

**South Pier Improvement Project**  
**Final Scope of Work**  
**for**  
**Draft Environmental Impact Statement**  
**April 14, 2008**

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**1.0 Introduction:**

The Astoria Generating Company, L.P., (AGC) a USPowerGen Company is proposing to improve the Gowanus Generating Station (GGS) with the addition of approximately 100 megawatts (MW) of new, cleaner, state-of-the-art electric generation while reducing the actual net emissions from the modified facility by a number of means which may include implementing enforceable permit limits, emission control technologies, and other environmental improvements within the community. The proposed enhancement to the GGS, hereafter referred to as the "South Pier Improvement Project" consists of two distinct components, the installation of one GE LMS 100 combustion turbine on an industrially zoned, existing south pier at the GGS and an emissions reduction strategy for the existing electric generating equipment.

The GGS is located in the Gowanus and Greenwood sub-load pocket. During periods of high electrical demand (peak-load), this area becomes electrically constrained and requires a significant amount of additional power to be generated within the pocket (peaking capacity) to support the electric system. The need for this additional power within the sub-load pocket is expected to continue increasing into the foreseeable future. Currently, the existing GGS combustion turbines are utilized to meet peak-load demands and maintain the electric grid stability. The new capacity at GGS will relieve a portion of the load from the older GGS units, allowing them to run less often. The newer, cleaner, and more efficient unit will be able to meet the current demand with less fuel, and therefore reduced air emissions, while simultaneously preparing for future growth in the area by providing increased capacity to meet growing electric demand within the sub-load pocket.

Though no significant adverse environmental impacts are anticipated as a result of the project, AGC has committed to voluntarily prepare and submit a Draft Environmental Impact Statement (DEIS) in order to fully address potential community concerns, including Environmental Justice issues. Due to the likelihood that the proposed project will require modification to the existing air permit at the GGS, and the fact that air quality is likely to be the overriding issue of concern for the community, the New York Department of Environmental Conservation (NYSDEC) has been determined to act as the Lead Agency for the State Environmental Quality Review Act (SEQRA) process.

The Draft Scope of Work has been prepared under the review of NYSDEC. It identifies and describes the range of environmental studies to be conducted to evaluate the potential environmental impacts of the proposed project. This document is being distributed by the NYSDEC, as the SEQRA lead agency, to the public, and to all interested and involved agencies for

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review and comment. After consideration of public and agency comments, the NYSDEC will issue a Final Scope of Work for the DEIS.

Copies of this Draft Scope of Work can be viewed at the following locations:

Community Board 7  
4201 4th Avenue, Brooklyn, NY 11232  
phone: 718-854-0003  
fax: 718-436-1142  
email: [communityboard7@yahoo.com](mailto:communityboard7@yahoo.com)

NYC Public Library  
5108 4th Avenue in Sunset Park, Brooklyn, NY 11220  
phone: 718-567-2806

NYC Public Library  
7 Wolcott Street in Red Hook, Brooklyn, NY 11231  
phone: 718-935-0203

NYSDEC Region 2 Office  
47-40 21<sup>st</sup> Street  
Long Island City, NY 11101

This Draft Scope of Work can be viewed and downloaded from the South Pier Improvement Project (or NYSDEC) website ([www.USPowerGen.com](http://www.USPowerGen.com)). In addition to receiving oral comments at the public meetings, written comments may be submitted in accordance with the public notice. Mr. Kevin Kispert is NYSDEC's project manager and primary contact regarding this document. Comments and questions pertaining to the SPIP may be emailed through the South Pier Improvement Project website ([www.USPowerGen.com](http://www.USPowerGen.com)) or submitted to Mr. Kispert and copied to the contact person for the project identified below.

The NYSDEC project manager is:  
Kevin Kispert  
NYSDEC, Division of Environmental Permits, Region One  
Stony Brook University  
50 Circle Road, Stony Brook, NY 11790-3409  
phone: 631-444-0365  
fax: 631-444-0360

The contact person for the project is:  
David Perri  
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505 Fifth Ave, 21st Floor, New York, NY 10017  
phone: 1-888-398-USPG or 1-888-398-8774

## **2.0 Description of Proposed Project**

The Astoria Generating Company, L.P., (AGC) a USPowerGen Company is proposing to improve the Gowanus Generating Station (GGS) with the addition of approximately 100 megawatts (MW) of new, cleaner, state-of-the-art electric generation while reducing the actual net emissions from the modified facility by a number of means which may include implementing enforceable permit limits, emission control technologies, and other environmental improvements within the community.

