FINAL SCOPE FOR THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR THE SPECIAL PERMIT APPLICATION FOR AN ELECTRIC GENERATING FACILITY

Caithness Long Island Energy Center II

AS A PERMITTED USE PURSUANT TO CHAPTER 85, ARTICLE XXIX: L INDUSTRIAL 1 DISTRICT (LIGHT INDUSTRY) SECTION 85-309 TOWN BOARD SPECIAL PERMITS OF THE CODE OF THE TOWN OF BROOKHAVEN

OCTOBER 31, 2013

A. INTRODUCTION

In May 2012, Caithness Long Island II, LLC (Caithness) filed a special permit application with the Town Board of the Town of Brookhaven to develop a state-of-the-art electric generating facility in the Town of Brookhaven. The application was filed while the project was under consideration as part of a request for proposals (RFP) process initiated by the Long Island Power Authority (LIPA). LIPA's RFP sought to identify and secure additional electrical resources in the 2016-2020 timeframe to ensure continued, reliable electric service in LIPA's service territory.

The need for additional resources was based on existing and projected generation requirements established by the New York Independent System Operator and the New York State Reliability Council. LIPA issued the RFP in August 2010, and the Caithness Long Island Energy Center II (CLI-II) project submitted a bid in response to the RFP in March 2011. On July 25, 2013, LIPA's RFP Selection Committee, with concurrence from LIPA's Executive Committee, recommended selection of the CLI II project.

The proposed CLI-II project, a large on-Island generating facility, is a critical ingredient in LIPA's strategy for ensuring sufficient and reliable electric power to Long Island. The proposed CLI-II project has a capacity of approximately 752 MWs at International Organization for Standardization (ISO) conditions, and comprises of a dual-fuel, 2-on-1 combined-cycle facility (two combustion gas turbines exhausting through two heat recovery steam generators [HRSG], with duct burner capability, serving a single steam turbine generator) that would be located in the Town of Brookhaven, Long Island, New York (hereinafter referred to as the "project," "proposed facility," or the "Caithness Long Island Energy Center II" or "CLI-II").

The Town Board of the Town of Brookhaven (TOB), as the State Environmental Quality Review Act (SEQRA) lead agency, has made a determination that the proposed project may have a significant adverse impact on the environment. Therefore, an Environmental Impact Statement (EIS) for the proposed Caithness Long Island Energy Center II will be prepared in

accordance with SEQRA pursuant to Article 8 of the Environmental Conservation Law (ECL § 8-0101 et seq.) and its implementing regulations, 6 NYCRR Part 617.

This Final Scope identifies and describes the environmental studies to be conducted to analyze the potential environmental impacts of the project. This document is being made available by the Town of Brookhaven, as SEQRA lead agency, to the public, and also is being distributed to all interested and involved agencies.

B. DESCRIPTION OF THE PROPOSED ACTION

The proposed facility would be located on an approximately 81.3-acre parcel that is controlled by the project sponsor. The project site is located south of the Sills Road interchange (Exit 66) of the Long Island Expressway (LIE) (Interstate 495), within the Town of Brookhaven, Long Island, New York. The project site's southwestern border is adjacent to an existing electric generating facility operated by Caithness Long Island, LLC, which is an affiliate of CLI-II. Figure 1 shows the proposed site boundary on the New York State Department of Transportation (NYSDOT) 7.5-minute map (Bellport, New York Quadrangle) for the surrounding area.

The proposed CLI-II facility will consist of two (2) F-Class heavy duty combustion turbines each with a HRSG providing steam through a common header to serve a single steam turbine generator. The waste heat from spent steam will be dissipated to the atmosphere through an air-cooled condenser where the condensed steam is returned as makeup water for the steam generators. The proposed facility will include a duel-fueled auxiliary boiler to facilitate startup of the steam turbine generator and two (2) emergency diesel generators to provide emergency power for safe shutdown of the facility in the event of a system-wide power outage, and both an electric and diesel fire water pumps for fire protection.

To accommodate short-term operation on distillate oil, the project would include a fuel oil storage tank (or tanks) and associated off-loading facilities, transfer piping, and pump systems. The fuel storage tank(s) would have secondary containment capacity of 110 percent of the tank; all piping outside of the basin would be double walled. Tanker trucks will be used to transport liquid fuel to the facility.

