisiana's air toxics compliance plan. PPG (Lake Charles, LA) is participating in the early reductions program under Title III of the CAAA that will provide PPG with a six-year extension to meet the HON. Acceptance into this program requires PPG to file a specialty-operating permit. This permit is a bridge between the current permitting system and the operating permits program. In addition, under Louisiana's state air toxics program PPG was required to complete an air toxics compliance plan that included a review of air toxics emissions, a MACT review, and a dispersion modeling/health risk assessment.

SARA TITLE III PROJECTS

Exelon - SARA Title III Section 313. Project Manager. The project objectives were to review historical reports, spreadsheets, and procedures and recommend upgrades and changes to improve the accuracy and usability of the existing system.

Public Service Electric and Gas - SARA Title III Section 313. Project Manager. The project objectives were the development of the Section 313 TRI report packages for eight generating stations. Threshold determination templates and release calculation spreadsheets were developed at a pilot facility prior to implementing the full program at the other stations. As part of the threshold determinations, existing data was reviewed and recommendations developed concerning methods to improve data quality.

USS Gary Works - SARA Title III Section 312 and 313. Project Manager. The project objectives were the development of the facility's Section 312 and Section 313 report packages. For Section 312 an Excel based spreadsheet that can be updated by the facility was used to develop the Tier II forms for the annual submittals.

GPU Generating Company – SARA Title III Section 313. Project Manager. The project objective was the development of threshold and release templates at two model facilities, one coal-fired and one oil-fired. Once the templates were developed they would be used by the other facilities to implement a consistent corporate-wide program.

American Cyanamid - SARA Title III Studies. Developed a database of toxic chemical release data for Union County, New Jersey as reported under the SARA Title III Section 313 Regulations. The project involved data base development, data input from various sources, data manipulation, and documentation.

Hazardous Materials Consortium - Air Quality Investigation. Principal Investigator on air quality studies to assess consequences of hazardous chemical releases to the atmosphere, as reported under SARA Title III, from five major chemical companies in neighboring communities. The project involved the development of a source emissions inventory suitable for dispersion modeling and comparison of off-site impacts to appropriate reference ambient levels.

TITLE V PROJECTS

USS Gary Works - Title V. Project Manager. The project objective is the completion of the facility's Title V permit application. Project tasks include: development of facility emissions unit and emissions rate inventory, delineation of significant/insignificant activities, identification of applicable requirements, development of monitoring, recordkeeping and reporting requirements, compliance review, and development of permit application package.

USS Fairless Works - Title V. Project Manager. The project objective is the completion of the facility's Title V permit application. Project tasks include: development of facility emissions inventory, development of process flow diagrams, delineation of significant/insignificant activities, identification of applicable requirements, development of monitoring, recordkeeping and reporting requirements, compliance review, and development of permit application package.

USS Irvin Works - Title V. Project Manager. The project objective is the completion of the facility's Title V permit application. Project tasks include: development of facility emissions inventory, development of process flow diagrams, delineation of significant/insignificant activities, identification of applicable requirements, development of monitoring, recordkeeping and reporting requirements, compliance review, and development of permit application package. The application was submitted on time and was deemed administratively complete.

Lehigh Portland Cement - Title V. Project Manager for two facilities in Indiana and Senior Reviewer for facilities in New York State, Pennsylvania, and Maryland. The project objective is the completion of the facility's Title V permit application. Project tasks include: development of facility emissions inventory, development of process flow diagrams, delineation of significant/insignificant activities, identification of applicable requirements, development of monitoring, recordkeeping and reporting requirements, compliance review, and development of permit application package.

Nanticoke Homes - Title V. Project Manager. The project objective was the completions of the facility's Title V permit application. Project tasks include: development of facility inventories, delineation of significant/insignificant activities, identification of applicable requirements, development of monitoring, recordkeeping and reporting requirements, compliance review, and development of permit application package. This project was initiated 3 weeks prior to the filing deadline in Delaware, completed and submitted to DNREC prior to the deadline, and deemed administratively complete.

CitiSteel - Title V. Project Manager. Project tasks include: development of facility emissions unit and emissions rate inventory, delineation of significant/insignificant activities, identification of applicable requirements, development of monitoring, recordkeeping and reporting requirements, compliance review, and development of permit application package.