The South Pier Improvement Project consists of two distinct components, the installation of one GE LMS 100 combustion turbine and an emissions reduction strategy for the existing electric generating equipment. Benefits of the Project are that it will provide additional cleaner electric generation while reducing the actual net emissions for carbon monoxide (CO), particulate matter PM<sub>2.5</sub>, PM<sub>10</sub>, and nitrogen and sulfur oxides (NO<sub>x</sub> and SO<sub>x</sub>), which are precursors to PM<sub>2.5</sub> formation. NO<sub>x</sub> is also a precursor to ozone formation.

These air quality benefits will be achieved through one or more emission reduction strategies which may include implementing enforceable permit limits, emission control technologies, and other environmental improvements within the community.

The proposed project will be built on approximately 2.25 acres on the south pier at the GGS property. The entrance to the GGS is located at 29th Street and 2nd Avenue, Brooklyn NY 11232. The south pier of the GGS is approximately 200 feet north of the GGS entrance and extends into the Gowanus Bay. The pier is a previously developed site consisting of compacted fill secured by a steel sheet-piled bulkhead. Due to the structural integrity of the existing bulkhead, the south pier is properly characterized as a well-defined earthen landmass, which can support a project of this scale. The pier is not suspended over water.

Areas that would be used during construction for material lay down, equipment storage, and construction parking will be identified in the DEIS. Figure 1 depicts the Site location on a United States Geological Survey (USGS) digital raster grid (Jersey City and Brooklyn Quad). Figure 2 depicts a preliminary site plan and the existing location of electric and gas interconnections.

The project site is currently zoned per Permitted Use (§42-15 B); electric power or steam generation plants and is located in a Significant Maritime Industrial Area (SMIA) as designated under the City's Waterfront Revitalization Plan. The land in the vicinity of the Project is listed as Manufacturing District M3-1 (M3-1 is the heaviest industrialized district recognized by the City). The nearby Metropolitan Detention Center (29th Street between 2nd and 3rd Avenue), an administrative facility which houses male and female inmates, is also located in the Manufacturing District M3-1. The project will be designed to be consistent with the architectural objectives of the Brooklyn waterfront redevelopment.

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The proposed project will utilize one GE LMS 100 combustion turbine. Natural gas would be utilized as the primary fuel with ultra low sulfur distillate fuel oil (ULSD) as a backup fuel for up to 720 hours annually. The new combustion turbine will have the following emission control technologies: selective catalytic reduction (SCR), and a CO oxidation catalyst (if required). The GE LMS 100 combustion turbine is approximately 100 feet in length (the overall length with the ancillary equipment is approximately 125 feet). The main combustion turbine and generator has a gross shipping weight of approximately 730,000 pounds.

The new combustion turbine will be electrically connected into the adjacent Con Edison Gowanus Substation which is the same substation to which the existing GGS facility is already connected. The GGS has a functioning gas transmission and distribution system interconnect with sufficient capacity for the new turbine. No new electric and gas transmission infrastructure is required to construct and operate the Project. ULSD supply would be provided by barge delivery to the existing storage facilities located at the GGS, and thus would not contribute to increased truck traffic within the neighborhood.

### **3.0 Summary of Anticipated Approvals and Involved and Interested Agencies**

Development and operation of the South Pier Improvement Project may require or involve the following discretionary federal, state, and local regulatory agency notifications, actions, permits and approvals.

- NYSDEC: NYS Environmental Quality Review Act (SEQR). 6 NYCRR 617.
- Draft Environment Impact Statement (DEIS) in order to fully disclose and address all potential environmental impacts. DEIS preparation is a component of the SEQR process. 6 NYCRR 617.9 and 617.10.
- NYSDEC Title V Permit Modification. 6 NYCRR 201-6.
- State Facility Air Permit. 6 NYCRR 201-5.
- Acid Rain Permit (Title IV) 6 NYCRR 201-6.
- Subpart 227-2 Reasonably Available Control Technology (RACT) For Oxides of Nitrogen (NO<sub>x</sub>)
- Proposed CO<sub>2</sub> Budget Permit 6 NYCRR 242-3 (New York State component of the Regional Greenhouse Gas Initiative (RGGI)).
- Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Annual Trading Permit 6 NYCRR 244-3 and CAIR SO<sub>2</sub> Trading Permit 6 NYCRR 245-3.
- Updated Spill Prevention Control and Countermeasure Plan (SPCC) due to new piping 40 CFR 112 and 6 NYCRR 612-614.