The approximately 81.3-acre project site is located in the Town of Brookhaven's L-Industrial-1 District, which permits electric generating facilities by special permit issued by the Town Board. The project site's southwestern border is adjacent to an existing electric generating facility operated by Caithness Long Island, LLC. Farther south of the existing electric generating facility is the Zorn Industrial Park. Immediately adjacent to the project site to the west is the Sills Industrial Park, located off Old Dock Road. The most prominent nearby land uses include the now vacant former Grucci Fireworks manufacturing plant, a LIPA transmission line right-of-way (ROW), and the main line of the Long Island Railroad. The recently completed Yaphank Correctional Facility and a proposed hydroponic farm are located to the east, beyond the LIPA ROW. The Brookhaven Landfill is approximately 1.5 miles to the south and the proposed electric generating facility will be located approximately 0.3 miles from the nearest residences to the northwest across the Long Island Railroad ROW and Sills Road (Route 101). The Patchougue-Yaphank Road (County Route 101) interchange with the Long Island Expressway (LIE) is located approximately 2,300 feet (0.4 miles) north of the property.

West of the proposed project site is the Medford area of the Town of Brookhaven, while northwest and northeast are the areas of Gordon Heights and Yaphank, respectively. The community of Shirley is located to the east while Bellport is to the south and Patchogue is

located to the southwest. The proposed site lies on the boundary between the flat coastal region to the south and the elevated terrain region toward the interior of Long Island. Southern Long Island's topography is generally flat, rising from mean sea level (MSL) to approximately 110 ft above MSL. On the north side of Long Island, some elevations rise more than 300 ft above MSL.

The project would interconnect to the 138-kilovolt (kV) LIPA transmission system at LIPA's existing Sills Road Substation, which is located within the CLI-II site. An expansion of the LIPA substation will be required to accommodate the project. Natural gas supply would be provided using one of a number of proposed pipeline configurations under consideration, utilizing, as appropriate, existing right-of-ways.

Figure 2 shows an aerial of the proposed project site.

C. SUMMARY OF DISCRETIONARY APPROVALS AND INVOLVED AND INTERESTED AGENCIES

Development and operation of the Caithness Long Island Energy Center II may require or involve the following discretionary federal, state, and local regulatory agency notifications, actions, permits and approvals.

United States Environmental Protection Agency (USEPA)

- Oil Pollution Act (OPA) – Facility Response Plan Approval

Long Island Power Authority

- Facility Power Purchase Agreement

New York State Department of Environmental Conservation (NYSDEC)

- Prevention of Significant Deterioration Permit (under its delegated authority from the U.S. Environmental Protection Agency)
- Part 201 State Air Permit
- Title IV Acid Rain Permit
- State Pollutant Discharge Elimination System (SPDES) Permit for Storm Water Discharges Associated with Industrial Activities and Process Wastewater Discharge
- Major Oil Storage Facility (MOSF) License
- Chemical Bulk Storage Registration

New York State Office of Parks, Recreation, and Historic Preservation

- New York State Parks, Recreation and Historic Preservation Law Section 14.09: Cultural Resource Review
- National Historic Preservation Act, Section 106: Cultural Resource Review

New York State Public Service Commission (PSC)

- Section 68 Certificate of Public Convenience and Necessity (as well as lightened regulation approval)
- Section 69 Long Term Indebtedness Approval
- Lightened Regulation Status Confirmation

Suffolk County Department of Health Services (SCDHS)

- Article VI Approval for Water Use
- Article VII Approval for Water Pollution Control
- Article XII Approval for Toxic and Hazardous Materials Storage and Handling Controls (excluding MOSF)
- Power Plant Registration Form (if applicable)

Suffolk County Planning Commission

- Advisory Recommendation

Town of Brookhaven Town Board

- Special Permit Approval for Electric Generating Facility

Town of Brookhaven Planning Board

- Site Plan Approval
- Tree Clearing Permit – Test Hole Exemption

From among a number of possible configurations, a natural gas pipeline lateral would be developed by an entity other than LIPA or CLI-II, and would require either PSC (Article VII of the Public Service Law) or the Federal Energy Regulatory Commission (FERC) approval, depending on which of several alternatives currently under consideration is pursued. Approval of the natural gas pipeline lateral is not subject to SEQRA review. It would go through its own separate environmental review and approval process; nevertheless, general information associated with the Project's connection to the pipeline lateral will be provided in the DEIS.