DISPERSION MODEL DEVELOPMENT PROJECTS

EPA Complex Terrain Dispersion Model - Dispersion Model Development. Lead programmer for the development, coding, optimization, testing, and documentation of the Complex Terrain Dispersion Model. The CTDM software package was developed for the personal/micro computer environment and consisted of meteorological and terrain preprocessing software, the complex terrain dispersion model, postprocessors to graphically display results and interactive software to aid the user in the setup and execution of each program.

ISC Model Enhancements - Dispersion Model Development. Lead programmer for the development, coding, optimization, testing, and documentation of modifications to the Industrial Source Complex short-term model. The modifications included the incorporation of the Scire-Shulman downwash algorithm that has become the standard refined model downwash algorithm and has been incorporated in all revised versions of the ISC model.

Joella L. Posey, P.E.

Project Engineer

Overview

Ms. Posey has over twelve years of experience in conceptual design and detailed design of water and wastewater treatment facilities and equipment. Her experience includes the detailed civil design of water distribution systems. process waste collection systems, concrete storage structures, disinfection equipment and pumping, piping, and sampling systems.

Areas of Expertise

Civil Engineering
Wastewater
Water

Years of Experience

With URS: 6 Years
With Other Firms: 11 Years

Education

Arizona State University, B.S., Civil Engineering, 1992

Project Specific Experience

Civil Design

- Project Engineer for the design of a $2.2 million potable and firewater recovery, treatment, and distribution system for a pharmaceutical facility in Pennsylvania. Design elements included preparing detailed plans and specifications for site layout, system piping and pumping systems, air stripping and disinfect ion treatment facilities, potable water and firewater storage tanks, and instrumentation systems.
- Project Engineer for the design of a $5 million industrial wastewater treatment plant upgrade for a pharmaceutical facility in Pennsylvania. Design elements included preparing detailed plans and specifications for the upgrade of the treatment plant including biological treatment, sludge dewatering, filtration (including reverse osmosis), and disinfection (UV and ozone).
- Project Engineer for Conoco LOHC Project Revamp, including design of prepackaged chemical feed system with chlorine and sulfur dioxide feed equipment, gas vacuum piping, ejector water supply piping, ejector booster pump, solution piping, and internal wiring.
- Project Engineer for Riverview Crossing Wastewater Treatment Plant project, including design of packaged open channel Ultraviolet Disinfection System to treat a peak wastewater flow of 0.4 MGD with 12 mg/l total suspended solids to an effluent standard of 200 mpn/100 ml E. Coli 30-Day geometric mean.
- Project Engineer for Roosevelt Island Water Treatment Project, including design of dechlorination analyzer system for a temporary chlorination and dechlorination facility for the Roosevelt Island Pump station.
- Processed, designed, and documented complex projects to meet customer and company requirements.
- Established chemical dosage requirements, determined system arrangement and equipment sizing, performed hydraulic calculations on water supply and solution piping, determined diffuser hole sizing and spacing, sized and selected mechanical and/or electrical accessories such as pumps, pressure gauges and switches, identified and eliminated system safety hazards.
- Designed and coordinated fabrication of specific disinfection equipment including material selection, evaluation of chemical compatibility of materials of construction, design of interconnecting

piping sizing and layout, and selection and sizing of valves and other mechanical and/or electrical devices.

- Scheduled project milestone dates to meet customer requirements and minimize conflicts with other projects.
- Provided equipment specifications, testing procedures, installation instructions, and operation and maintenance instructions for individual components and complex systems.
- Project Engineer for the plans and specifications for renovations of the sampling system, chlorine facilities, and plant water system of the 150 MGD Deer Valley Water Treatment Plant, including design of sample pumps, sample system piping, chlorine distribution piping, booster pump, and equipment, plant water booster pump station, and 25,000 gallon hydropneumatic tank.
- Project Engineer for plans and specifications for the Bubbling Ponds Fish Hatchery, including design of rearing pond fill and drain piping, hydraulic control structures, concrete settling basin, slow sand filter, parshall flume, concrete raceways, potable water supply to hatchery building, evapotranspiration system for wastewater disposal, approximately 14 acres of Hypalon lined earthern rearing ponds, and conveyance system renovations.
- Project Engineer for the plans and specifications for the City of Mesa Generic Chlorination Facilities Design, including chlorination equipment storage shed, chlorination equipment, and ejector water booster pump and piping.
- Project Engineer for the evaluation of State and Local regulations in relation to the operation of the Sunrise RV Resort Wastewater Treatment Plant.
- Assisted in preparation of plans and specifications of 2,900 feet of water distribution pipeline to improve fire protection for the Town of Hayden, AZ.
- Obtained hydrogeologic, soil and well information for effluent reuse application and Aquifer Protection Permit application for the Safford Prison Wastewater Treatment Facility.
- Prepared presentation boards and performed mechanical drafting tasks for various projects.
- Analyzed stormwater runoff using Rational Method to determine detention basin sizing and layout.
- Performed earthwork calculations, preliminary cost estimates, quantity calculations, and volume calculations for storm drain systems.