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- State Pollutant Discharge Elimination System (SPDES) Permit Modification for Additional Stormwater 6 NYCRR 750, including an update to the existing Best Management Practices (BMP) plan.
- SPDES General Permit for Stormwater Discharge from Construction Activity (including SWPPP) GP-02-01, 6 NYCRR 750.
- NYCDEP Certificate of Operation - 15 RCNY Chapter 2.
- Triennial Air Certificate revision for Gowanus/ Narrows - NYC Administrative Code, Title 24 Air Pollution Control (NYCDEP).
- NYS Chemical Bulk Storage (NH<sub>3</sub> tank) 6 NYCRR 596-599.
- NYS Petroleum Bulk Storage 6 NYCRR 613.
- Increase water use connection/approval to city (NYCDEP).
- Federal Aviation Administration (FAA) Notice of Proposed Construction.
- Fire Department of New York (FDNY) Storage Permit (aqueous ammonia <20% concentration).
- Modification of Existing Coast Guard Response Plan.
- Waterfront Revitalization Program Consistency Review.
- Certificate of Public Convenience and Necessity (CPCN), pursuant to Section 68 of the Public Service Law.

**Note:** The Potential to Emit (PTE) for the South Pier Improvement Project will be less than major modification threshold emission levels. Thus, PSD and NNSR (6 NYCRR 231, including the proposed revisions) will not be required.

#### **4.0 Proposed Draft Environmental Impact Statement Scope of Work**

Though no significant adverse environmental impacts are anticipated as a result of the proposed project, AGC will prepare and submit a Draft Environmental Impact Statement (DEIS) in order to fully address potential community concerns, including Environmental Justice issues. The DEIS will include all elements required by 6 NYCRR 617.9, and will include the following sections:

- DEIS Cover Sheet** All draft and final EISs must be preceded by a cover sheet stating: whether it is a draft or final EIS; the name or descriptive title of the proposed project; the location (county and town, village or city) and street address, if applicable, of the proposed project; the name and address of the lead agency and the name and telephone number of a person at the agency who can provide further information; the names of individuals or organizations that prepared any portion of the statement; the date of its acceptance by the lead agency; and in the case of a draft EIS, the date by which comments must be submitted.

- ii. **DEIS Table of Contents** The Table of Contents will include a listings of tables, figures, maps, appendices/attachments and any items that may be submitted under separate cover (and identified as such).
- iii. **Executive Summary** The executive summary will include a brief description of the proposed project and a listing of potential environmental impacts and proposed mitigation measures. A summary will be provided of the approvals and permits required, and the alternatives to the proposed project that are evaluated in the DEIS.
- iv. **Project Purpose and Public Need** The DEIS will contain a description of the public need for the project, including a brief overview of the environmental, social and/or economic benefits anticipated due to the proposed project and the unique nature and characteristics of the load pocket will be described.

AGC is required to file for a Certificate of Public Convenience and Necessity from the Public Service Commission under Section 68 of the Public Service Law. As part of that process, AGC will need to make a showing before the Commission that the proposed project is in the public interest and economically feasible, and that the project proponent is able to finance the project (16 NYCRR Section 21.3). The elements necessary for such a showing will be discussed in detail in the DEIS. The Department of Public Service will be an "involved agency" for purposes of reviewing the entire DEIS.

Expected future growth in demands of the NYISO electric system demands will be presented as well as a discussion as how the proposed project fits within the existing and future NYISO electrical system. The need for future generation capacity, including the NYISO's estimate which calls for additional electric supply by 2011 for increased reliability, will be discussed along with regulatory requirements for the location of generation facilities.

- v. **Description of the Proposed Project** This section of the DEIS will provide a comprehensive description of the site in a regional and local context and provide a detailed discussion of the proposed project.

- a. **Site Description**

A general description of the project area will include topography, existing road networks, surface waters, geographic boundaries, physiographic characteristics of the project area, tax map boundaries of participating and adjacent land parcels, parcel acreages, and any easement or restrictions that could affect the proposed project.

Dominant land use within and adjacent to the project area will be presented in the DEIS. Other pending developments (including other electric generation projects) within or adjacent to the project area will be discussed.

The relationship of the project area to wetland areas, streams courses, residential areas, schools, hospitals, clinics, correction facilities, retirement homes, parklands, historic

properties, or any other recognized or protected natural or man-made features will be presented in the DEIS.

The DEIS will provide a review of the South Pier Improvement Project's consistency with the coastal policies contained in 19 NYCRR 600.5 and stipulations contained in the New York City New Waterfront Revitalization Program (WRP) and will include a certified New York City WRP Consistency Assessment Form. As defined in the WRP, the proposed Project is located in a Significant Maritime Industrial Area (SMIA), which is a waterfront area considered to be particularly well-suited for maritime and industrial development, including utilities and energy facilities. A discussion of the proposed project's consistency with the policies in the WRP will be provided. In addition, a description of how the proposed project will be designed in accordance with the architectural objectives of the Brooklyn waterfront redevelopment will be included in the DEIS.

