

NEW YORK STATE BOARD ON ELECTRIC
GENERATION SITING AND THE ENVIRONMENT

RECOMMENDED DECISION

PRESIDING EXAMINER WILLIAM BOUTEILLER
AND
ASSOCIATE EXAMINER P. NICHOLAS GARLICK

CASE 97-F-2162 - Application by PSEG Power New York, Inc. for a Certificate of Environmental Compatibility and Public Need to Construct and Operate a 750 Megawatt Natural Gas-Fired Combined Cycle, Combustion Turbine Generating Facility in the Town of Bethlehem, Albany County.

NOTICE FOR FILING EXCEPTIONS

(Issued February 1, 2002)

Attached is the Recommended Decision of Presiding Examiner William Bouteiller and Associate Examiner P. Nicholas Garlick in this proceeding. In light of the comprehensive Joint Stipulations filed on January 2, 2002 that are supported by numerous parties, briefs on exceptions will be due in hand to the undersigned and may be mailed to all active parties by February 8, 2002. Twenty-five copies of each brief shall be filed with the Secretary, and a copy shall be served on each party. Reply briefs on exceptions will not be entertained.

(SIGNED)

JANET HAND DEIXLER
Secretary

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APPEARANCES: See Appendix A

WILLIAM BOUTEILLER, Presiding Examiner
P. NICHOLAS GARLICK, Associate Examiner:

I. INTRODUCTION

On November 30, 1998, Niagara Mohawk Power Corporation submitted to the Siting Board a three-volume application for a Certificate of Environmental Compatibility and Public Need. In it, the company proposed to redevelop the 400 MW Albany Steam Station that is located on a 186-acre site in the Town of Bethlehem. It proposed to construct a more efficient and higher capacity facility to replace the existing units.

After this case began, Niagara Mohawk petitioned the Public Service Commission for authority to sell the Albany Steam Station to PSEG Power LLC. In April 2000, the Commission

approved the transfer and acknowledged that the new owner also planned to repower the Albany Steam Station.¹

On July 2, 2001, PSEG Power New York Inc. submitted a nine-volume supplement that updated the November 1998 application.² On August 31, 2001, the Chairman of the Siting Board determined that PSEG's application complied with the statutory requirements and public hearings could resume.

A. Project Description

The Albany Steam Station is on the western bank of the Hudson River in the Town of Bethlehem. The site is zoned for heavy industrial use. The existing facilities consist of four, 100 MW steam electric units that originally burned coal. Two units were installed in 1952; the others entered service in 1953 and 1954, respectively. Today, the units run on either natural gas or residual oil. Their maximum efficiency is 34 percent when using natural gas.

PSEG acquired from Niagara Mohawk the southern 84 acres of the Bethlehem site.³ On the PSEG parcel is the powerhouse and the boiler and turbine buildings. The boiler

¹ Cases 94-E-0098 and 0099, Niagara Mohawk Power Corporation, Order Approving Transfer of the Albany Generating Facility (issued April 26, 2000).

² PSEG Power New York Inc. is affiliated with PSEG Power LLC, which is a subsidiary of Public Service Enterprise Group. The Group owns Public Service Electric and Gas Company, the largest electric and gas utility company in New Jersey.

³ Niagara Mohawk retained the 102 acres of the site containing ash deposits from when the Albany Station used coal. PSEG acquired its parcel on May 12, 2000.

building has four boilers, ancillary equipment, and four tall stacks. The turbine building contains four generators, condensers, and support equipment. The powerhouse includes two control rooms that operate the generators. Outside the buildings are the electric transformers that connect to the switchyard and the Niagara Mohawk transmission system. Three small buildings are also located near the powerhouse--an administration building, a shops and stores building, and a sootblowing air compressor building.

PSEG proposes to construct a 750 MW combined cycle, natural gas-fired facility to replace the existing generation station. The Albany Steam Station will be retired when the new Bethlehem Energy Center (BEC) begins to operate.

The BEC will have three new combustion turbines equipped with electric generators, three heat-recovery steam generators, and a new steam turbine also with an electric generator. The combined-cycle units rival the high efficiency levels of any other commercial fossil-fueled unit currently available.

The BEC will primarily use natural gas but it will also burn low sulfur distillate oil as its secondary fuel. The BEC will be equipped with selective catalytic reduction facilities to minimize nitrous oxide (NOx) emissions. It will also have oxidation catalysts to minimize carbon monoxide (CO) and volatile organic compounds (VOCs).

The Albany Steam Station boilers, turbines and generators will be retired in place and its four 336-foot stacks

will be removed. Three new 248-foot stacks will be built. Coal conveyors that have not been used in recent times will also be removed.

B. Procedural History

Long before it filed the November 1998 application, Niagara Mohawk publicly announced its plans to redevelop the Albany Steam Station. In December 1997, the company initiated pre-application procedures and a public involvement program by filing and delivering to interested persons its pre-application report.⁴

Thereafter, company representatives began to meet with local officials and interest groups to discuss the BEC project. Niagara Mohawk also mailed letters to local residents containing a BEC fact sheet and inviting the public to attend information meetings in March 1998 and an open house at the Albany Steam Station in April 1998. Throughout this period, the company reviewed the BEC project design, and the need for environmental studies, with various State agency staffs.

By letter dated January 26, 1999, the Chairman of the Siting Board informed Niagara Mohawk that its application met the minimum requirements for compliance with PSL §164 and that a hearing could commence. The Chairman's letter also informed the

⁴ Pre-application reports are now referred to as preliminary scoping statements. See, PSL §163(1).

company of specific deficiencies in the application that should be remedied with the submission of additional information.⁵

The first public statement hearings in this case were held during the day and on the evening of February 23, 1999. In all, two persons spoke at the hearings. One speaker expressed concern about there being adequate gas supplies to serve the proposed facility and other natural gas customers. The other observed that, without the BEC project, reliance on the Albany Steam Station could fall off and the site was not easily converted to any other purpose. Early on, the Examiners conducted several prehearing conferences to help organize the proceeding.⁶

As noted above, in May 2000 PSEG acquired the Albany Steam Station facilities and, on July 2, 2001, it updated and supplemented the original application.⁷ On August 31, 2001, the Chairman of the Siting Board determined that the supplemented application fully complied with the statutory requirements.

⁵ The statutory provisions (PSL §165(1)) in effect at the time the Chairman issued her compliance determination allowed the Chairman to fix a date for the commencement of public hearings on the portion of the application that conformed with PSL §164.

⁶ Prehearing conferences were held on February 6, March 6, and April 7, 16, and 29, 1998. Conferences were also held on February 8 and May 10, 1999. During these conferences, the Examiners marked four exhibits for the record. The Examiners also conducted a telephone conference with the parties on October 5, 2001 to discuss intervenor funding matters.

⁷ Like Niagara Mohawk before it, PSEG notified local residents of its plans to replace the existing facilities with modern technology. PSEG conducted an informational meeting for interested residents on February 6, 2001.

Also, on September 5, 2001, the Department of Environmental Conservation (DEC) informed PSEG that its permits were complete and the DEC Staff had begun their technical review.

Consequently, DEC began to schedule a public hearing concerning the draft State Pollutant Discharge Elimination System (SPDES) Permit and PSEG's air permit applications.

On October 17, 2001, the Examiners convened day and evening public statement hearings, pursuant to Article X, at the Bethlehem Town Hall.⁸ During the day hearing, five persons spoke after the applicant described the BEC project for those in attendance.

A director of the American Lung Association of Northeast New York stated the organization's support for this power project that will reduce pollutants, improve the environment and help protect public health. The president of the Bethlehem Chamber of Commerce stated support for the BEC given its economic benefits that include employment opportunities and local tax payments. A business manager for the International Brotherhood of Electrical Workers (Local 236) supported the construction of the BEC.⁹ Also, counsel for Riverkeeper, Inc., an environmental group that is a party in

⁸ The Examiners anticipated that the DEC administrative process would run concurrently with the companion Article X administrative process; however, due to an error by the applicant regarding the publication of the DEC public notice, the DEC legislative hearing and issues conference were rescheduled.

⁹ Local 97's president also spoke at the evening hearing to reiterate the union's support for the project.

this proceeding, explained its ongoing efforts to protect the ecological integrity of the Hudson River.

Bethlehem Supervisor Sheila Fuller announced at the hearing the Town's support for the project from the close scrutiny and independent review it received from local officials. The Town supports the retirement of the existing plant and the construction of a modern generation facility with state-of-the-art cooling and air pollution control technology. Local tax matters have been resolved to the Town's satisfaction and it looks forward to the environmental and economic benefits the BEC will provide.

At the evening hearing, Assemblyman John Faso's spokesperson provided the Assemblyman's support for the BEC project based of its environmental, energy and economic benefits. Also, the corporate secretary of the Business Council of New York State, Inc. stated its support for the BEC given the electric system and economic contributions it will provide the State, and the local benefits for the Town and the Capital District.

Letters and resolutions supporting the construction and operation of the BEC project have also been received from the Albany-Colonie Regional Chamber of Commerce, the Bethlehem Town Board, Bethlehem's Industrial Development Agency, the Bethlehem Central School District, and several local residents.

The Examiners conducted a prehearing and issues conference on October 23, 2001 to identify active parties, to discuss scheduling and procedural matters, to address intervenor

funding requests, and to identify issues that could have required adjudicatory hearings. Shortly thereafter, the Examiners issued their ruling delineating the Article X issues that could either be litigated or settled by the parties.¹⁰

With respect to the companion DEC proceeding that is considering SPDES and air permit matters, Administrative Law Judge P. Nicholas Garlick conducted a legislative hearing on December 3 at the Bethlehem Town Hall and an issues conference, in Albany, on December 12, 2001. Following the DEC conference, Judge Garlick issued a ruling that found no issues for adjudication in the DEC proceeding.¹¹ The Judge's ruling triggered an interlocutory appeal to the DEC Commissioner from Dr. Uriel M. Oko that seeks an adjudicatory hearing with respect to the amount of polychlorinated biphenyls (PCBs) the BEC may emit into the air and the health risks they may present. On January 31, 2002, the DEC Commissioner denied the appeal and directed the DEC Staff to finish processing PSEG's permit applications.

The Examiners conducted an evidentiary hearing on January 17, 2002 to receive record evidence concerning the Joint Stipulations the parties filed on January 2 that fully resolved the issues the Examiners identified in their November 15 ruling. The record in this case consists of 757 transcript pages and 7

¹⁰ Case 97-F-2162, Article X Issues Ruling (issued November 15, 2001).