D. PROPOSED DRAFT EIS SCOPE OF WORK

As set forth in the Positive Declaration, the Town Board of the Town of Brookhaven, as the SEQRA lead agency, has determined that the size and scope of the proposed action may result in one or more significant adverse environmental impacts and therefore, a Draft Environmental Impact Statement (DEIS) must be prepared. The content and scope of the environmental studies to be contained within the DEIS are described below.

COVER PAGE AND TABLE OF CONTENTS

The DEIS will include all elements required by 6 NYCRR 617.9.

EXECUTIVE SUMMARY

The DEIS will contain an Executive Summary that provides a brief description of the project; a list of involved agencies and the approvals required from each such agency; a list of interested agencies; a list of federal agencies which have jurisdiction over the project but are not governed by SEQRA; a brief description of the adverse environmental impacts discussed in the DEIS, conclusions reached about the potential significant adverse impacts and the mitigation proposed for such impacts; and a brief description of the alternatives to the project that are considered in the DEIS.

PROJECT PURPOSE AND NEED

The DEIS will contain a description of the existing LIPA electric system demands and expected future growth in demand. How this project fits within the existing LIPA electric system will be described. The need for future generation capacity will be discussed along with the regulatory requirements for the location of the generation facilities.

DESCRIPTION OF THE PROPOSED ACTION AND PROJECT

The following information relative to the description of the proposed action will be provided within the DEIS:

- A general description of the project area will include topography, local surface waters, road networks, tax map boundaries of participating and adjacent land parcels, parcel acreages, and any easements or restrictions that could affect the proposed project.
- Site plan drawings of the project layout will show locations of the proposed electric generating equipment, access roads, substation and related electric transmission facilities, staging and storage areas, parking areas, operations and maintenance facilities, lighting, fences, and gates. Security measures will be described. Each of these project components will be portrayed relative to the locations of adjacent land parcels and private buildings, existing overhead electric transmission lines, property lines, wetlands, and public roads.
- The DEIS will provide a description of gas and electric interconnections.

Regarding the required on-site transmission interconnection, the DEIS will provide details of the proposed electric transmission line, including an overview of the proposed transmission line design and associated facilities as well as any off-site reinforcements to the electrical system that may be required as known at the time. The DEIS will assess potential adverse environmental impacts associated with the project's electric interconnect to the existing LIPA transmission system.

With respect to the natural gas pipeline, alternative proposals are currently under consideration. For each alternative, the DEIS will provide a map-level and literature review assessment of the potential adverse environmental impacts and proposed mitigation to wildlife habitat, wetlands, waterbodies, water resources, groundwater, soils, vegetation, cultural resources, and land use along each of the proposed gas pipeline corridors and the surrounding areas that may be impacted.

E. SCOPE OF ENVIRONMENTAL IMPACT ASSESSMENTS

LAND USE, ZONING, AND PUBLIC POLICY

The land use, zoning and public policy study will include identification and mapping of existing land use conditions and zoning designations, consistency with local land use plans and policies, impact analysis, and proposed mitigation, if applicable. The analysis will evaluate impacts within a primary study area (1-mile radius from the project site) and, where appropriate, a secondary study area (2-mile radius). To depict current state of development at the project site and surrounding area, the primary and secondary study areas will be depicted upon an aerial photograph of the project site area created using the latest aerial orthographic imagery available

for download from the New York State GIS Clearinghouse or other public available internet sources.

LAND USE

Primary Study Area

The DEIS will include a study of the existing land uses within a 1-mile radius of the project site (primary study area). The land use assessment will include:

- A generalized map of existing land uses within the primary study area.
- Aerial orthophotographs of the site and primary study area, indicating the current conditions of land uses in the area.
- A map(s) of proposed future land uses within the primary study area by the time the proposed facility would be expected to commence commercial operation. Information would be gathered through interviews with state and local planning officials and from other sources.
- A qualitative assessment of the compatibility of the Project with existing and proposed land uses within the primary study area. The qualitative assessment will evaluate the probable effects of the proposed project on the use and enjoyment of those areas for the current and known planned uses.
- A qualitative assessment of potential safety concerns to the Project in light of the existing and proposed land uses within the primary study area.
- A qualitative assessment of the compatibility of proposed aboveground interconnections with existing, potential, and proposed land uses within the primary study area.

Secondary Study Area

An identification and analysis of the recreational land uses within the secondary study area, including the nearby historic sites, state parks, county parks and nature preserves, golf courses, and town and village parks that might be affected by the sight or sound of the construction or operation of the project and interconnections, including a summary describing the nature of the potential adverse environmental impacts due to project construction and operation on recreational uses and identification of how the impacts will be minimized.