#### **b. Detailed Description of the Proposed Project**

A description of the size, generating capacity and layout of the proposed project will be detailed in the DEIS.

Site plans, depicting the project layout, illustrating the location of the proposed electric generating equipment, substation and related electric transmission facilities, staging and storage areas, parking areas, operation and maintenance facilities, lighting, fences, and gates will be presented in the DEIS. Each of these components will be discussed relative to the locations of the adjacent land parcels and private buildings, existing overhead electric transmission lines, property lines, wetlands, and public roads. Determining factors for selection of equipment will be discussed. In addition, a brief description of the decommissioning plan will also be provided. Components of the project (i.e., ammonia storage system and associated piping) that will require registration/licensing under the Chemical Bulk Storage Regulations (CBS) and the Petroleum Bulk Storage Regulations will be identified and registrations and licenses will be obtained prior to operation. The DEIS will include a description of any fuel and lube oil storage tanks, any chemical storage tanks, associated piping systems and a description of the proposed secondary containment structures to be constructed around tanks and off loading areas.

The DEIS will provide a description of gas and electrical interconnections, security measures and proposed off-site improvements, if any, that will be necessary to build and operate the project. No off-site improvements are anticipated at this time with the exception of the electrical interconnection work in the substation.

#### **c. Construction and Operation**

Impacts from construction and operation of the proposed project will be described and their significance evaluated in the DEIS. Construction issues to be presented in the DEIS include construction schedule/duration, anticipated construction employment,

construction sequencing, routing of construction traffic along local roads, and equipment deliveries via barge.

Despite the fact that the addition of the proposed new generating equipment will not result in large quantities of solid waste, a summary description of construction activities including clearing, treatment of natural products to be removed during construction (e.g. disposal of cut material, etc.), civil work (roads and foundations), turbine installation, and site restoration will be included in the DEIS. Excess soils designated for offsite disposal will be properly characterized and disposed of by a licensed and insured hauler according to applicable regulatory guidelines. Sources and quantities of construction materials to be obtained from local sources (concrete, gravel, etc.) will be identified. Safeguards to be taken to protect local citizens from any construction-related hazards will be discussed.

The DEIS will include a discussion of the long-term ownership, operation, inspection, and maintenance requirements of all project components/improvement. Information on annual rate of power generation, routine maintenance requirements, long-term employment, effect on local electric rates, and useful life of the project will be presented.

#### **d. Reviews, Approvals and Other Compliance Determinations**

Governmental entities having approval over the project, including the nature of their jurisdiction and the approvals required from each entity, whether or not such governmental entities are subject to the SEQRA process will be listed. The basis of the approval authority of each jurisdiction will be properly cited.

#### **vi. Existing Conditions, Potential Impacts and Mitigation Measures**

This section of the DEIS will identify the existing environmental conditions, potential impacts of the proposed project, and proposed mitigation measures as appropriate for each of the major issues identified in this Draft Scoping Document. The format or organization of this section will include the following subsection headings for each topic discussed:

*Existing Conditions*

*Potential Impacts*

*Mitigation Measures*

This format provides for a more meaningful presentation of the environmental issues in a reader-friendly form and will allow the reader to focus on individual impact issues.

This section will be supplemented with documentation of existing conditions and the evaluation of potential for adverse impacts by including information, maps, illustrations or graphics that support each topic area including aerial photographs, topographic maps, agency correspondence, Geographic Information System (GIS) data, completed support

studies, etc. This documentation will be appended to the DEIS. Both temporary (construction-related) and permanent (operational) impacts will be addressed.

**a. Geology, Soils and Topography**

Because the proposed project is to be developed on an existing industrially zoned bulkheaded earthen pier, it is not likely that soils will be significantly impacted by the proposed project. However, in the event that the construction of ancillary equipment results in soil disturbance, a geotechnical analysis of surface and subsurface soils and bedrock conditions for the purposes of foundation design and structural stability in the vicinity of the ancillary equipment will be conducted. Recent geotechnical survey at the SPIP project site and historical records indicate that South Pier consists of clean soils with no history of reportable spills. All expected construction-related excavation and soil disturbance activities at the project site will be described in the DEIS. The procedures that will be followed during construction to identify any potential soil contamination and remedial actions will be outlined in the DEIS. This process will be substantially similar to AGC's NYSDEC approved Soil Management Technical Protocol (2002) currently in place at other company owned generating facilities. This protocol establishes procedures for the proper determination, handling and disposal of contaminated soils. In addition, an erosion and sediment control plan and a stormwater pollution prevention plan (SWPPP) will be established for the proposed project.