¹¹ DEC Case 4-0122-00044-00021, Ruling on Issues and Party Status (issued January 3, 2000).

exhibits.¹² The parties who participated in the Article X proceedings are listed in Appendix A.

C. Joint Stipulations

On November 1, 2001, PSEG provided notice, pursuant to 16 NYCRR 3.9(a)(1), that it was entering into settlement negotiations with the parties to this proceeding. The parties thus provided adequate notice of their negotiations that began on November 13 and proved to be successful. By letter dated January 2, 2002, PSEG provided the Secretary to the Siting Board the Joint Stipulations it executed with three State agencies (the staff representatives for the Departments of Public Service, Environmental Conservation, and Health), three environmental groups (Riverkeeper, Inc., Scenic Hudson, Inc., and Natural Resources Defense Council), and two municipalities (the Town of Bethlehem and the Rensselaer County Environmental Management Council).

The parties' Joint Stipulations contain 14 topic agreements that identify the probable environmental impacts of the proposed facility. Each topic agreement contains stipulated facts and cross-references to the application and exhibits in this case that demonstrate the evidentiary basis for the parties' agreements. The parties have also provided proposed

¹² The principal exhibit in this case is Exhibit 6, the parties' Joint Stipulations. Attached to the Joint Stipulations are 35 supporting items that have been numbered JS 1 to JS 35, respectively (See Appendix C).

certificate conditions to minimize the BEC's adverse impacts as required by PSL §168.

The topic agreements address: air and water resources, terrestrial ecology, earth and visual resources, aesthetics, cultural resources, land use, local laws, traffic, electric transmission facilities, gas supply and transmission, noise, the approved procurement process, reasonable alternatives, and the public interest. Each of them is considered below. Overall, the Examiners find that the Joint Stipulations and the topic agreements adequately address the matters specified by PSL §168. The Examiners conclude that the evidentiary record in this case supports the terms of the Joint Stipulations and it provides a sufficient basis for the Siting Board to determine whether the proposed facility should be certificated.

D. Siting Board Findings

Article X allows the Siting Board to grant or deny an application as filed, or to certificate a facility upon such terms, conditions, limitations or modifications of the construction or operation of the facility as it deems appropriate.¹³ To grant a certificate, the Siting Board must find:

- That the facility is reasonably consistent with the policies and long-range planning objectives and strategies of the most recent state energy plan, or that the

¹³ PSL §168(2).

facility was selected pursuant to an approved procurement process.¹⁴

- The nature of the probable environmental impacts, specifying predictable adverse and beneficial effects on (a) the normal environment and ecology, (b) public health and safety, (c) aesthetics, scenic, historic, and recreational values, (d) forest and parks, (e) air and water quality, and (f) fish and other marine life and wildlife.¹⁵
- That the facility minimizes adverse environmental impacts, considering (a) the state of available technology, (b) the nature and economics of reasonable alternatives required to be considered under PSL §164(1)(b), and (c) the interest of the State in aesthetics, preservation of historic sites, forest and parks, fish and wildlife, viable agricultural lands, and other pertinent considerations.¹⁶
- That the facility is compatible with public health and safety.¹⁷
- That the facility will not discharge any effluent in contravention of DEC standards or, where no classification has been made of the receiving waters, that it will not discharge effluent unduly injurious to fish and wildlife, the industrial development of the State, and the public health and public enjoyment of the receiving waters.¹⁸

¹⁴ PSL §168(2)(a).

¹⁵ PSL §168(2)(b).

¹⁶ PSL §168(2)(c)(i).

¹⁷ PSL §168(2)(c)(ii).

¹⁸ PSL §168(2)(c)(iii).

- That the facility will not emit any air pollutants in contravention of applicable air emission control requirements or air quality standards.¹⁹
- That the facility will control the runoff and leachate from any solid waste disposal facility.²⁰
- That the facility will control the disposal of any hazardous waste.²¹
- That the facility will operate in compliance with applicable state and local laws and associated regulations, except that the Siting Board may refuse to apply specific local laws, ordinances, regulations, or requirements it regards as unduly restrictive.²²
- That the construction and operation of the facility is in the public interest, considering its environmental impacts and the reasonable alternatives considered under PSL §164(1)(b).²³

As stated above, the Siting Board must find that the proposed facility will not discharge any effluent that will be in contravention of the DEC standards and that it will not emit any air pollutants in contravention of applicable air emission control requirements or air quality standards.²⁴ In Article X

¹⁹ PSL §168(2)(c)(iv).

²⁰ PSL §168(2)(c)(v).

²¹ PSL §168(2)(c)(vi).

²² PSL §168(2)(d).

²³ PSL §168(2)(e).

²⁴ PSL §168(2)(c)(iii) and (iv).

proceedings, the Siting Board defers to the judgment of the DEC Commissioner, who is delegated responsibility to issue permits from the United States Environmental Protection Agency pursuant to the Clear Air Act (CAA) and the Clean Water Act (CWA).²⁵

II. RECOMMENDED FINDINGS

A. Air Resources

PSEG's application addresses the project's impact on air quality, including the cumulative effect of air emissions from existing facilities and the potential for significant deterioration in local air quality.²⁶ PSEG witnesses James H. Slack, Brian Stormwind, and Stephen Keough addressed these matters.

When the proposed plant commences operation, PSEG will cease operation of the Albany Steam Station, a 400 MW facility which shares the site. Compared to the emissions of the Albany Steam Station, the new facility will emit significantly less air pollution and be one of the cleanest fossil-fueled plants in the state. In fact, the new facility will emit 97% less NOx and 98% less SOx per megawatt-hour than the Albany Steam Station.

²⁵ See Case 99-F-0558, Heritage Power LLC, Opinion and Order Granting Certificate (issued January 19, 2001), pp. 7-8; Case 99-F-1314, Consolidated Edison Company of New York, Inc., Opinion and Order Granting Certificate (issued August 30, 2001), pp. 34-36.

²⁶ Sections 1.4.3.2, 2.2.1.8, 2.212, 3.3, 4.3, 5.2.5, 6.1.1 and 8.1.

The new plant will also be significantly more energy efficient than the existing one. By replacing the existing Rankine-Cycle steam-electric units, originally placed in service in the early 1950s, with modern combined cycle units, a considerable improvement in energy efficiency is achieved. Last year, the plant's overall efficiency was 30%, while the new plant will generate electricity at an efficiency of 49%.

The new plant will be fueled primarily with natural gas but will be permitted to use low-sulfur distillate oil as a secondary fuel during periods of high natural gas prices or when the demand for natural gas peaks, as limited by the DEC air permits.

In addition to using energy efficient technology and clean fuels, the new facility will also employ advanced air pollution control and monitoring systems. The plant will reduce smog and acid rain with a selective catalytic reduction (SCR) system, dry low-NOx combustors and water injection, all of which will reduce emissions of NOx. The plant will also use a catalytic oxidizer to minimize emissions of carbon monoxide (CO) and volatile organic compounds (VOC). Using natural gas and low-sulfur distillate fuels will reduce SO₂ emissions, which will reduce acid rain.

The only proposed issue that was not resolved during negotiations among the parties involved the potential release of polychlorinated biphenyls (PCBs) from the plant's cooling towers. The DEC Commissioner ruled that the proposed issue did not meet the standards for adjudication and directed that the

processing of the environmental permits be completed and the permits issued.²⁷

Apart from the one contested issue regarding PCB emissions, which the Commissioner has dealt with, the parties agree that all predictable impacts of the air emissions of the BEC project have been reviewed; that the project will take all necessary steps to minimize any adverse environmental impact; and that the no applicable air emission control standard will be contravened. Therefore, the Examiners recommend that the Siting Board adopt this topic agreement.

B. Water Resources

PSEG's application addresses the project's impact on water quality, including the predictable adverse and beneficial impacts on the environment, ecology, water quality, fish and other marine life, and wildlife.²⁸ PSEG witnesses James Mudge, Michael Skelly, Raymond Tripodi, Mark Strickland and David Harrison addressed these matters.

The new facility will employ a closed-loop, hybrid cooling system with mechanical draft cooling towers. The closed-loop system will reduce the use of Hudson River water by 98 to 99 percent, compared to the existing Albany Steam Station. Currently, the existing facility uses approximately 500 million

²⁷ DEC Case 4-0122-00044-00021, Interim Decision (issued January 31, 2002).

²⁸ Sections 2.1.4, 2.1.7, 2.1.8, 2.2.1.4, 2.2.5, 2.2.6, 2.2.7, 2.2.10, 3.1, 3.2, 3.9.4, 3.9.5, 4.1, 4.2, 4.7, 5.1, 5.2, 5.3, 6.1.3, 8.2, 8.3.

gallons per day (mgd) of water from the Hudson River. The new plant will withdraw an average of 4.72 mgd, 8.53 mgd maximum, from the Hudson River via an intake structure located at the facility. Sanitary wastewater will be routed to the publicly owned treatment works at the Town of Bethlehem. Other wastewater will be subject to appropriate monitoring and treatment and discharged to the Hudson River via existing outfalls. Stormwater will be discharged to the Hudson River.

To minimize the impingement and entrainment of fish and other aquatic organisms, the Applicant will construct a 2.0 mm wedge-wire screen and seasonally deploy a fixed panel Gunderboom Marine Life Exclusion System (MLES). This system will be mounted on the Hudson River bottom and serve to filter cooling water drawn into the BEC.

The DEC, the Applicant and many other parties agree that the use of closed-loop, hybrid-cooling with a wedge-wire screening and the seasonally deployed Gunderboom MLES is the Best Technology Available (BTA) as that term is used in the federal Clean Water Act²⁹ and applicable state regulations.³⁰ Three parties specifically depart from this view. Riverkeeper, Scenic Hudson, and NRDC contend that the Gunderboom MLES is an experimental, rather than a proven, technology and therefore is not an "available technology" capable of being relied on as a

²⁹ 33 U.S.C.A. §1326(b).

³⁰ 6 NYCRR 704.5

component of BTA in lieu of reducing cooling water intake capacity.³¹

Notwithstanding this objection and the fact that these parties would allow use of the hybrid cooling technology without the use of the Gunderboom MLES, the Examiners recommend that the Siting Board accept the DEC determination that the proposed cooling system with the Gunderboom is BTA and therefore, is designed to operate in compliance with applicable state laws and regulations concerning the environment.