ZONING

The DEIS will provide a map depicting existing zoning districts within the primary study area and will provide a discussion of zoning requirements, setbacks, site development details, and local code requirements appropriate to the zone and the type and scale of the development. For each local zoning provision identified, the DEIS will include a discussion, or other, demonstrating the degree of compliance with the substantive provision. The DEIS will discuss the Project's consistency with criteria relevant to issuance of local approvals such as site plan and special permits approvals. The DEIS will also discuss any waivers required for the project and the relevant standards for approval of such waivers.

PUBLIC POLICY

The DEIS will provide a qualitative assessment of the compatibility of the project with applicable local and regional land use plans, including the most recently adopted Brookhaven Comprehensive Plan and the Suffolk County – Comprehensive Plan 2035.

For the primary and secondary study area, the DEIS will include a map of existing economic development zones, agricultural districts, designated Coastal Zone boundaries, Wild, Scenic and Recreation Corridors, Scenic Areas of Statewide Significance, and critical environmental areas as designated pursuant to the SEQRA. The project's relationship to and/or potential impacts on these designated areas will be evaluated.

COMMUNITY FACILITIES

LOCAL SERVICE PROVIDERS

This section will identify and quantify local community service demands anticipated for the project as well as those service providers that are currently responsible for providing services to the project site. These service providers will include emergency services, including police protection, fire, and emergency medical. Each of the service providers responsible for serving the project site listed will be contacted by mail or telephone and interviewed as to their capacity to serve the proposed facility. Service providers will be asked about their current ability to service the proposed facility, either alone, or in conjunction with a similar service provider in the area. Logs of telephone conversations and/or written responses from service providers will be included in the Agency Correspondence Appendix of the DEIS. For each relevant community service, when necessary, an analysis will be performed to assess potential impacts of the project and to develop suitable mitigation measures. Where capacity to serve the proposed project is not clear from such providers, a discussion will be provided addressing how anticipated service needs will be met.

OTHER COMMUNITY RESOURCES

The DEIS will also include an inventory of other community facility resources (e.g., hospitals, religious facilities, parks, schools, libraries) within a 1-mile radius of the project site. The DEIS will evaluate the effect on these resources due to the development of the proposed project.

CULTURAL RESOURCES

The DEIS will include an assessment of the probable impacts on cultural resources of the construction and operation of the project. The methodology for assessing the potential impacts on cultural resources will be in accordance with standards and methods contained in Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State, published by the New York Archaeological Council in 1994.

The DEIS will include a summary of the nature of the potential adverse environmental impact on any historic and cultural resources identified and identify how those impacts will be avoided or minimized. The New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) Coordinator will be consulted throughout the investigation.

ARCHAEOLOGICAL RESOURCES

The majority of the CLI-II site was previously evaluated for the potential presence of archaeological resources during the licensing of the Caithness Long Island Energy Center, which is an existing generating facility located along the southwestern border of the CLI-II project site, and during a previous licensing effort for an earlier project proposed on 18-acres of the existing Caithness Long Island Energy Center site. These prior assessments included the conduct of Phase 1A and 1B studies. No archaeological sites were encountered during these previous surveys, and no cultural material was recovered. Determinations of No Effect were issued by the OPRHP (OPRHP Review Nos. 02PR04839 and 04PR04367).

The portions of the CLI-II project site that were not addressed by the prior Determinations of No Effects will be evaluated for potential impacts to archaeological resources. This assessment will include:

- Phase IA studies and, if required as determined through consultation with OPRHP, Phase IB studies for the Area of Potential Effect (APE) for the project site and any areas to be used for on-site interconnections, including a description of the methodology used for such studies.
- Where Phase IA and IB studies were already completed as part of other projects, these previous studies will be summarized in the DEIS.
- Where warranted based on Phase I study results and in consultation with the OPRHP, Phase II intensive archaeological field investigations will be conducted to assess the boundaries, integrity, and significance of cultural resources identified in Phase I studies. Phase II studies will be designed to obtain detailed information on the integrity, limits, structure, function, and cultural/historic context of an archaeological site, as feasible, sufficient to evaluate its potential National Register eligibility. The need for and scope of work for such investigations will be determined by the project archaeologists in consultation with OPRHP.
- All archaeological materials recovered during the project cultural resources investigation will be cleaned, catalogued, inventoried, and curated according to New York Archaeological Council standards. To the extent possible, recovered artifacts will be identified as to material, temporal or cultural/chronological associations, style, and function. The project archaeologists will provide temporary storage for artifacts until a permanent curatorial facility is identified.
- The DEIS will include an Unanticipated Discovery Plan that will identify the actions to be taken in the unexpected event that resources of cultural, historical, or archaeological importance are encountered during the excavation process. This plan will include a provision for work stoppage upon the discovery of possible archaeological or human remains. In addition, the plan will specify that the methodology used to assess any discoveries will follow the most recent Standards for Cultural Resource Investigations and Curation of Archaeological Collections in New York State. Such an assessment, if warranted, will be conducted by a professional archaeologist, qualified according to the standards of the New York State Archaeological Council and the National Park Service (36 CFR 61).

HISTORIC RESOURCES

The analysis of potential impacts to historic resources will include:

- A review of the files maintained by the OPRHP and other appropriate databases to identify any sites, districts, or structures listed on the State or National Register of Historic Places within a 2-mile radius of the project site.
- Identification of any locally designated historic sites, districts, or structures within a 2-mile radius of the project site.
- Potential adverse visual impacts to significant historic structures within the project viewshed that are individually listed on the State or National Register of Historic Places, will be characterized as part of the visual resources study, as described in "Visual Resources," below.

VISUAL RESOURCES

The DEIS will include a visual impact assessment (VIA) to determine the extent and assess the significance of project visibility. The components of the VIA will include identification of visually sensitive resources, confirmatory visual assessment fieldwork, visual simulations (photographic overlays), cumulative visual impact analysis, and proposed visual impact mitigation. The methodologies, standards and definitions for assessing visual resources of state concern will follow procedures outlined in the NYSDEC Program Policy, NYSDEC, Assessing and Mitigating Visual Impacts, DEP-00-2, 7/31/2000.

The VIA will address the following issues:

- The character and visual quality of the existing landscape with the Caithness Long Island Energy Center included in the baseline condition.
- Visibility of the project, including visibility of operational characteristics, such as visible plumes from the exhaust stacks.
- Visibility of all on-site, aboveground interconnections.
- Appearance of the project upon completion, including building/structure size, architectural design, facade and roofing colors and texture.
- Exterior lighting and similar features.
- Representative views (photographic simulations) and architectural scale renderings of the project, including front, side, and rear views, indicating proposed elevations.
- Nature and degree of visual change resulting from construction of the project and on-site, aboveground interconnections.
- Nature and degree of visual change resulting from operation of the project.
- Proposed mitigation and mitigation alternatives based on an assessment of mitigation strategies listed in NYSDEC's program policy noted above, including landscaping, architectural design, visual offsets, relocation or rearranging facility components, reduction of project component profiles, project color and design, cooling system alternatives, lighting options for work areas and safety requirements, and lighting or marking options for the stacks, if required by the Federal Aviation Administration (FAA).

- A description of all visual resources listed in the NYSDEC Visual Resources Policy that would be impacted by the project.

The VIA will be based on the major physical features of the plant (i.e., turbine structures/building and stack). Since visibility alone does not constitute an adverse visual or aesthetic impact, the assessment will rely on the results of a field investigation. The VIA will be conducted as follows:

- Visually sensitive resources will be identified within a 2-mile radius of the proposed project site using existing maps and other published sources, including the National and State Registers of Historic Places and the 1996 Town of Brookhaven Comprehensive Land Use Plan. Visually sensitive resources are defined as those sites where visual quality and aesthetics are important to the use and enjoyment of the site. Visually sensitive resources are anticipated to include historic buildings and sites; parks and other public recreation areas; designated scenic districts and roads; and scenic vistas and overlooks. Visually sensitive resources will be mapped at an appropriate scale for presentation in the DEIS.
- A visual resource inventory will be used to determine the sensitive viewing areas and locations of viewer groups in the project vicinity. These will include recreational areas (i.e., golf course, state parks), residences, businesses, institutional, historic sites (listed or eligible), and travelers (interstate and other highway users). In addition, any open space sites identified in the Town of Brookhaven and Suffolk County's Comprehensive Plans will be included in the inventory. The resources listed in the NYSDEC's policy will be utilized to prepare the visual resources inventory.
- Identified visually sensitive resources will be evaluated in the field to determine if the proposed project will be visible and to assess the relative importance of views that may include the proposed plant. Project visibility will be documented through the use of a tethered weather balloon elevated to the height of the proposed stack and the facility's air-cooled condenser (the next tallest structure). The field investigations will make note of viewer context, existing landscape quality, and the extent of potential project visibility (i.e., partial or full view). Photographs will be taken to document existing views toward the proposed project and the tethered balloon location and for use in developing photosimulations of the proposed facility.