**b. Water Resources**

Because the proposed project is to be developed on an existing industrially zoned pier, it is not likely that water resources will be significantly impacted by the proposed project. No water withdrawals or discharges are anticipated from the proposed project. Modification to an existing SPDES permit, if necessary, will be completed as part of the project. The new unit will not require the use of any surface waters for plant cooling. The depth to groundwater will be determined. If the project design requires the use of municipal water or discharges to the municipal sewer system, the quantity of water required and the volume and analytical properties of wastewater discharge will be properly characterized. The DEIS will include a discussion of any potential water resource impacts that may occur from maintenance or repair operations on the South Pier that may be deemed necessary to construct the SPIP.

Available GIS mapping will be utilized to illustrate nearby state or federally-regulated wetlands and streams in the vicinity of the proposed project. Potential impacts to surface water resources resulting from installation of all project components, and project operation, shall be described, along with proposed measures to avoid, minimize and/or mitigate these impacts. FEMA-regulated floodplain areas will be identified and an assessment of potential project-related impacts to floodplains, if any, will be provided in the DEIS.

The impact of the proposed project on storm-water management within the vicinity of the project area will be described. A stormwater management plan or adherence to surrogate state regulations pertaining to such a plan, including the related erosion control plan will be discussed in the DEIS. Appropriate mitigation measures for managing the rate, quantity and quality of stormwater runoff during construction and operations activities will be presented.

### **c. Biological, Terrestrial and Aquatic Ecology**

By proposing the project be located on an existing industrially zoned pier, it is anticipated that adverse impacts to vegetation, fish, shellfish, and other wildlife will be avoided. Data on the project area's terrestrial and aquatic ecological resources and the extent to which the proposed project would have an impact on those resources will be evaluated. The United States Fish and Wildlife Service (USFWS) and NYSDEC will be contacted in order to determine the presence of any threatened and endangered species that may occur in the vicinity of the proposed project. Proposed measures to avoid, minimize or mitigate impacts to ecological resources will be presented.

Any state or federally-listed endangered, threatened or special concern species occurring within or near the project area on a seasonal or year-round basis as indicated through agency consultation will be reported. Mitigation measures designed to offset, reduce, or eliminate losses of listed species and associated habitat will be discussed to the extent required.

### **d. Climate and Air Quality**

AGC recognizes that the local community has significant concerns about air pollution and anticipates that air quality is likely to be the major concern for the proposed project. The proposed project will require modification to the existing air permit at the GGS. In order to fully address community concerns and ensure a net reduction of emissions, AGC will implement an air quality improvement strategy which may include but is not limited to:

1. Permit caps (limits) on the total emissions for new equipment.
2. Permit caps (limits) on the total emissions from oil-firing for both the new and existing equipment.
3. Permit cap on sulfur content of the oil for both the new and existing equipment to reduce SO<sub>x</sub> and PM.
4. Installation of control technology on existing combustion turbine(s) for reduction of NO<sub>x</sub>.
5. Installation of control technology on existing combustion turbine(s) for reduction of CO.

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6. Reduction in total emissions for existing equipment to reduce PM as well as all other emissions.
7. AGC funded community projects to reduce local PM emissions and/or impacts.
8. Permit caps on emissions from other regional, company owned facilities.
9. Shutdown and removal of existing units.

These methods will be discussed, evaluated and quantified to determine the optimum combination of strategies that result in net reductions of PM, NO<sub>x</sub>, SO<sub>x</sub>, and CO.

The existing air quality status within the region of the proposed project will be discussed as well as the affects of the proposed project (during both construction [temporary] and operation [permanent]). All of Kings County, NY, including the GGS, is located in a US EPA designated Non-Attainment area for ozone (O<sub>3</sub>) and particulate matter (PM<sub>2.5</sub>). The proposed project emission reductions will be identified as reductions of pollutants that contribute to the areas Non-Attainment status for both O<sub>3</sub> and PM<sub>2.5</sub> and will result in a net Air Quality benefit.

The DEIS will include an analysis of the likely impacts from emissions of air pollutants. An air quality modeling study will be performed in accordance with the NYSDEC Guidelines on Dispersion Modeling (DAR-10) to support the air permit application. The modeling study will demonstrate that the SPIP will comply with USEPA and NYSDEC requirements for addressing ambient air quality standards, which are designed to protect the public health. The NYSDEC PM<sub>2.5</sub> Policy: CP-33 Assessing and Mitigating Impacts of Fine Particulate Matter Emissions may also apply to the SPIP. AGC will evaluate the requirements of the policy in the DEIS and comply with any requirements that are applicable to the SPIP. Results of all ambient air quality modeling studies required by regulation and policy will be reported in the DEIS.

A discussion of the temporary construction-related impacts to local air quality will also be presented.