The parties agree that all predicable impacts on water impacts from the BEC project have been reviewed; that the project will take all necessary steps to minimize any adverse environmental impact; and that the no applicable water quality standard will be contravened. Therefore, the Examiners recommend that the Siting Board adopt this topic agreement.

C. Terrestrial Ecology

PSEG's application addresses the project's impact on forests, stands and tree farms, terrestrial organisms, and the habitats used by rare, threatened and endangered species.³² PSEG witness James H. Slack addressed these matters.

All construction activity will occur within the confines of the existing Albany Steam Station. Thus, no significant impacts on any vegetation or wildlife are expected.

³¹ Joint Stipulations, paragraph 7.

³² Sections 3.5, 3.9.1, 4.3.3.5, 4.3.3.7.3, 4.5, 4.7.1 and 4.10.2.2.6; Tables 4.3.3-24 and 4.3.3-25.

Nor will the plant's construction affect any endangered or threatened species.

By virtue of the fewer and smaller stacks it will have, the BEC project will reduce adverse effects for migratory birds. Also, by using intermittent lighting at the lowest levels permitted for air traffic safety, fewer bird mortalities are expected.

The deposition of salt and particulate matter from the project's cooling tower operation will have negligible impacts on terrestrial ecological resources in the vicinity of the site. Highly efficient drift eliminators will minimize such depositions.

Finally, construction and operation of the BEC will be consistent with the New York State Coastal Zone Management policies. Ten of the 44 policies do not apply to the project; the project will comply with the remainder.

The parties agree that the BEC project will have either minimal or negligible adverse impacts on wetlands and that no habitats, forests or natural areas will be disturbed. They also agree that construction activity and plant operation will have no significant adverse impacts on biological resources and vegetation that are regulated or protected by state and local laws. The Examiners therefore recommend that the Siting Board adopt this topic agreement.

D. Earth Resources

Article X requires consideration of the project's potential impact on agricultural land, ecosystems, soils, geology and seismology. PSEG's application addresses these matters and PSEG witness James H. Slack provided testimony on them.³³

The Albany Steam Station resides on land that is more or less level; the site's elevations range between 10 and 20 feet above sea level. Rolling hills surround the site and gently slope to the Hudson River. To the west, the hills reach 220 feet; east of the Hudson they rise to 400 feet.

The site rests on a shale formation. Bedrock within a five-mile radius of the site consists of shale and sandstone below glacial and alluvial deposits. Its soil is a loamy-urban mixture that has been impacted by site development and use over the years. Prime farmland exists in the region of the site across the Hudson River near the Papscaanee Creek and along Routes 9 and 20.

A seismic study of Albany was performed in 1979 which determined that the possibility of activity in this region is low. The likelihood of any strong ground shaking is minimal.

Project construction will yield 30,000 cubic yards of excavated soil and material. Some of this soil will be lost to water and wind erosion. Soil compaction and the mixing of topsoil with subsoil is also expected. Excavated soil will be

³³ Sections 3.4, 3.9.3, 3.9.7, 4.4, 4.10.2.2.7 and 6.1.2; Figures 3.4.2-1 and 3.9.3-1; and, Tables 3.9.3-1 and 3.9.3-2.

temporarily stockpiled. Ultimately, it will be used to backfill around foundations, to construct berms and for other types of landscaping. Approximately 15,000 cubic yards of clean fill material will be brought to and used on the site.

PSEG will employ soil erosion and sediment control programs that include such measures as silt fencing, restriction of heavy traffic to designated corridors, and dust abatement. Clean up, plantings, and landscaping will commence upon the completion of construction. These measures will ensure that the earthwork impacts are minimized.

The parties agree that the site's geologic features, and the slight possibility of any seismic activity, do not require any special design features nor any particular construction methods. They also agree that the BEC's use of the existing Albany Steam Station minimizes the occupation of any new land and avoids the need for any extensive excavation or blasting work.

Thus, the parties represent that the BEC project will minimize environmental impacts associated with the construction of a new generating station. The new buildings will be in accordance with applicable construction code requirements. The design of the buildings' foundations will depend upon actual soil conditions encountered at the site. Operation and maintenance activity at the BEC is not expected to affect any earth resources, including the topography, geology, agricultural resources, and soil. Accordingly, the Examiners recommend that the Siting Board adopt this topic agreement.

E. Visual Resources and Aesthetics

In compliance with Article X, PSEG has identified the BEC's potentially significant and unavoidable adverse impacts on visual resources, and it has offered to mitigate and minimize them. PSEG's application addresses visual resources and aesthetics and it provided expert testimony from a panel of witnesses who address these matters.³⁴

PSEG has identified the visual resources, character and visual quality of the landscape near the Albany Steam Station. It has rated the topographic and land use conditions within a five-mile radius. Within this viewshed, there are nine landscapes: urban and suburban settings, commercial highway and major transportation corridors, the river waterfront, valley hills, open and forested uplands, and rural industrial facilities. None of them are particularly unique; each is typical of their respective categories. The Albany Station's existing facilities are not visible from any designated scenic sites. However, they can be seen from the Hudson River, Albany's tall buildings, and the Papscaenee Island Nature Preserve, among other locations.

The visual additions to the site include: a new powerhouse, three new stacks, a hybrid cooling tower, a storage tank for aqueous ammonia, a storage tank for distillate oil, and

³⁴ Sections 3.6.4, 3.9.9, 4.6.4, 4.7, 4.10.2.2.9; Appendices D.3, D.5, K, M.2; Tables 3.6.4-1 to 4-3, 4.6.4-1 to 4-7; Figures 3.6.4-1 to 4-16, 4.6.4-1 to 4-21. PSEG's expert witnesses are James H. Slack, Brian L. Stormwind, Stephen Keough, and Matthew W. Allen.

a turbine building. Four existing stacks will be removed, as will a coal handling system and two residual oil storage tanks. Transmission lines on the site will be relocated.

The BEC will be visible from various locations, including the Hudson River, major transportation routes, Albany's tall buildings, roads in East Greenbush, and in the immediate vicinity of the project. Most views of the BEC are within the urban and waterfront zones from where other urban and industrial structures can be seen. The project will dominate other views that are unaffected by significant urban and industrial uses. However, this is no different than the present circumstances of the Albany Steam Station.

PSEG has evaluated the visual impacts related to the BEC's hybrid cooling tower and combustion turbine stacks. The plume from the cooling tower will depend on prevailing atmospheric conditions; the visibility of the stack plume could be affected by the fuel being used. Any increase in visual impacts from the BEC's plumes are expected to be minimal given their urban and industrial setting. The cooling tower's plume is expected to produce a slight decrease in the visual quality from the Papscaanee Island Nature Preserve and from another location.

Overall, the parties concur that the project's visual impacts will be minimal and, for the most part, be contained to the existing site. Topography and vegetation provide a partial screening that obscures the facility's structures from various viewpoints. Also, the height of the tallest structures on the

site (the stacks) will be reduced relative to the existing stacks. Warning lights will be installed on the stacks and they will be operated in accordance with Federal Aviation Administration requirements.

The BEC's plumes will be similar in appearance to the plumes emitted by other facilities in the vicinity and they will not materially alter the views of the area. PSEG has agreed to limit the scale of the BEC's plumes by using a hybrid cooling system. It will monitor visible plumes and operate the plant to minimize them.

The new buildings PSEG will construct will compliment the character of the existing buildings. PSEG will use dark non-reflective colors to minimize their visual contrast with the landscape. A non-reflective color will also be used for the transmission line poles that are being relocated on the site.

Architectural drawings and detailed plans for the site will be provided to local and state officials, for their comments, before PSEG submits them as compliance filings to the Siting Board. They will show vegetation clearings, tree protection measures, and landscape plantings that will maintain existing vegetation and enhance screening. PSEG will also adopt facility and vegetation maintenance plans for the upkeep of the structures and the landscape.

Outdoor lighting will be installed on the new powerhouse to promote plant safety and security; however, undesirable glare and fugitive light will be avoided. PSEG will

provide its final lighting plans to the Siting Board as one of its compliance filings.

The Examiners recommend that the Siting Board adopt the terms and provisions of the topic agreement on visual resources and aesthetics.

F. Cultural Resources

Historic and cultural resources near the project site are addressed in PSEG's application and in the testimony provided by a company witness, James Slack.³⁵

The first phase of a cultural resource investigation was conducted to identify areas that could contain prehistoric or historic resources. It identified only seven historic structures, none of which is listed on the State or National Register of Historic Places. Two are eligible for inclusion in the State and National Registers; however, the BEC will not adversely affect their settings or public views. Consequently, the parties agree that the project will not adversely affect any landmarks or historic buildings.

On the site, deep excavations will be limited to areas that were previously excavated for the Albany Steam Station. An archeological team will monitor excavations on the northern section of the site to install gas interconnection lines. Should they encounter any unexpected discoveries, a plan will be put in place to protect them.

³⁵ Application Supplement Sections 3.6.6, 3.9.8, 4.6.6 and 4.10.2.2.8; Appendix G.

The parties' topic agreement demonstrates that no known cultural resources will be impacted by the BEC, and that no architectural resources or historic buildings are located on the site. The project has been reviewed in accordance with the requirements of the New York State Parks, Recreation and Historic Preservation Law (Section 14.09). And, the Office of Parks, Recreation and Historic Preservation has determined that the project will have no affect on cultural resources or historic places. The Examiners therefore recommend that the Siting Board adopt the terms and provisions of this topic agreement.

G. Land Use and Local Laws

The PSEG application identifies the BEC's impacts on existing land uses. It also evaluates unavoidable adverse impacts and the mitigation measures needed to minimize them.³⁶ PSEG witness Raymond A. Tripodi addressed this matter.

The BEC is compatible with the current use of the site and its effects on surrounding land uses are minimal given the size and location of the Albany Steam Station. The project will not displace any persons, employment or business activity in the local community. The construction and operation of the BEC will comply with all applicable laws enacted by the Town of Bethlehem. No local laws or requirements are considered to be unreasonably restrictive for the project.

³⁶ Application Supplement Sections 3.6.1, 3.9.2, and 4.6.1; Figures 3.6.1-1 to 3.6.1-3; and, Tables 4.6.1-1a, 1c and 2.

The topic agreement (endorsed by the Town) recognizes that PSEG would need from local authorities a floodplain development permit, a building permit, a site plan review, and demonstrated compliance with the Town's zoning code. The topic agreement states that the Siting Board's certificate will incorporate all the local approvals PSEG would have otherwise obtained from the Town. The Examiners recommend that the Siting Board adopt the terms and provisions of this topic agreement.