Photographic simulations (photographic overlays) of the project will be prepared from representative viewpoints, selected as part of the field investigation evaluation described above, to demonstrate the post-construction appearance of the project. The photographic overlays from each of the viewpoints selected will be limited to the project, as it would appear under typical operating conditions.

Each set of existing and simulated views of the project will be compared and the change, if any, in visual character will be identified. Based upon the likely viewers, and their likely visual sensitivity, the potential impact will be discussed within the DEIS. Should significant adverse visual impacts from the proposed project be identified, potential mitigation measures will be outlined, and the extent to which they effectively minimize such impacts will be discussed.

The VIA will include a discussion of the project's conformance with applicable guidance and requirements, including the Illuminating Engineering Society (IES) Lighting Handbook, LIPA's Dark Skies-Friendly Night Light Program, and Chapter 85 Article XXXIX Exterior Lighting Standards of Town Code.

SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Projects similar to the proposed facility have resulted in direct and indirect social and economic effects during construction as well as during operation. Impacts to the socioeconomic environment due to construction of a facility are shorter in term, but typically have a greater impact than the impacts due to operation. This is primarily due to the influx of construction personnel and the secondary effects of capital spending and construction payroll. Socioeconomic impacts of the project will be evaluated in terms of demographics, economic status (i.e., income levels) and employment. Potential project impacts on low-income and minority populations will also be addressed as part of an Environmental Justice (EJ) Analysis.

The DEIS will provide the following information regarding socioeconomics and environmental justice:

SOCIOECONOMICS

Regarding potential socioeconomic effects of the project, the DEIS will provide:

- An estimate of the number of temporary construction jobs to be created by the project, including an estimate of the average construction work force and an estimate of the peak construction employment level.
- An estimate of the construction payroll, by trade, during the peak construction period of the project; an estimate of annual direct non-payroll expenditures likely to be made in the vicinity of the project (e.g., materials, services, rentals) during the period of construction; and an estimate of the secondary employment and economic activity likely to be generated in the vicinity of the project by the construction of the proposed facility. This analysis will state the basis of any economic multiplier factor or other assumption used.
- An estimate of the annual on-site payroll, secondary employment, and economic activity, including general property transactions, likely to be generated in the vicinity of the project by the operation of the proposed facility. This analysis will state the basis of any economic multiplier factor or other assumption used.
- An estimate of the number of jobs during a typical year once the proposed facility is in operation and an estimate of other expenditures likely to be made in the vicinity of the project during a typical year of operation.
- A qualitative analysis of the potential cost impacts that could be incurred by the Town of Brookhaven, Suffolk County, and any other affected public authority.

ENVIRONMENTAL JUSTICE

Potential project impacts on low-income and minority populations will be addressed as part of an environmental justice analysis, conducted pursuant to the NYSDEC environmental justice policy "CP-29: Environmental Justice and Permitting." The policy sets forth guidance for incorporating environmental justice concerns into the NYSDEC environmental permit review process. The policy amends the NYSDEC environmental permit process by identifying potential environmental justice areas; providing information on environmental justice to applicants with proposed projects in those communities; enhancing public participation requirements for proposed projects in those communities; establishing requirements for projects in potential environmental justice areas with the potential for at least one significant adverse environmental

impact; and providing alternative dispute resolution opportunities to allow communities and project sponsors to resolve issues of concern to the community.

The environmental justice policy applies to permits administered under Article 70 of the Environmental Conservation Law (ECL) and Title 6 of the New York Code of Rules and Regulations (NYCRR) Part 621. (Title 6 NYCRR Part 487 (Subchapter H) "Analyzing Environmental Justice Issues in Siting of Major Electric Generating Facilities Pursuant to Public Service Law Article 10" is established for major facilities subject to Article 10, which this project is not.) Any application for a new permit that is classified as a major project (as defined by 6 NYCRR Part 621.4) from applicable programs or an application for a major modification of an existing permit from the same applicable programs is subject to the environmental justice screening process. The NYSDEC programs that are subject to review for environmental justice impact, as they relate to the proposed project are:

- Air Pollution Control - 6 NYCRR Part 201;
- Air Pollution Control - 6 NYCRR Part 231; and
- State Pollutant Discharge Elimination System (SPDES) - 6 NYCRR Parts 750 through 758.