The DEIS will address the cleaning of existing fuel storage and delivery systems to prevent contamination of proposed new fuels. With respect to bio-fuels, long-term storage, tankage characteristics, additives, and availability will be evaluated in the DEIS.

In addition to responding to local community air quality concerns, the EIS will discuss anticipated Project emissions within the context of climate change and greenhouse gas emissions. Background on state policies such as the Regional Greenhouse Gas Initiative (RGGI) will be summarized. Project emissions of CO<sub>2</sub> will be determined and compared to global, national, and state emission levels. Potential reduction of CO<sub>2</sub> emissions will

be discussed. In addition, implications of potential sea level rise due to climate change at the SPIP site will be discussed and potential mitigation measures will be presented.

#### **e. Aesthetic/Visual Resources**

The location and design of the proposed project will allow it to fit in consistently with the industrial (M3-1 District) zoning of the project area. Given this location and the fact that stack heights will be designed as low as possible to achieve ambient air quality standards, significant visual impacts are not anticipated. AGC has contracted a premier local architectural firm that is renowned for innovative, energy efficient and “green” building design in order to ensure that the proposed structure is designed in accordance with the architectural objectives of the Brooklyn waterfront redevelopment and is sensitive to and consistent with existing architecture in the Sunset Park community. Input from the community will be solicited to understand local community concerns and the desired objectives for the future of the Brooklyn waterfront. This information will be considered by the project architect to develop the overall design concepts.

The visual analysis of the project will be prepared in a manner consistent with NYSDEC Visual Policy: Assessing and Mitigating Visual Impacts, DEP-00-2. The visual character of the area within a 2-mile radius of the project area (the visual study area) will be described and the visual impact assessment will address the potential for the project to impact any of the fifteen (15) resource categories listed in Section V(A) of the visual policy. Notable visual/aesthetic resources within this area that are considered sensitive from a statewide and local perspective will be identified. In addition, visual impacts from the proposed project to historic structures within a 2-mile radius will be determined. Potential project visibility and visual impacts using objective analytical techniques will be evaluated, including:

- Describe short-term visual impacts associated with project construction.
- Determine the extent of potential project visibility within the visual study area, based on viewshed mapping, line-of-sight cross sections, and field verification.
- Evaluate the change in visual character that may result from implementation of the proposed project, based on the preparation and evaluation of computer-assisted visual simulations (up to 3).
- Recommend measures to minimize impacts to aesthetic resources.

#### **f. Historic, Cultural and Archaeological Resources**

Given the urban nature of the existing view shed, it is anticipated that no adverse impacts to cultural, archaeological, historic or other natural or cultural resources will

result from the proposed Project. In order to definitely characterize the project area, a Phase 1 archeological investigation will be conducted within the proposed project footprint. Additional consultation with the New York State Historic Preservation Office (SHPO) will be conducted based on the findings of the Phase 1 study.

As discussed above, architectural treatments will be designed to be consistent with the architectural objectives of the Brooklyn waterfront redevelopment and potential visual impacts to area historic structures will be determined.

#### **g. Noise**

The noise analysis will be conducted in a manner consistent with the NYSDEC Noise Policy: Assessing and Mitigating Noise Impacts Program, DEP-00-1. The DEIS will document ambient noise conditions within the project area, describe anticipated construction-related noise, and calculate the potential impacts that will result from operation of the proposed turbine. The DEIS will evaluate potential noise increases, and low frequency noise by using a recognized sound power level prediction model. Compliance with noise thresholds as defined in NYC noise ordinance and zoning code will be addressed, including predicted noise levels at the nearest adjacent residences. Proposed means of mitigating potential construction and operational noise impacts will be addressed. It is anticipated that because the new unit will be built with sufficient sound reduction technology there will be no significant increase in local sound levels from the Project. The noise analysis will assess background ambient noise levels which include operation of the existing GGS and the potential impacts that may result from "worst case" conditions defined by the expected operations of the SPIP as presented in the DEIS.

#### **h. Traffic/Transportation**

The existing road systems will be described and those roads that will be used for construction of the proposed project will be identified. In addition, the transportation requirements of the project (e.g., turning radii, vehicle widths, vehicle weight) will be presented. Limitations/deficiencies that affected roads, bridges and tunnels may have will be identified and discussed. Potential impacts that may occur during the construction period including temporary damage to road surfaces and temporary traffic delays (due to slow-moving or parked vehicles), will be discussed. The affects, if any, which these impacts may have on local businesses, will be presented. A construction and post construction parking plan will be developed. The existing GGS fuel storage barges and water-borne and land-based fuel delivery schedule are not anticipated to significantly change due to the construction and operation of the proposed project. Nonetheless, the effects of water-borne deliveries of equipment including incremental fuel deliveries, handling and fuel storage activities for the SPIP will be evaluated. The DEIS will address the potential for traffic interferences between the SPIP and the proposed SIMS facility to the extent that the SPIP construction takes place at the same time as the SIMS facility is under construction or in operation. The evaluation will assume

that the SIMS facility is planning on approximately 100 trucks per day into their facility as well as nearly continuous barge activity in the Gowanus bay.