H. Public Safety, Public Interest and Other Matters

1. Traffic

The parties have provided a topic agreement that evaluates the project's impact on motor vehicle, river and railroad traffic. It also provides mitigation measures for them. Traffic matters are addressed both in the application and by PSEG witness James H. Slack.³⁷

With respect to motor vehicles, PSEG evaluated existing traffic conditions in the vicinity of the project, including those on the primary access routes, major roadways, and intersections. Traffic count volumes were collected and road capacities were calculated. Road traffic will be principally impacted by the plant's construction. When the BEC begins to operate, truck deliveries to the site are only expected to be about nine more a week than the Albany Steam

³⁷ Application Sections 3.6.3 and 4.6.3; Figures 3.6.3-1 to 3.6.3-3, 4.6.3-1 to 4.6.3-4; Tables 3.6.3-1 to 3.6.3-3, 4.6.3-1 to 4.6.3-15; and, Appendix F.

Station received. This amount of increased truck deliveries is considered to be insignificant for purposes of this proceeding.

Ships and barges on the Hudson River deliver fuel oil to the Albany Steam Station and are expected to make deliveries to the BEC. Up to 24 barge deliveries are expected annually at the BEC. While this is more than the 17 deliveries in 2000, the potential increase in barge traffic is minimal in comparison to the use of Hudson River barges for other purposes.

Finally, the railroad spur at the Albany Steam Station once brought coal shipments to the site; however, the spur fell into disuse when the plant began to use fuel oil.

With respect to the BEC construction period, the service quality levels on roads and intersections in the vicinity of the project are expected to decrease, primarily on weekday mornings and evenings. These impacts will exist for a short period while peak construction exists. Heavy construction vehicles and equipment are expected to use the local roads.³⁸ In any event, construction-related traffic on local roads is not expected to substantially interfere with school bus routes and schedules as this traffic will move in the opposite direction.

To minimize adverse traffic impacts, and to improve service levels, PSEG will provide traffic control officers during morning and evening peak hours during construction.

³⁸ It is possible that some of the facility's major components--the steam turbine generator and transformer, the combustion turbine and transformer, and other equipment--will be transported by rail. The on-site rail system will require upgrades for it to be used for this purpose.

Arrangements will also be made to change the cycle length and timing of traffic signals at certain intersections. PSEG will obtain signal revisions at certain intersections during weekday peak morning hours and it will monitor traffic at another intersection to determine if a traffic control officer is needed.

PSEG will post clear warnings of heavy vehicles using the roads and it will make arrangements with the State Department of Transportation (DOT) for directional signs to facilitate truck deliveries and construction worker traffic. Companies that make deliveries to the site will receive road instructions for their drivers to use. Construction workers and truck operators will receive maps showing the preferred routes to and from the site. PSEG will also devise strategies to reduce the overall number of vehicles traveling to the site.

PSEG will provide local officials weekly reports of the amount of traffic expected during peak construction periods. It will also obtain a permit from the State DOT to construct a south access road to the project site.

The parties agree that there will not be any long-term or permanent adverse impacts to roads, rail or river traffic from the operation of the BEC. With respect to plant's construction, they agree that traffic-related impacts will be temporary and they will be adequately mitigated to minimize inconveniences to others. The Examiners recommend that the Siting Board adopt the terms of this topic agreement.

2. Electric Transmission Facilities

PSEG's application describes the electric transmission facilities the project requires as do PSEG witnesses Laurie J. Oppel and Harold G. Joscher.³⁹ Various reinforcements and system upgrades will be installed to support the new facilities. They include: vertical bus structure reinforcements, installation of series reactor and bypass breakers; relocation of a portion of an existing transmission line; replacement of connectors and switches to upgrade existing transmission lines; and, the installation of over-current relays.

The parties agree that the project will not adversely affect the transmission system transfer interfaces between the New York State Independent System Operator and neighboring electric systems. They also agree that the project will not adversely affect the transient stability of the overall transmission system or the reliability of the bulk power system. The plant will impact Central Hudson Gas & Electric Company's transmission system which will require upgrades at the North Catskill and Milan substations.

The project will not produce electromagnetic fields during construction. Before it operates, PSEG will conduct analyses to ensure that the BEC will comply with the Public

³⁹ Application Sections 2.2.9, 3.9 and 4.10; Figures 2.2.9-1 to 2.2.9-5, 3.9.3-1, 3.9.5-1, 4.10.2-1 to 4.10.2-3; Tables 3.9.2-1, 3.9.3-1 and 3.9.3-2, 3.9.5-1; and, Appendix J.1 to J.6.

Service Commission's guidelines for electric and magnetic fields.

The electricity the BEC provides will decrease the possibility of a major disturbance at two transmission system interfaces--the Total East and the Central East interfaces. This will help reduce any chance of a major electric system blackout in eastern New York or New England. The additional electricity the BEC provides will increase dynamic reactive power capabilities in eastern New York and thereby enhance the system's ability to respond to low-voltage disturbances. It will also improve voltage stability.

The BEC will increase transmission system reliability by providing greater flexibility during times of an emergency. It will relieve transmission flows and reduce line losses on the west-to-east transmission lines between Utica and Albany and elsewhere. It will also reduce the eastern New York system's loss-of-load probabilities and reduce any chance of a voltage collapse on this portion of the system.

To minimize adverse environmental impacts and promote public safety, PSEG will use transmission interconnections that operate within applicable standards and that are consistent with the practices required by utility tariffs, rules, and transmission system protocols. The Examiners recommend that the Siting Board adopt the terms of this topic agreement.

3. Gas Supply and Transmission

The PSEG application addresses gas supply and transmission matters (Sections 2.3 and 9.5.5; Figures 2.3-1 and 2.3.2-1). The parties' topic agreement describes the facilities the project requires and indicates that PSEG has the ability to acquire sufficient capacity on the interstate pipelines for the firm and interruptible gas supplies the BEC requires.

No adverse impacts are expected to occur to the existing gas transmission and distribution systems from the operation of this project. Gas system modifications will be made to increase gas deliveries to the site, including a new interconnection with a 30-inch pipeline owned by Dominion Transmission, Inc. Natural gas will also be delivered to the BEC through a recently installed 16-inch pipeline that is owned by the Tennessee Gas Pipeline Company.

The parties agree that the project will minimize adverse gas interconnection impacts and that it is compatible with public safety requirements. The Examiners recommend that the Siting Board adopt the terms of this topic agreement.

4. Noise

The application addresses the project's noise impacts as does PSEG witness Douglas H. Bell.⁴⁰ Baseline noise surveys were conducted to establish the parameters of the existing

⁴⁰ Sections 3.6.2 and 4.6.2; Figures 3.6.2-1 to 3.6.2-4 and 4.6.2-1 to 4.6.2-7; Tables 3.6.2-1, 4.6.2-1 to 4.6.2-4; and, Appendix E.

noises in the community surrounding the project. Ambient sound levels were measured at nine locations.

The adverse noise impacts expected from the plant's construction and operation were identified and evaluated. To mitigate and avoid noises during construction, PSEG will operate construction equipment in accordance with manufacturers' recommendations; it will limit use of pile driving equipment to specified hours; and, it will use a steam discharge silencer for pipe cleaning activity. PSEG will notify public officials in advance of this type of activity. It will also notify public officials in advance of other activities that could make excessive noise at night or in early morning hours (such as jack hammering, demolition, bulldozers, steam and air blows) that may be necessary due to scheduling difficulties.

When the plant operates, PSEG will mitigate and avoid noise impacts by using building roof and wall materials that limit sound transmissions, and by installing duct silencers or acoustical louvers in fan ventilation openings. It will install thick roll-up doors with gaskets and limit the installation of operable windows to the west side of two buildings. Silencing devices will be installed on turbine air intakes and on the heat recovery steam generator exhaust outlet. Low-speed fans will be used in the cooling tower, and each of the plant's combustion turbines will be enclosed to limit noise. Silencers will be used on all steam and air discharges outside the plant.

Shortly after the BEC begins to operate, PSEG will implement a noise monitoring program to ensure compliance with

the acoustic design goals established for the plant. As a result of all these measures, the plant's construction-related and operational noise impacts will be minimized and significant adverse noise impacts will be avoided. The Examiners recommend that the Siting Board accept the topic agreement that addresses noise.

5. Approved Procurement Process

With the application it filed, PSEG has sought a Siting Board determination that the proposed facility has been selected pursuant to an approved procurement process.⁴¹ The parties have provided a topic agreement that lists the portions of the application that support the motion (Sections 1.4.3; 4.6.7; and, 7) and point to the testimony of PSEG witness Russell S. Arlotta.

The parties observe that the BEC will be a merchant facility and it will participate in the competitive electric generation market. It will add production capacity to the market and it will compete with other generators in the markets that NYISO administers. Such competition as this is desirable to lower the cost of electricity throughout the State and to achieve desirable results in the marketplace.

⁴¹ PSL §160(7) defines an "approved procurement process" to be any electric capacity procurement process approved by the Public Service Commission as being reasonably consistent with the most recent State Energy Plan. An application for a facility that is selected pursuant to an approved procurement process may omit certain information that is otherwise required. See PSL §164(1)(b).

PSEG will not seek to recover its costs for the BEC from electric utility ratepayers; instead, it will depend upon the market for its profit or loss. The parties point out that previous Siting Board and Public Service Commission rulings have found competition in the electric supply market to be a valid approved procurement process.

The Examiners recommend that the Siting Board grant PSEG's motion, adopt the topic agreement, and render favorable findings pursuant to PSL §168(2)(a)(ii).

6. Reasonable Alternatives

With its application, PSEG submitted its evaluation of the reasonable alternatives to the BEC project, including the testimony of a six-member panel.⁴²

PSEG analyzed technological alternatives to the project's cooling system and ultimately agreed to use a closed-loop cooling system with hybrid wet/dry cooling towers, a wedgewire screen intake structure and a seasonally deployed Gunderboom marine life exclusion system. The parties consider this to be the best alternative for this project to minimize aquatic, aesthetic and visual impacts, and to reduce the loss of aquatic organisms in comparison to the Albany Steam Station's cooling water intake system.

⁴² Sections 2.2.1.4, 2.2.6, 4.1.3, 4.6.4.4.3 and 5.0; Appendices L.1, l.2, and M.2. PSEG's witnesses are Messrs. Matthew W. Allen, Russell S. Arlotta, Stephen Keough, Mark F. Strickland, David Harrison, Jr., and James H. Slack.