The NYSDEC policy establishes that upon receipt of an application for a permit covered by the NYSDEC policy, the NYSDEC Division of Environmental Permits will conduct a preliminary screen to identify whether the proposed action is in or near potential environmental justice areas and determine whether potential adverse environmental impacts related to the proposed action are likely to affect potential environmental justice areas. Following the completion of the preliminary screening process, the NYSDEC Division of Environment Permits staff provides permit applicants with the NYSDEC findings relevant to environmental justice issues associated with the project and whether detailed studies will be required to address potential impacts to identified communities of concern. The NYSDEC employs a two-step methodology for conducting the preliminary screening analysis:

Step 1: Identify potential adverse environmental impacts and area to be affected. NYSDEC staff in the Division of Environmental Permits and the affected environmental quality divisions will identify potential adverse environmental impacts associated with the proposed action. Environmental quality program staff will identify the area to be affected by the potential adverse environmental impacts (i.e., the screening area).

Step 2: Determine whether potential adverse environmental impacts are likely to affect a potential environmental justice area. An integrated geographic and demographic information program will be used to determine whether potential adverse environmental impacts from the proposed action are likely to affect a potential environmental justice area. First, census block groups are analyzed to determine whether there are any environmental justice areas (i.e., minority and/or low-income characteristics meet or exceed NYSDEC established thresholds) within the screening area. The NYSDEC Policy defines a low-income community as a census block group, or continuous area with multiple census block groups, having a low-income population equal to or greater than 23.59 percent of the total population. A minority community is defined within the policy as having a minority population equal to or greater than 51.1 percent in an urban area and 33.8 percent in rural areas.

If census block groups meeting or exceeding the thresholds for a potential environmental justice area are not identified within the screening area, the NYSDEC policy states that the proposed action is not likely to affect any potential environmental justice area and the permit review

process may continue independent of the environmental justice concerns. If census block groups meeting the low-income and minority population thresholds are identified, the proposed action is determined to be likely to affect a potential environmental justice area and the remainder of the NYSDEC policy requirements must be incorporated into the review process.

A preliminary review of the proposed project indicates that an environmental justice analysis may be required for the project. If so, the following tasks will be accomplished and summarized in the DEIS as part of an Environmental Justice Analysis:

- Review of technical guidance and examples received from USEPA and NYSDEC, including USEPA's Environmental Justice NEPA Compliance Analysis and USEPA Region 2's Draft Interim Policy on Identifying EJ Areas and the NYSDEC environmental justice policy, "CP-29: Environmental Justice and Permitting," and the "Final Report of the New York State Department of Environmental Conservation Disproportionate Adverse Environmental Impact Analysis Work Group" issued in July 2004. The DEIS will present a summary overview of these documents.
- Performance of a socioeconomic analysis of the screening area. The analysis will include a description and map for each census block group that falls within or overlaps a 2-mile radius of the project center (i.e., the turbine exhaust stacks) summarizing the following parameters: population, percent minority vs. percent non-Hispanic white, and household income based on the latest available Census data. The results of this socioeconomic analysis will be summarized in a table and compared to socioeconomic characteristics of designated reference communities - Suffolk County and New York State.
- For the identified community of concern, if applicable, an analysis will be conducted to determine whether potentially disproportionate and adverse environmental impact(s) related to the proposed action are likely to affect the identified community of concern. The analysis will identify and map all potential adverse environmental impact(s), discerning where possible, varying levels of impact through air quality modeling isopleth maps or other tools such as Geographic Information System (GIS) mapping for other environmental impact categories, such as hazardous waste generators.
- Should a community of concern be identified and a full environmental justice analysis is required, a public participation plan would be developed and implemented in accordance with the NYSDEC environmental justice policy. The public participation plan, if required, would include the following components:
  - The distribution and posting of information regarding the proposed action and permitting process throughout the identified community of concern.
  - The holding of public information meetings to keep the public informed about the proposed action and the permit review process.
  - The establishment of an easily accessible document repository or repositories in or near the identified community of concern.
  - The development of a project website and project brochures detailing progress on project permitting activities, substantive public or agency concerns raised to date, all issues resolved or outstanding, and components of the project's public participation plan yet to be implemented and the expected time for completion.