**i. Socioeconomics**

The economic effect of the proposed project, including the long-term and short-term employment and impact to local businesses will be discussed. Labor and community demographic statistics from the most current United States census will be compiled and discussed.

**j. Environmental Justice**

The GGS is located in the Sunset Park community of Brooklyn, New York. This community is comprised of approximately 150,000 people and is bordered by Bay Ridge in the South, Park Slope on the North and Borough Park on the East. NYSDEC has identified the Sunset Park community as a Potential Environmental Justice Area (PEJA). Therefore, the DEIS will evaluate the proposed Project based on the guidelines and recommendations provided in NYSDEC Commissioner Policy 29 (CP-29) for Environmental Justice. The DEIS will include a qualitative description of existing environmental burdens on the Potential Environmental Justice Area (PEJA), including a comparative assessment of asthma rates in Sunset Park, and an evaluation of potential additional burden due to any significant adverse environmental impact as a result of the SPIP. Specifically, a review of available asthma hospitalization rates and mortality rates across 3 geographic size classes; 1) Sunset Park, 2) Brooklyn, and 3) New York City will be completed. This approach will allow for comparisons to be made between local and more regional health patterns. Studies to be reviewed will include the Community Health Profile for Sunset Park and Northwest Brooklyn by the New York City Department of Health and Mental Hygiene (NYC DOHMH). These studies will be based on health-related data from New York State Department of Health Statewide Planning and Research Cooperative System, the New York City Community Health Survey 2002-03-04, and the NYC DOHMH Bureau of Vital Statistics.

**k. Public Safety**

The proposed project site is already protected by security services that will be modified prior to the start of construction. The DEIS will address potential public safety issues associated with the proposed project, including, stray voltage, air quality, and increased construction traffic concerns. Restrictions on public access and other means of avoiding or minimizing public safety risks will be discussed, along with proposed plans to respond to public safety incidents.

**l. Community Facilities and Services**

Existing community services, including fire departments, emergency services, schools, hospitals, clinics, and parks and recreation facilities will be discussed. In addition

recreational and educational uses of Gowanus Bay will be identified and potential impacts as a result of the SPIP will be discussed. Such information will be based on personal communications with service providers and/or review and confirmation of pertinent literature. The DEIS will identify how the proposed project may impact or benefit the above services and the resources of the entity providing the services. The adequacy of existing services and facilities will be evaluated, along with the potential benefits to these services and facilities resulting from project implementation. Any required mitigation measures to offset or lessen potential impacts shall be identified, including modification to existing fire protection and emergency response plan developed in consultation with the local fire departments/emergency service providers.

#### **m. Communication Facilities**

Given the fact that stack heights will be designed as low as possible to achieve ambient air quality standards, it is anticipated that no adverse impacts to communication facilities will result from the proposed project. Existing wireless communication facilities within and adjacent to the project area will be identified. Potential project impacts on microwave beam paths, as well as television, radio, and cellular phone reception and transmission will be discussed. Mitigation measures to avoid and minimize impacts on communication facilities will be proposed, if necessary.

#### **n. Land Use and Zoning**

Existing conditions and potential impacts regarding the proposed project's compatibility with the character and development trends in the area, as well as with surrounding land uses and community resources will be discussed. The DEIS shall evaluate the relationship of the proposed project to existing land use and the surrounding community. The project is compatible with current zoning in the area, which is M3 (heavy industrial). We will analyze compliance of the project with applicable performance and bulk requirements. Specifically, the evaluation will include:

- Existing and proposed land use within and adjacent to the project area.
- Compliance/consistency with requirements of all local ordinances.
- Consistency with local Comprehensive Plans and/or development goals.
- The compatibility of the proposed project with surrounding land uses, and its potential impact on property values.

The DEIS will provide a review of the South Pier Improvement Project's consistency with the coastal policies and stipulations contained in the New York City New Waterfront Revitalization Program (WRP) and will include a certified New York City WRP Consistency Assessment Form. As defined in the WRP, the proposed Project is located in a Significant Maritime Industrial Area (SMIA), which is a waterfront area considered to be particularly well-suited for maritime and industrial development, including utilities and energy

facilities. A discussion of the proposed project's consistency with the policies in the WRP will be provided. In addition, the project will be reviewed in order to ensure consistency with the community's Draft 197-A Plan and the Greenway-Blueway Project.