Were the "no action" alternative to be selected here, the Albany Steam Station would continue to operate and the generation, reliability, economic and environmental benefits attributable to the BEC project would not accrue. The BEC will replace existing facility and thereby substantially reduce air emissions and water intake requirements while increasing electric generation capacity. None of this would accrue under the "no action" alternative.

PSEG also points out that, as a private enterprise, it does not own or have under option any other properties in New York that could serve as alternative locations for the project.

The Examiners recommend that the Siting Board adopt the terms of the topic agreement addressing reasonable alternatives.

7. Major Onshore Storage Facility License

The Albany Steam Station currently has five petroleum storage tanks (three for residual oil and two for distillate oil) for which a Major Onshore Storage Facility (MOSF) License was issued by DEC on March 31, 2003. In this case, PSEG has proposed to remove two residual oil tanks and to convert the remaining tank to low sulfur distillate oil. PSEG is also considering the construction of a new distillate oil storage tank.

PSEG, DEC Staff and DPS Staff have entered into a MOSF Stipulation Agreement. It recognizes DEC's authority to prevent

and abate water pollution caused by petroleum discharges.⁴³ It also acknowledges DEC's regulation of the storage, handling and transportation of petroleum, and that DEC enforces the containment and remediation of petroleum discharges.⁴⁴

Pursuant to this stipulation, the Siting Board would authorize DEC to issue and reissue MOSF licenses for the BEC's onshore storage facilities. The parties to the stipulation have agreed to a specified process and to the substantive requirements that will apply when PSEG seeks licenses from DEC. The stipulation also identifies the enforcement remedies DEC may use should the applicant not comply with the license terms. The Examiners recommend that the Siting Board adopt the terms and provisions of the MOSF Stipulation Agreement.

8. Certificate Conditions

PSEG, the State agencies, local municipalities, and the environmental groups have proposed certificate conditions consistent with the stipulations and topic agreements they have executed.⁴⁵ The Examiners recommend that the Siting Board adopt the proposed conditions.

⁴³ Environmental Conservation Law (ECL) Articles 3 and 17; 6 NYCRR Parts 610-614, 702 and 703.

⁴⁴ Navigation Law (NL) Article 12; 6 NYCRR Parts 610 and 613; 17 NYCRR Parts 30-32.

⁴⁵ Appendix B.

9. Public Interest

In a topic agreement addressing public interest considerations, PSEG and the parties highlight application provisions and testimony demonstrating that the BEC would serve the public interest.⁴⁶

The parties concur that the project will provide an overall reduction of the emission rates at the site by replacing the Albany Steam Station with the BEC's high-efficiency, state-of-the-art, natural gas-fired combined cycle technology. They point to the project's emission control technology to limit NOx, VOCs and CO to the lowest achievable emission rates for these pollutants. They also point to the 98% reduction in base water use the BEC will provide in comparison to the Albany Steam Station.

With respect to electric generation considerations, they observe that the BEC is consistent with the State Energy Plan, it will improve electric system reliability in eastern New York and contribute to a competitive energy market that can reduce average energy prices in the State.

Transmission system reliability will also increase with the BEC facility. It will provide greater flexibility during any system emergency; it will relieve transmission flows and reduce transmission losses on the west to east transmission lines between Utica and Albany.

⁴⁶ Sections 1.4, 2.2, 4.2.3, 7 and the testimony of PSEG witness Harold G. Joscher.

The socioeconomic benefits that the project will provide to local communities in the Capital District include employment for 300 construction workers for 24 months, and 530 indirect jobs related to the project. The estimated economic impact for the region is about \$82 million in household income and up to \$51 million for material and supplies purchases. The operation of the BEC facility will contribute to long-term job employment in the Capital District. The facility will also make payments in lieu of taxes and provide long-term revenues for the local community.

Finally, the parties point to the advantage of reusing the existing generation site (with its available infrastructure) and to the benefits had by avoiding the use of any other sites.

III. CONCLUSION

On the basis of all the above, the Examiners conclude that the Siting Board can make the required findings pursuant to Article X that are necessary to grant PSEG Power New York, Inc. a Certificate of Environmental Compatibility and Public Need, subject to the specified terms and conditions. The recommended certificate conditions are presented in Appendix B. Thus, we recommend that the application, so conditioned, be granted.

February 1, 2002

WLB/PNG:gds

APPEARANCES

FOR PSEG POWER NEW YORK, INC.:

Read and Laniado, LLP (by Sam M. Laniado, Esq.),
25 Eagle Street, Albany, New York 12207-1901.

Nixon Peabody, LLP (by Richard M. Cogen and Sheri
Littlefield Moreno, Esqs.), 30 South Pearl Street,
Albany, New York 12207.

Russell S. Arlotta, 60 Park Plaza, T-16-H, Newark,
New Jersey 07102.

FOR DEPARTMENT OF PUBLIC SERVICE STAFF:

David Van Ort, Staff Counsel, 3 Empire State Plaza,
Albany, New York 12223-1350.

FOR NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION:

Franz T. Litz, Esq., 625 Broadway, Albany,
New York 12233-1500.

FOR NEW YORK STATE DEPARTMENT OF HEALTH:

David W. Quist, Esq., Empire State Plaza, Room 2421,
Corning Tower, Albany, New York 12237.

FOR THE TOWN OF BETHLEHEM:

Whiteman, Osterman & Hanna (by Michael Whiteman and
Terresa Bakner, Esqs.), One Commerce Plaza, Albany,
New York 12260.

FOR RENSSELAER COUNTY ENVIRONMENTAL MANAGEMENT COUNCIL:

Ken Dufty, 1600 7th Avenue, Ned Pattison Government
Center, Troy, New York 12180.

FOR SCENIC HUDSON, INC.:

Warren Reiss, Esq., 9 Vassar Street, Poughkeepsie,
New York 12601.

APPEARANCES

FOR RIVERKEEPER, INC.:

Reed Super, Esq., 25 Wing & Wing, Garrison,
New York 10524-9910.

FOR THE NATURAL RESOURCES DEFENSE COUNCIL:

Katherine Kennedy, Esq., 40 West 20th Street,
New York, New York 10011.

FOR THE BUSINESS COUNCIL OF NEW YORK STATE, INC.:

John T. Evers, 152 Washington Avenue, Albany,
New York 12210.

FOR NIAGARA MOHAWK POWER CORPORATION:

A. Scott Cauger, Esq., 300 Erie Boulevard West,
Syracuse, New York 13202.

FOR CENTRAL HUDSON GAS AND ELECTRIC CORPORATION:

Gould & Wilkie (by Robert J. Glasser, Esq.), One Chase
Manhattan Plaza, New York, New York 10005.

PRO SE:

Dr. Uriel Oko, 11 York Road, Glenmont,
New York 12077-3241.

NEW YORK STATE BOARD
ON ELECTRIC GENERATION
SITING AND THE ENVIRONMENT

IN THE MATTER

- of the -

Case 97-F-2162

Application by PSEG Power New York, Inc. for a Certificate of Environmental Compatibility and Public Need to Construct and Operate a 750 megawatt natural gas-fired combined cycle combustion turbine generating facility, in the Town of Bethlehem, Albany County.

PROPOSED CERTIFICATE CONDITIONS

I. Project Authorization

- A. The Certificate Holder is authorized to construct and operate the Project, as described in the Application Supplement, except as waived, modified, or supplemented by this Certificate.
- B. The Certificate Holder is responsible for obtaining all necessary federal and federally delegated permits, including a State Pollutant Discharge Elimination System Permit (“SPDES”) and a U.S. Army Corps of Engineers (“ACOE”) permit under the Clean Water Act (“CWA”), a Prevention of Significant Deterioration (“PSD”) permit, a Title IV (acid rain) permit, a preconstruction State Air Facility Permit with New Source Review conditions under the Clean Air Act (“CAA”), and other approvals and permits that may be required for this Project, and which the Siting Board is not empowered to provide. The Certificate Holder shall also be responsible for obtaining a license under Article 12 of the Navigation Law from the New York State Department of Environmental Conservation (“NYDEC”) for the major on-shore storage of fuel.
- C. The Project shall be designed to operate and be operated in compliance with all applicable federal and state laws and regulations. Subject to the Board’s ongoing jurisdiction, the Project shall be designed to operate and be operated in compliance with all applicable local laws and regulations.

- D. The Certificate Holder is authorized to connect the Project facilities to the Dominion pipeline, the Tennessee Gas pipeline, distribution facilities of Niagara Mohawk Power Corporation, or any combination of the above.
- E. The Certificate Holder is authorized to perform the on-site, and have the applicable transmission owner perform the off-site, electric transmission upgrades described in the Application Supplement.

II. General Conditions

- A. The Project and its site shall be constructed, operated, and maintained as set forth in the Application Supplement and other submissions, and as indicated by the Certificate Holder in stipulations and agreements during this proceeding, except as these may be waived, modified, or supplemented by the Board, and except as set forth in conditions contained in the SPDES, State Air Facility, PSD, and Major Oil Storage Facility (“MOSF”) permits issued by the NYSDEC.
- B. The Certificate Holder shall submit a schedule of all plans, filings, and other submissions to the Board as may be required by these Certificate Conditions, and to the extent practicable, shall coordinate the schedule for submitting Compliance Filings with the relevant state agencies having jurisdiction over such Compliance Filings.
- C. The Certificate Holder shall submit a Compliance Filing consistent with Part 1003 of the Article X regulations. A “licensing package” is defined herein as a component of the Compliance Filing and includes all plans or other submissions required by these Certificate Conditions. Licensing packages may be submitted individually or on a combined basis. All filings shall be served on all active parties that have advised the Board of their desire to receive a copy of such filings.
- D. The Certificate Holder shall prepare an “Unanticipated Discovery Plan” before the start of construction and shall submit the plan as part of a licensing package to provide protection in the event that cultural resources are encountered during construction. The plan shall include the retaining of a qualified archeologist during construction, in the event that cultural resources are encountered during Project activities.
- E. Until the necessary PSD, new source review (“NSR”), MOSF, SPDES, and ACOE permits are issued for the Project, the Certificate Holder shall not engage in any construction or operation activity, as applicable, for which any such permit would be necessary.
- F. The Certificate Holder shall create approximately 1.05 acres of wetlands to mitigate the loss of 1.5 acres of federally regulated wetlands. In addition, the Certificate Holder shall minimize impacts to wetlands during construction of the transmission lines by utilizing existing access roads,

siting towers on upland areas, using upland areas for staging areas and work spaces, and using timber mats or other material to spread the weight of equipment when necessary to provide access to construction equipment to or through wetlands.