Management

- Plan, direct, and coordinate the marketing of Water Quality Monitor products and services accounting for $2.1 million annual sales.
- Launch new series of platform instrumentation products, including management and coordination of new product design, production, and introduction; made product development decisions concerning form, fit, and function; supervised the development schedule;

coordinated Beta Tests; developed new product documentation; and implemented an introduction program.

- Establish pricing for Water Quality Monitor products, parts, and accessories to achieve satisfactory gross margin and share of market performance in relation to pre-set standards and to general and specific trends within the industry and the economy.
- Train internal and external personnel on features and benefits of products.

Pennsylvania

- Project Engineer for the design of a $2.2 million potable and firewater recovery, treatment, and distribution system for a pharmaceutical facility in Pennsylvania. Design elements included preparing detailed plans and specifications for site layout, system piping and pumping systems, air stripping and disinfection treatment facilities, potable water and firewater storage tanks, and instrumentation systems.
- Project Engineer for the design of a $5 million industrial wastewater treatment plant upgrade for a pharmaceutical facility in Pennsylvania. Design elements included preparing detailed plans and specifications for the upgrade of the treatment plant including biological treatment, sludge dewatering, filtration (including reverse osmosis), and disinfection (UV and ozone).

Wastewater

- Project Engineer for Conoco LOHC Project Revamp, including design of prepackaged chemical feed system with chlorine and sulfur dioxide feed equipment, gas vacuum piping, ejector water supply piping, ejector booster pump, solution piping, and internal wiring.
- Project Engineer for Riverview Crossing Wastewater Treatment Plant project, including design of packaged open channel Ultraviolet Disinfection System to treat a peak wastewater flow of 0.4 MGD with 12 mg/l total suspended solids to an effluent standard of 200 mpn/100 ml E. Coli 30-Day geometric mean.
- Project Engineer for Roosevelt Island Water Treatment Project, including design of dechlorination analyzer system for a temporary chlorination and dechlorination facility for the Roosevelt Island Pump station.
- Processed, designed, and documented complex projects to meet customer and company requirements.
- Established chemical dosage requirements, determined system arrangement and equipment sizing, performed hydraulic calculations on water supply and solution piping, determined diffuser hole sizing and spacing, sized and selected mechanical and/or electrical accessories such as pumps, pressure gauges and switches, identified and eliminated system safety hazards.
- Designed and coordinated fabrication of specific disinfection equipment including material selection, evaluation of chemical compatibility of materials of construction, design of interconnecting

piping sizing and layout, and selection and sizing of valves and other mechanical and/or electrical devices.

- Scheduled project milestone dates to meet customer requirements and minimize conflicts with other projects.
- Provided equipment specifications, testing procedures, installation instructions, and operation and maintenance instructions for individual components and complex systems.
- Project Engineer for the plans and specifications for renovations of the sampling system, chlorine facilities, and plant water system of the 150 MGD Deer Valley Water Treatment Plant, including design of sample pumps, sample system piping, chlorine distribution piping, booster pump, and equipment, plant water booster pump station, and 25,000 gallon hydropneumatic tank.
- Project Engineer for plans and specifications for the Bubbling Ponds Fish Hatchery, including design of rearing pond fill and drain piping, hydraulic control structures, concrete settling basin, slow sand filter, parshall flume, concrete raceways, potable water supply to hatchery building, evapotranspiration system for wastewater disposal, approximately 14 acres of Hypalon lined earthern rearing ponds, and conveyance system renovations.
- Project Engineer for the plans and specifications for the City of Mesa Generic Chlorination Facilities Design, including chlorination equipment storage shed, chlorination equipment, and ejector water booster pump and piping.
- Project Engineer for the evaluation of State and Local regulations in relation to the operation of the Sunrise RV Resort Wastewater Treatment Plant.
- Assisted in preparation of plans and specifications of 2,900 feet of water distribution pipeline to improve fire protection for the Town of Hayden, AZ.
- Obtained hydrogeologic, soil and well information for effluent reuse application and Aquifer Protection Permit application for the Safford Prison Wastewater Treatment Facility.
- Prepared presentation boards and performed mechanical drafting tasks for various projects.
- Analyzed stormwater runoff using Rational Method to determine detention basin sizing and layout.
- Performed earthwork calculations, preliminary cost estimates, quantity calculations, and volume calculations for storm drain systems.
- Plan, direct, and coordinate the marketing of Water Quality Monitor products and services accounting for $2.1 million annual sales.
- Launch new series of platform instrumentation products, including management and coordination of new product design, production, and introduction; made product development decisions concerning form, fit, and function; supervised the development schedule; coordinated Beta Tests; developed new product documentation; and implemented an introduction program.