A map will be provided which illustrates the study areas existing economic development zones; designated Coastal Zone boundaries; Wild, Scenic and Recreation Corridors; Scenic Areas of Statewide Significance; and Critical Environmental Areas designated pursuant to the SEQRA. The proposed project's relationship to and/or potential impacts on these designated areas will be evaluated.

#### **vii. Unavoidable Adverse Impacts**

This section of the DEIS will identify impacts that may occur despite mitigation measures, and will compare the beneficial and adverse implications of these unavoidable impacts.

#### **viii. Alternatives Analysis**

In accordance with 6NYCRR Part 617.9(b)(5)(v), the DEIS will include a description and evaluation of the range of reasonable alternatives to the proposed project. Alternatives to be considered will include alternate project size, alternate project location, alternate project layout, alternate turbine size, alternate plant technologies (peaking vs. combined cycle), shutdown and removal of existing barge-mounted units and the "no action" alternative. The evaluation and comparison will include a quantitative and qualitative comparison of unavoidable impacts associated with each alternative.

#### **ix. Irreversible and Irretrievable Commitment of Resources**

This section of the DEIS will identify those natural and man-made resources consumed, converted or otherwise made unavailable for future use as a consequence of the proposed project.

#### **x. Cumulative Impacts**

Given the Applicant's proposal of a project that provides a net reduction in emissions that should contribute to an improvement in local air quality and the expectation that there will be no significant adverse impacts to other environmental resources, it is anticipated that there will be no cumulative adverse impacts from the project.

The DEIS will discuss the potential cumulative impact, including positive impacts, of the proposed project along with other electric generation projects that have been proposed within the region. The potential for, and impact of future electric generation projects, or expansion of the proposed project, will also be addressed. Based on information obtained from existing publicly available data, the DEIS will also discuss impacts from other major sources of air pollution in addition to electric generating facilities in the vicinity of the SPIP.

**xi. Growth-Inducing Aspects**

This section of the DEIS will describe potential growth-inducing aspects the proposed project may have, particularly the potential for additional development of electric generation power projects in the vicinity of the project area.

The DEIS will contain a description of the existing NYISO electric system demands and expected future growth in demands. A description of how the proposed project fits within the existing NYISO electric system will be included. The need for future generation capacity, including the New York System Operator (NYISO) estimates which calls for additional electric supply by 2011 for increased reliability, and PlanNYC 2030 will be discussed along with regulatory requirements for the location of generation facilities.

**xii. Effects on the Use and Conservation of Energy Resources**

This section of the DEIS will describe the effect of the proposed project on the use and conservation of energy resources. Benefits of utilizing efficient, state-of-the-art generation technologies and environmentally benign fuels (e.g., ultra-low sulfur diesel, natural gas, and bio-fuels) will be presented. The DEIS will also address an analysis of energy efficiency at GGS.

**xiii. Green Design Considerations**

This section of the DEIS will evaluate and describe the environmentally-friendly, green design attributes which may be incorporated into the proposed project. Perhaps most significant in this regard is the fact that the proposed project has been designed to result in net negative emissions. That is, the actual emissions from the existing facility will be reduced by an amount greater than the emissions permitted for the new equipment.

Green design considerations for the proposed project include both green building techniques and renewable/conservation energy strategies. The green designs attributes which will be evaluated, include, but are not limited to, the following items:

Green building techniques

- 1) Green planted spaces around the facility
- 2) Green planted areas on the facility (walls or roofs)
- 3) Incorporating vegetation to mitigate potential visual and noise effects
- 4) Laying out the facility to minimize bulk
- 5) Selecting colors that blend into the area

Renewable/conservation energy strategies

- 1) Capturing rain water for on site irrigation.

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- 2) Review/modification of the conservation efforts in the existing facility (ie replacing lights to energy efficient fixtures/bulbs)
- 3) Consideration of using electric/hybrid vehicles on site
- 4) Use of Bio Fuels in the older units
- 5) Evaluation of photovoltaic (PV) cells on the new and old facility

**xiv. References**

This section of the DEIS will list any sources of relevant information cited directly in the report text.

**APPENDICES TO ACCOMPANY DEIS**

To supplement the information required in each topic section, include the following:

- Relevant technical maps, figures and exhibits
- Project plans, specifications, or construction information
- Air quality modeling, methodology and results
- Air permit application
- SPDES permit modification application
- Visual impact assessment
- Noise assessment
- Geotechnical assessment
- Relevant agency correspondence
- List of firms and persons responsible for both overall preparation of the DEIS and the underlying plans and other exhibits relied upon.