- G. The Certificate Holder shall submit, as licensing packages, (1) a wetland enhancement/mitigation plan that provides for the replacement of permanently impacted 1.5 acres of low value “man induced” wetlands; (2) a Storm Water Pollution Prevention Plan (“SWPPP”) addressing all construction activities through final site stabilization; and (3) a spill prevention control and countermeasures (“SPCC”) plan.
- H. The Certificate Holder shall submit a plan for monitoring and reporting visible plumes from the exhaust stacks as a Compliance Filing.
- I. The Certificate Holder shall submit a plan for the intermittent operation of the hybrid cooling system that minimizes the occurrence of visible cooling tower plumes during periods when formation of such plumes is expected.
- J. Before the start of plant construction, and with the concurrence of New York State Department of Transportation (“NYSDOT”), the contractor shall arrange for the erection of five directional signs (white lettering on green background with directional arrows) to facilitate arriving truck and construction worker traffic, and obtain any other applicable permits from NYSDOT. The five locations for the signs are on southbound and northbound U.S. Route 9W approaches at the SR 32 intersection, eastbound and southbound approaches at the intersection of SR 144 and SR 32 and the southbound off-ramp of I-787 at the intersection with SR 32.
- K. The Certificate Holder shall apply to NYSDEC for a license or licenses for a Major On-Shore Storage Facility (“MOSF”) in accordance with the MOSF Stipulation Agreement among the Certificate Holder, NYSDEC staff, and NYSDPS staff.
- L. This Certificate incorporates all approvals that would otherwise be required by the Town of Bethlehem absent the applicability of Article X.
- M. Within 90 days after the grant of a Certificate, the Certificate Holder shall prepare and submit a Compliance Filing containing a decommissioning plan for the Facility that addresses the activities identified in Section 9.3.2, and the financial assurance mechanisms detailed in Section 9.2.2 of the Application Supplement.
- N. The Certificate Holder shall negotiate with Central Hudson concerning the appropriate level of funding to be paid Central Hudson for the proposed 115 kV series reactor and bypass circuit breaker at the North Catskill substation and 115 kV line reactor at the Milan substation. In the event

agreement is not reached, the Certificate Holder shall submit the dispute to the NYSPSC, which shall appoint an administrative law judge who shall adopt procedures to hear the matter and prepare a recommendation to the NYSPSC for resolution of the matter. Submission of the dispute to the NYSPSC shall not constitute a waiver of any rights the Certificate Holder or Central Hudson may have, or any positions either party may wish to advocate to the NYSPSC, or in any other forum.

- O. The Certificate Holder shall install and maintain a permanent surveyors monument at the reference point for the noise easement granted by Niagara Mohawk Power Corporation. As-built drawings shall be filed, indicating final facility layout, and depicting the location of the monument and noise easement. Bearing and distance from property lines and nearby corners of property or structures shall be provided.

III. Construction Conditions - General

- A. These Certificate Conditions shall be made contract requirements for the construction contractors as applicable.
- B. Appropriate construction personnel shall be trained in environmental compliance matters.
- C. The Project shall be constructed within the 84-acre site where the existing Albany Steam Station is located and will comply with all applicable local laws and regulations.
- D. The Certificate Holder shall implement the following measures to mitigate or avoid noise impacts during Project construction:
 - 1. Maintain and operate construction equipment in accordance with manufacturer's recommendation.
 - 2. Pile driving equipment shall not be operated between the hours of 8:00 PM and 7:00 AM from Monday through Saturday, or Sunday.
 - 3. Use a blow-down tank outfitted with a steam discharge silencer able to provide a 30-dBA reduction in steam noise for pipe cleaning prior to system start-up. The Certificate Holder shall provide adequate advance notification to the entities listed in III(D)(4) below.
 - 4. The normal construction shifts for the Project will include two shifts occurring between 7:00 AM and 2:00 AM. Pile driving is described in II.A.2, above. The following noise producing construction activities shall not be conducted between 8:00 PM through 7:00 AM unless required by scheduling difficulties and after notification to the list of agencies and government offices

provided in the next sentence: (1) pile driving, jackhammering or demolition; (2) use of bulldozers, excavators or dump trucks for Site preparation; (3) loading or off loading big pipes or other materials that could make excessive noise; or (4) conducting scheduled steam or air blows. Such notice shall be made to NYSDPS, Town of Bethlehem Supervisor, Town of Bethlehem Building and Engineering Department, Town of Bethlehem Police Department, Mayor of the City of Rensselaer, Supervisor of the Town of East Greenbush, and Rensselaer County Environmental Management Council one business day prior to conducting the activities listed in (1) through (4) above during the 8:00 PM through 7:00 AM time frame.

- E. The Certificate Holder shall revise the signalized intersections of U.S. Route 9W and SR 32 to raise the estimated Level of Service (“LOS”) during weekday morning peak hour from LOS F to LOS D.
- F. The Certificate Holder shall perform additional monitoring at the left turn from SR 32 to determine the need for additional police officer control at this intersection.
- G. The Certificate Holder shall post warning signs on SR 144 indicating the entrance of heavy vehicles into the roadway. Clearing and grubbing on both sides of the driveway shall be performed to provide adequate sight lines.
- H. The Certificate Holder shall incorporate travel demand management (“TDM”) strategies to reduce the overall number of vehicles traveling to and from the Project site.
- I. The Certificate Holder shall distribute instructions to trucking companies that will deliver supplies, etc. to and from the site to utilize NYS Routes 32 and 9W, and to avoid Glenmont Road (sometimes called Feura Bush Road).
- J. During peak construction periods, the contractor shall alert the Bethlehem School District, the Town Supervisor’s Office, the Town Building and Engineering Department, and the Town of Bethlehem Police Department on a weekly basis of expected levels of traffic to be generated by the plant construction for the following week.
- K. The Certificate Holder shall make available to construction workers and truck operators maps that show preferred major arrival and departure routes.
- L. The Certificate Holder shall provide for traffic control officers during the morning and evening Peak Hours (6:30 – 9:00 A.M. and 3:30 – 6:00 P.M.) for the construction period beginning with Act ID 500 through Act ID 605

per Figure 2.2.11-1 of the Application. Before the start of construction, the contractor shall arrange for the NYSDOT to update the cycle length and phase timing of the traffic signal at the intersections of Rt. 9W and Rt. 32, Rt. 32 and the I-787 southbound off ramp and all traffic signals between I-787 and the plant.

- M. The Certificate Holder shall not dispose of construction-related waste by burning those waste materials on the site. All construction wastes shall be disposed of in accordance with applicable laws and regulations.
- N. The Certificate Holder shall pay the building permit fee in compliance with the Town of Bethlehem Code in an amount not to exceed \$90,000. The Building Inspector of the Town will undertake the customary inspections of the facility and review and comment on, as necessary, the Compliance Filings by the Certificate Holder.
- O. The Certificate Holder shall submit final site plans and building plans which include the appropriate certifications of a New York State Licensed Engineer or Architect that the Facility, as designed, is in compliance with Flood Damage Prevention Hazard Regulations of the Town of Bethlehem and the New York State Uniform Fire Prevention and Building code (Building Code). Upon completion of the Project, the Certificate Holder's New York State licensed engineer or architect shall issue a certification that the Project was constructed in compliance with the Building Code. The Certificate Holder may seek a variance in accordance with §381(1)(f) of the Executive Law. (Note: the Certification should be treated as a Compliance Filing. 16 NYCRR §1003.3. Copies of the "as built" plans also need to be filed with the Town of Bethlehem, NYSDPS and the Siting Board/NYSPSC, as the case may be.)

Prior to commencing construction other than demolition, MOSF related work, site clearing preparation, the Certificate Holder shall submit a licensing package addressing implementation of these requirements, and providing, *inter alia*, that:

1. The Town of Bethlehem will be provided with two (2) complete sets of plans for each building, including structural plans, plumbing, electrical schematics, HVAC details and elevations;
2. The licensed Architect or Engineer mentioned above must stamp any non-material alteration or field changes in design, detail or plans and submit such change to the Town of Bethlehem Building Department as part of "as built" plans within 180 days after Project completion;

3. All test reports on soil compaction or soil, concrete or structural analysis must be submitted to the Town of Bethlehem Building Department; and
 4. The periodic reports on compliance referenced above must be submitted at least monthly.
- P. The Certificate Holder shall submit an environmental compliance plan to ensure (1) implementation and maintenance of required environmental mitigation measures; (2) compliance with the terms of this Certificate; and (3) compliance with applicable federal, state and local statutes, ordinances, rules and regulations. The Compliance Plan shall include:
1. the name(s) of the environmental inspector(s) and a statement of qualifications for each inspector demonstrating sufficient knowledge and experience in environmental matters to complete the inspections and audits;
 2. a certification of the authority of the inspector(s) to "stop work" in cases of non-compliance or imminent environmental or safety hazard;
 3. provision for deployment of more than one inspector if required to monitor major field operations;
 4. a proposed checklist of matters to inspect for compliance, including the specific items or locations to be inspected, the inspection method to be employed (e.g., visual, auditory, testing by instrument, etc.), and acceptability criteria to be applied by the inspector(s);
 5. a procedure setting forth how the Certificate Holder shall respond to and correct problems found by the inspector(s);
 6. a schedule for monthly submission of inspection reports during construction and submission of audit checklists, together with a written explanation of problem(s) signed by the inspector(s) and an authorized representative of the Certificate Holder, to DPS Staff, DEC Staff, and local agency and/or building inspectors; and
 7. a schedule for submission to DPS, DEC, and appropriate local agencies of an annual certification by a responsible corporate official of compliance with the terms of this Certificate during the first two years of operation of the Facility.