- Establish pricing for Water Quality Monitor products, parts, and accessories to achieve satisfactory gross margin and share of market performance in relation to pre-set standards and to general and specific trends within the industry and the economy.
- Train internal and external personnel on features and benefits of products.

Registrations

Professional Engineer, State of Pennsylvania, August 1997
Tau Beta Pi – National Engineering Honor Society

Chronology

2000 – Present/URS, Project Engineer
1993 – 2000/Capital Controls Company, Colmar, PA
1997 – 2000/Capital Controls Company, Product Manager, Water Quality Monitors
1993 – 1997/Capital Controls Company, Project Engineer
1990 – 1993/Wilson and Company Engineers, Phoenix, AZ
1992 – 1993/Wilson and Company Engineers, Design Engineer
1990 – 1992/Wilson and Company Engineers, Engineering Technician
1989 – 1990/Howard, Needles, Tammen, and Bergendoff, Phoenix, AZ, Engineering Technician

Contact Information

335 Commerce Drive, Suite 300
Fort Washington, PA 19034-2623
Tel/215.367.2500
Direct/215.367.2577
Fax/215.367.1000
Joella_Posey@urscorp.com

William D. Scott, P.E.

Consulting Engineer

Areas of Expertise

Consulting Engineer
Power Generation Industry
Economic Analysis

Years of Experience

Total: 35 Years

Education

University of Maine, B.S., Mechanical Engineering
Widener University, Master of Education

Overview

Mr. Scott is a mechanical Engineer with 35 years experience in the power generation industry. He has expertise in conceptualizing and analyzing thermodynamic cycles and enhancing combustion and steam turbine performance. Mr. Scott is also knowledgeable in economic analysis, review of client operations for improved energy efficiencies and energy cost reduction, permitting requirements, and project engineering functions. He is proficient in technical presentations and translating customer needs into design and equipment requirements, while systematically working simultaneously on diverse projects. Mr. Scott is also familiar with power generation simulation software and acquainted with operation of combined cycle, fossil and nuclear power facilities and various process applications.

Project Specific Experience

Consulting Engineer

- Responsible to review and analyze client site energy requirements, providing conceptual designs for combined cycle, cogeneration, peaking, standby power, or small boiler facilities from 100 kW to 1000 MW, and over 1,000,000 pounds per hour of high pressure steam.
- Provided operating assumptions and calculated annual emissions for air permit application.
- Provided technical assistance during feasibility, design, permitting, construction, and startup phases of power facilities.
- Aided Major Environmental Co. and Municipal Utility: Provided alternate designs; vendor interaction; base bid capital cost, layout, and air permit effort of a combined cycle power plant.
- Provided due diligence support for operating cogeneration and wind farm facilities to independent and utility subsidiary clients.
- Review site energy usage to reduce steam and electric demand and energy costs in con-junction with energy audit programs.
- Conducted life-cycle comparison study between motor and steam turbine prime movers.
- Recommended operation and equipment upgrades for performance enhancements.
- Estimate capital, operation and maintenance costs, and prepared financial proformas.
- Calculated performance, estimated capital cost, and provided economic proforma for 400 MW combined cycle project located in Romania, and assisted the Developer with a meeting at International Finance Corporation of the World Bank.
- Provided support role interacting with equipment suppliers and clients' engineer.
- Acted as technical representative with clients' customer.

- Provided implementation oversight of all permit requirements for 750 MW cogen facility.
- Prepared feasibility study for electric generation from waste energy of Electric Arc Furnace
- Provided initial introduction of client to third party energy developers.
- Conducted feasibility study to determine viability of district heating system for isolated Arctic Alaska site.