IV. Construction – Energy Facility

- A. The Certificate Holder shall construct a hybrid cooling system with a plume design point of 20°F at 85% relative humidity.
- B. The Certificate Holder shall construct the Facility pursuant to the applicable provisions of final air permits issued by NYSDEC under Article 19 of the ECL, the PSD program (40 C.F.R. § 52.21 and 40 C.F.R. Part 124), the final SPDES permit issued by NYSDEC, and the final MOSF license issued by NYSDEC.
- C. The Certificate Holder shall file as a Compliance Filing, and shall implement, a soil erosion and sediment control program involving measures such as silt fencing, restriction of heavy traffic to designated corridors and implementation of dust abatement practices. In addition, the Certificate Holder shall commence cleanup and revegetation operations immediately after the completion of construction activities.
- D. The Certificate Holder shall design the new powerhouse and steam turbine buildings in a manner that will be similar or complimentary in character to the existing powerhouse with a focus on the aesthetics of the building exteriors. The other project elements including the stacks, cooling tower, roof, and ancillary equipment will use darker non-reflective colors and materials to minimize visual contrast with the background landscape. An architectural drawing and detail plan specifying color, materials, and architectural treatments will be provided to NYSDPS, RCEMC, Scenic Hudson and the Town of Bethlehem for comment prior to its submission as a Compliance Filing.
- E. Details of vegetation clearing, tree protection measures and landscape plantings shall be presented as compliance filings. The goals of these compliance filings are, to the maximum extent practicable, maintain existing vegetation on site for continued site screening and plant new vegetation at key locations to fill in or enhance existing screening.
- F. The Certificate Holder shall submit an asbestos abatement plan to the Siting Board as a Compliance Filing. The Certificate Holder shall also file a copy of the asbestos abatement plan with the Town of Bethlehem. The Certificate Holder shall conduct all asbestos removal in accordance with the applicable New York State Department of Labor and USEPA standards.
- G. The Certificate Holder shall implement the following measures to mitigate or avoid in-river impacts during construction:
 1. Perform activities in accordance with applicable provisions of the final water permits issued by NYSDEC and ACOE.

2. To the extent practicable, no in-river construction will occur from April 1 through July 15 in an effort to minimize the impacts of sediment suspension (i.e., turbidity) on aquatic biota that could potentially occur in the area.
3. If scheduling requires such activities to occur during April 1 through July 15, the Certificate Holder shall provide NYSDEC Region 4 Division of Fish and Wildlife Fisheries Manager with an explanation of the work to be conducted during this time period at least 30 days in advance of performance of those activities for review and approval. The NYSDEC's approval of such activities shall not be unreasonably withheld.

V. Construction – Gas and Electrical Interconnects

- A. The Certificate Holder shall design, engineer and construct (or fund the construction of) the transmission interconnection such that its operation will comply with the “Interim Guidelines on Limits of Exposure to 50/60 Hz Electric and Magnetic Fields, “ of the Non-Ionizing Radiation Committee of the International Radiation Protection Association.
- B. The Certificate Holder shall design, engineer, and construct the transmission interconnection such that its operation shall comply with the electromagnetic field (“EMF”) standards established by the NYSPSC in Opinion No. 78-13 (issued in June 19, 1978) and the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities (issued September 11, 1990), respectively.
- C. Except for facilities owned by Niagara Mohawk Power Corporation or Central Hudson Gas & Electric, the Certificate Holder is authorized to construct and shall design, engineer, and construct the proposed transmission facilities in a manner consistent with the information provided in the System Reliability Impact Study (“SRIS”) approved by the TPAS, the NYISO Operating Committee and the NYISO 2001 Transmission Reliability Assessment Study (“TRAS”), and in accordance with the applicable and published planning and design standards and best engineering practices of Niagara Mohawk and the NYISO, the New York State Reliability Council (“NYSRC”), Northeast Power Coordinating Council (“NPCC”), North American Electric Reliability Council (“NERC”), and North American Electric Reliability Organization (“NAERO”), and successor organizations depending upon where the facilities are to be built and which standards and practices are applicable. Specific requirements shall be those required by the NYISO Operating Committee and TPAS in the approved SRIS and by any interconnection or facilities modification agreement negotiated with Niagara Mohawk. Any construction at substations owned by Central Hudson or Niagara Mohawk shall be performed by those entities or under their direction.

- D. The Certificate Holder shall ensure that construction of any Gas Transmission Line complies with all applicable State and federal safety regulations, including but not limited to, 16 N.Y.C.R.R. Part 255.
 - E. The re-routed Albany #8 – New Scotland Transmission line shall be located to minimize its visibility from River Road. All new single-shaft steel poles shall be a non-reflective color and non-specular conductors shall be required for the re-routed line as well as all electrical interconnects.
 - F. An archaeological team shall monitor the excavations prior to placement of the gas interconnection lines. In the event of identification of significant cultural resources during Project construction, they will be evaluated, documented, and recovered according to professional archeological standards by the archeological team.
 - G. The Certificate Holder shall prepare and submit as Compliance Filings a Transmission Line Relocation Plan and Profile drawings for the proposed relocation of Albany #8 – New Scotland Transmission line on the BEC site. The plan and profile drawings shall show details including: BEC facility site plans; ROW location; existing and proposed structure locations, heights, color and design; details of vegetation clearing, trimming, protection, and disposal. The Plan and Profile drawings and details shall be submitted to staff for review 30 days prior to planned submittal as compliance filings.
- VI. Operation and Maintenance
- A. The Certificate Holder shall operate the Facility pursuant to the final air permits issued by NYSDEC under Article 19 of the ECL, the Prevention of Significant Deterioration program (40 C.F.R. § 52.21 and 40 C.F.R Part 124), the final SPDES permit issued by NYSDEC, and the MOSF License, as such permits may be modified or amended by NYSDEC from time to time.
 - B. The Certificate Holder shall operate the Project in accordance with the approved tariffs and applicable rules and protocols of Niagara Mohawk, NYISO, NYSRC, NPCC, NERC, and NAERO, and successor organizations. The Certificate Holder agrees to obey the lawful directives of the system operator at the NYISO and the Niagara Mohawk operator or their successor. The Certificate Holder reserves the right to seek subsequent review of any specific operational orders of the NYISO, the Federal Energy Regulatory Commission, or Niagara Mohawk, in any appropriate forum.

- C. The Certificate Holder shall ensure public safety and reliability of the natural gas interconnection facilities by including valves, regulators, metering equipment, service taps, and related piping.
- D. The Certificate Holder shall implement the following measures to mitigate or avoid noise impacts during Project operation:
1. Construct the building wall and roof with a minimum sound transmission class rating of 35.
 2. Install duct silencers or acoustical louvers, as appropriate, for all fan ventilation openings.
 3. Install roll-up doors with a minimum 16-gauge thickness and gasketed.
 4. Avoid operable windows on the west side of the HRSG building and the Steam Turbine building.
 5. Install duct silencing on combustion turbine air intakes and in HRSG outlet transition or exhaust stack.
 6. Use low speed airfoil blade fans in the cooling tower.
 7. Meeting design goals for all acoustic treatments.
 8. House combustion turbines individually in enclosures such that the sound level at a distance of 5 feet outside the enclosures does not exceed 85 dBA.
 9. Install blow-off silencers on all steam and air discharges outside of the plant. The silencers will be sized to ensure that blow-off sound levels do not exceed a sound level of 90 dBA at 25 feet.
- E. The Facility shall be designed to meet the CNR rankings listed in Table 4.6.2-4 of the Application Supplement and shall meet a CNR ranking of C at the subject receptors.
- F. The Certificate Holder shall conduct a post-construction ambient noise monitoring program within six months of the starting of commercial operation to demonstrate that, based on noise measurements and acoustic observations, the operating plant complies with the acoustic design goal of a CNR ranking of C. The CNR analysis, as described in the Application Supplement, will include the ambient noise data presented in the Application Supplement and the sound monitoring data of the operating plant. Prior to conducting the noise monitoring program, a protocol will be developed and submitted for approval as a Compliance Filing subsequent to the issuance of the Certificate.

- G. The Certificate Holder shall minimize impacts to vegetation resulting from salt and trace metal deposition associated with cooling tower operation by using highly efficient drift eliminators.
- H. The Project site shall be maintained in accordance with a Facility Maintenance Plan and Vegetative Maintenance Plan, which shall incorporate maintenance of the Albany Steam Station structures that will remain on the Project site. The Facility Maintenance Program and Vegetative Maintenance Plan shall be filed with the NYSPSC within six months prior to commencing commercial operations at the Facility.
- I. The Certificate Holder shall install and use stack heater or alternate mitigation technology (such as the design of the heat recovery steam generators to raise stack temperatures) designed for daily operation between one half hour before sunrise and one half hour after sunset when a visible stack plume is expected to occur and distillate oil is burned in a unit. PSEGRY shall provide plans, specifications and an operational protocol to the Board as part of a Compliance Filing.
- J. The Certificate Holder shall install warning lights on the stacks as required by FAA Advisory Circular AC 70/7460-1K (USDOT, 2000). A dual lighting system consisting of red lights for nighttime and medium intensity flashing white lights for daytime and twilight use will be installed approximately 5 feet below the top of each stack.
- K. The Certificate Holder shall install outdoor lighting on the new powerhouse. Best management practices shall be employed to minimize unwanted glare and fugitive light while ensuring a safe and secure work environment. Primary principles to be employed include: orienting lighting downward; use of task lighting; use of cut-off shields to prevent upward light; and limiting illumination to the level necessary for employee safety and function. Detailed final lighting plans shall be presented as a Compliance Filing.
- L. The Certificate Holder shall abide by the Facility's best management practices for storm water mitigation set forth in the SWPPP .
- M. The Albany Steam Station shall be permanently retired upon commercial operation of the Project

Joint Stipulations Exhibit List

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BETHLEHEM ENERGY CENTER**LIST OF ACRONYMS**

ACOE	U.S. Army Corps of Engineers
ACSR	Aluminum conductor steel reinforced
Al	Aluminum
BEC	Bethlehem Energy Center
BTA	Best Technology Available
Btu	British thermal unit
Btu/kWh	British thermal units per kilowatt hour
Btu/lb	British thermal unit per pound
°C	Degrees Centigrade
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CEM	Continuous Emissions Monitoring
CESQG	Conditionally Exempt Small Quantity Generator
CFC	Chloro-fluorocarbon
CFR	Code of Federal Regulations
cfs	Cubic feet per second
CMP	Coastal Management Program
CNG	Consolidated Natural Gas
CNR	Composite Noise Rating
CO	Carbon monoxide
CORMIX	Cornell Mixing Zone Model
CTG	Combustion Turbine Generator

CWA	Clean Water Act
CWP	Circulating Water Pump
dB	Decibels
dba	Decibels A-Weighted
DO	Dissolved Oxygen
ECL	New York Environmental Conservation Law
EMF	Electromagnetic Field
EPA	United States Environmental Protection Agency
EROS	Earth Resources Observations Systems
EIS	Environmental Impact Statement
EPC	Emission Pollution Control
ERC	Emission Reduction Credit
°F	Degrees Fahrenheit
FAA	Federal Aviation Administration
ft	Feet
ft/sec	Feet per second
FTE	Full Time Employee
gpd	Gallons per day
gpm	Gallons per minute
HAP	Hazardous Air Pollutant
H ₂ SO ₄	Sulfuric acid mist
HRSG	Heat Recovery Steam Generator
Hz	Hertz
IGM	Integrated Gaussian Model
ISCST3	Industrial Source Complex Short-Term Dispersion Model, Version 3

ISO	Independent System Operator
Kcmil	Thousand circular mils
KJ/MW	Kilojoules per Magawatt
kV	Kilovolt
kW	Kilowatt
kWh	Kilowatt hour
L _{eq}	Sound level equivalent
L _{max}	Highest sound level reached during a 10 minute interval
L ₀₁	A-weighted sound pressure levels exceeded 1 percent of each interval monitored
L ₁₀	A-weighted sound pressure levels exceeded 10 percent of each interval monitored
L ₅₀	A-weighted sound pressure levels exceeded 50 percent of each interval monitored
L ₉₀	A-weighted sound pressure levels exceeded 90 percent of each interval monitored
LAER	Lowest Achievable Emission Rate
lb/hr	Pounds per hour
lb/MMBtu	Pounds per Million British thermal units
lb/MW _{hr}	Pounds per Megawatt Hour
lbm/hr	Pounds-mass per hour
lbs	Pounds
LOS	Level of Service
MACT	Maximum Achievable Control Technology
MCS	Management Classification System
mgd	Million gallons per day

MLW	Mean Low Water
MMBtu/hr	Million British thermal units per hour
mph	Miles per hour
msl	Mean Sea Level
MVA	Mega Volt Amps
MW	Megawatts
MWH	Megawatt Hour
NAAQS	National Ambient Air Quality Standards
NANSR	Non Attainment New Source Review
NCDC	National Climatic Data Center
NEPOOL	New England Power Pool
NERC	North American Electric Reliability Council
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NH ₃	Ammonia
NHMC	Nonmethane hydrocarbons
NHP	National Heritage Program
NMFS	National Marine Fisheries Service
NMHC	Non Methane Hydrocarbons
NMPC	Niagara Mohawk Power Corporation
NOAA	National Oceanic and Atmospheric Administration
NO ₂	Nitrogen dioxide
NOI	Notice of Intent
NO _x	Nitrogen oxides
NPCC	Northeast Power Coordinating Council
NSPS	New Source Performance Standards

NWI	National Wetlands Inventory
NWP	Nationwide Permit
NYAAQS	New York Ambient Air Quality Standards
NYCRR	New York Codes, Rules and Regulations
NYISO	New York Independent Systems Operator
NYPA	New York Power Authority
NYPP	New York Power Pool
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOS	New York State Department of State
NYSDOT	New York State Department of Transportation
NYSDPS	New York State Department of Public Service
NYSEG	New York State Electric and Gas
NYSM	New York State Museum
NYSPSC	New York State Public Service Commission
NYSRC	New York State Reliability Council
O ₂	Oxygen
O ₃	Ozone
OCAG	Offsite Consequence Analysis Guidance
O&M	Operation and Maintenance
OPA	Oil Pollution Act
OPRHP	Office of Parks, Recreation and Historic Preservation
OTR	Ozone Transport Region
PAHs	Polynuclear Aromatic Hydrocarbons

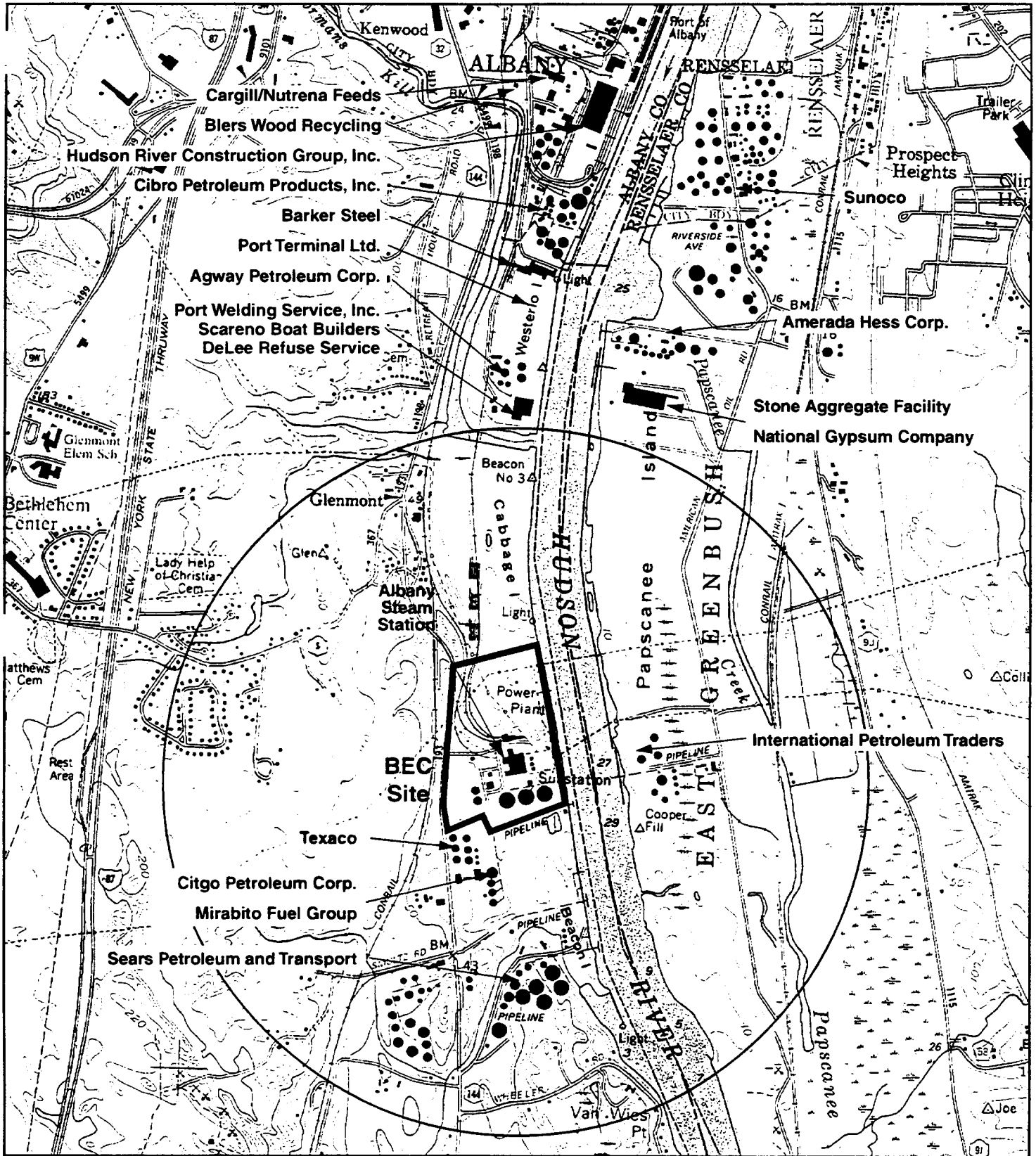
Pb	Lead
PBS	Petroleum Bulk Storage
PCN	Pre-Construction Notification
PCBs	Polychlorinated biphenyls
PEM	Palustrine Emergent Marsh
PFO	Palustrine Forested Wetland
PG	Pasguill-Gifford
PIP	Public Involvement Program
PM	Particular Matter
PM ₁₀	Particulate matter sized 10 micrometers and less
PM _{2.5}	Particulate matter sized 2.5 micrometers and less
POTW	Publicity Owned Treatment Works
ppm	Parts per million
ppmdv	Parts per million by dry volume
ppt	Parts per trillion
PSC	New York State Public Service Commission
PSD	Prevention of Significant Deterioration
PSEGNY	PSEG Power New York Inc.
psi	Per square inch
psia	Per square inch absolute
psig	Per square inch gauge pressure
PSL	New York Public Service Law
PSS	Palustrine Scrub/Shrub
PUB	Palustrine Unconsolidated Bottom
RACM	Regulated Asbestos Containing Material

RACT	Reasonably Available Control Technology
RCEMC	Rensselaer County Environmental Management Council
RCRA	Resource Conservation and Recovery Act
RH	Relative humidity
rkm	River kilometer
Rmi	River mile
RMP	Risk Management Plan
ROW	Right-of-way
rpm	Revolutions per minute
RTDM	Rough Terrain Dispersion Model
SACTI	Seasonal and Annual Cooling Tower Impact model
SASS	Scenic Areas of Statewide Significance
SAV	Submerged Aquatic Vegetation
SCD	Security Constrained Dispatch
SCR	Selective Catalytic Reduction
SCUC	Security Constrained Unit Commitment
SEP	State Energy Plan
SEQRA	New York State Environmental Quality Review Act
SESCP	Soil Erosion and Sediment Control Plan
SGC	Short-term Guideline Concentration
SIA	Significant Impact Area
SIL	Significant Impact Level
SIP	State Implementation Plan
SO ₂	Sulfur dioxide
SPCC	Spill Prevention, Control and Countermeasure Plan

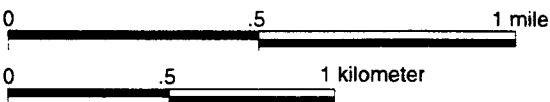
SPL	Sound Pressure Level
SPDES	State Pollutant Discharge Elimination System
SPS	Special Protection Scheme
SPR	Spill Prevention Report
SR	State Route
SRIS	System Reliability Impact Study
SSD	Stopping Sight Distance
ST	Steam Turbine
STG	Steam Turbine Generator
SWPPP	Storm Water Pollution Prevention Plan
TDM	Travel demand management
T&E	Threatened and Endangered
TGP	Tennessee Gas Pipeline Company
TL	Total Length
tons/yr	Tons per year
TPAS	Transmission Planning Advisory Subcommittee
TRAS	Transmission Reliability Assessment Study
TRC	Total Residual Chlorine
TSP	Total suspended Particulate matter
TSS	Total Suspended Solids
ug/m ³	Micrograms per cubic meter
USACOE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

USGS	United States Geological Survey
VIA	Visual Impact Assessment
VOC	Volatile Organic Compounds
VPH	Vehicles per hour
VTS	Vertical Traveling Screens

SITE MAP



Map Source: NYSDOT, 1998. Delmar and East Greenbush Quadrangles



PSEG
Power New York Inc.
Bethlehem Energy Center

FIGURE 3.1.1-1
Commercial/Industrial Facilities
Located Along Hudson
River Waterfront