Power Systems

- Responsible to review and analyze client site energy usage, providing conceptual combined cycle, cogeneration, peaking, or standby power plant designs.
- Analyzed various electric rate tariffs conjunction with reducing electric costs.
- Review site energy usage to assist to reduce steam and electric demand and energy costs.
- Estimate capital cost, operation and maintenance expenses for financial pro forma.
- Technical project manager for DOE Super Energy Savings Performance Contract (ESPC).
- Reviewed operating facilities for viability of potential purchase.

Gas Turbine Processes

- Performed initial cycle analysis and optimization studies, reviewed existing equipment and OEM's upgrade recommendations.
- Developed Process Flow Diagrams, design criteria, P&ID's, system descriptions, and startup procedures for 600 MW PSE&G Bergen 1 Repowering Project.
- Developed heat balance, equipment design criteria, process flow diagram, equipment data sheets, and system descriptions for combined cycle reference plant.
- Developed steam and electric profiles, performed cycle studies, recommended equipment, prepared scoping documents for 21 MW load following cogeneration facility at MIT.
- Reviewed and redesigned operating equipment for planned 13 percent facility expansion. Investigated and presented recommendations for co-incinerating municipal sludge for 408 TPD/ 10 MW Springfield (MA) Resource Recovery Municipal Solid Waste facility.
- Provided redesign to enhance performance of 27 MW combined cycle facility.
- Prepared specs for 5 MW black start Diesel generator at 1200 MW Saudi Arabian project.
- Wrote, conducted and analyzed functional, performance, and emission test procedure for replacement combustion turbine at 720 MW Doswell (VA) Combined Cycle facility.

Senior Applications Engineer

- Analyzed over 200 customer requests to determine economic and technical feasibility for potential Qualified Facility or IPP cogeneration power plants ranging in size from less than 1 MW to greater than 125 MW.
- Performed detailed cycle calculations for all types of combined, topping, and bottoming cycles with combustion, steam, and reciprocating prime movers.
- Made technical presentations to plant and executive personnel.
- Prepared design specifications, established cycle performance guarantees, negotiations, submitted petitions for Qualified Facility certification and Fuel Use Act exemptions.
- Provided technical support, analysis, and evaluation of potential operational deficiencies.
- Oversaw development of in-house simulation software, and created department record and filing systems.

Combustion Turbine Systems

- Analyzed, cycle and turbine performance for utility and cogeneration facilities.
- Provided technical marketing support, and assisted in presentations.
- Established procedures to determine performance and emission guarantee of Combustion Turbines using fuels other than natural gas and fuel oil.
- Developed procedure to reduce customer spare parts inventory.
- Provided technical support to rectify in-service non-conformities.
- Simplified standard performance curves to facilitate usage.
- Systematized and catalogued all section computer codes.

Steam Turbine Engineer

- Developed and implemented thermodynamic and mechanical upgrading programs for fossil and nuclear steam turbines ranging from 7 to 900 MW and age from 50 years to newly in-stalled.
- Interpreted customers needs to available and future upgrading programs.
- Provided technical marketing support; and assisted in corporate presentations.
- Performed project engineering functions, specifying, ordering major equipment, coordinating engineering, drafting and manufacturing within time and budget constraints.
- Proposed unique solution to meet customers' needs.
- Studied methods to increase power of PWR nuclear plant without increasing reactor output.
- Provided technical support to rectify manufacturing non-conformities.
- Provided detailed mechanical and thermodynamic calculations.

- Planned, conducted, evaluated, interpreted, and documented product design verification and ASME PTC-6 tests for large fossil and nuclear steam turbines.
- Analyzed, compared, and interpreted test results against design data.
- Selected data acquisition and instrumentation packages.
- Developed customer responsibility manual for ASME PTC-6 nuclear steam turbine tests.

Registrations

Registered Professional Engineer - Pennsylvania
American Society of Mechanical Engineers - ASME
Holder of US patent
Corporate cost improvement recognition

Chronology

1998 – Present/Consulting Engineer
1996 – 1998/Planergy, Ltd. (Chadds Ford, PA)
1991 – 1996/Fluor Daniel (Marlton, NJ)
1984 – 1991/O'Brien Environmental Energy Systems (Philadelphia, PA)
1980 – 1984/Westinghouse Electric Corporation (Concordville, PA)
1969 – 1980/Westinghouse Electric Corporation (Lester, PA)

Contact Information

908 Cherry Tree Rd.
Aston, PA 19014-1570
Business/610.485.6874
Fax:/610.485.6875
wdscottpe@aol.com