In accordance with the NYSDEC environmental justice policy, the project will submit its public participation plan to the NYSDEC for review and approval prior to implementation.

TRAFFIC AND TRANSPORTATION

The DEIS to be submitted will include a traffic impact study (TIS) of the probable traffic and transportation impacts resulting from the construction and operation of the project. The methodology for assessing the potential traffic and transportation impacts from traffic generated by the construction and operation of the project will follow the instructions provided in the Transportation Research Board, National Research Council, Highway Capacity Manual, HCM 2010. In support of the traffic study, consultations will be undertaken with the relevant highway agencies.

The TIS will include a description of the pre-construction characteristics of the roadways in the vicinity of the project. The description will include:

- The results of peak period turning movement counts for a typical weekday morning (7 to 9 AM) and weekday afternoon (4 to 6:30 PM) to be conducted at the following intersections:
  - CR 101/Sills Road/East Patchogue Yaphank Road and Long Island Avenue North;
  - CR 101/Sills Road/East Patchogue Yaphank Road and Long Island Avenue South / State Street;
  - CR 101/Sills Road/East Patchogue Yaphank Road and Long Island Expressway (LIE) Exit 66 Entrance Ramp/Expressway Drive South;
  - CR 101/Sills Road/East Patchogue Yaphank Road and LIE Exit 66 Exit Ramp/Expressway Drive North (Marginal Place North);
  - CR 101/Sills Road and Old Dock Road;
  - CR 101/Sills Road/East Patchogue Yaphank Road and CR 16/Horseblock Road;
  - CR 16/Horseblock Road and Old Dock Road;
  - CR 16/Horseblock Road and Zorn Boulevard;
  - CR 16/Horseblock Road and LIE Exit 65 Westbound Exit/Expressway Drive North;
  - CR 16/Horseblock Road and LIE Exit 65 Eastbound Entrance/Expressway Drive South;
  - CR 16/ Horseblock Road and Alexan Apt Boulevard; and
  - Mill Road and East Patchogue Yaphank Road.
- The results of hourly volumes and vehicle classification counts tallied by placing an Automatic Traffic Recorder machine along CR 16 for a minimum period of 3 days.
- For each intersection listed above, a description of intersection geometry and traffic control devices by approaches.
- A calculation of the existing level of service (LOS) for each intersection listed above, giving detail for each turning movement will be done using the traffic analysis software Synchro, *version 8*. Synchro adheres to and implements the guidelines and methods set forth in the 2000 Highway Capacity Manual and the 2010 Highway Capacity Manual.

- An estimate of the annual rate of traffic growth in the vicinity of the project incorporating: (1) general background growth due to regional traffic volume increases as obtained from the New York State Department of Transportation (NYSDOT) LITP2000 Study or other appropriate source; and (2) local officials will be contacted to identify other nearby planned area developments that may affect traffic within the study area.
- A review of accident data from the NYSDOT and/or Suffolk County Department of Public Works for each study intersection and the roadways sections identified above for the most recent 3-year period available. Any accident trends or significant changes in the frequency or severity of accidents will be identified. The results of this review will be tabulated and summarized in the DEIS.

The traffic study will include a site plan, drawn at an appropriate scale, depicting all project site driveway intersections, the number of approach lanes, and traffic control devices by approaches as well as the number of on-site parking spaces.

The traffic study will include an estimate of the trip generation characteristics of the project during operation. The estimate will include:

- A description of the operation of the project, including the number of employees per shift.
- An estimate of the number and frequency of vehicle trips generated during operation of the project, including arrival and departure distribution, by size and type of vehicle.
- The vehicle trips generated by the project will be assigned to the adjacent roadways based on the characteristics of the roadway network, the location of the proposed site access points, existing travel patterns, and likely destination points.

If the trip assignment shows that the project could cause more than 35 vehicles to use an intersection during a peak hour, the following analyses will be undertaken. The traffic study will include an analysis and evaluation of the traffic and transportation impacts of the project, including:

- A comparison of projected future traffic conditions with and without the proposed project for each intersection listed above and the site access drive will be conducted for the project. The traffic volumes will be adjusted to future levels.
- An evaluation of the adequacy of the road system to accommodate the projected traffic associated with typical operations of the completed project.
- An identification and evaluation of reasonable mitigation measures regarding traffic and transportation impacts, if needed, including the construction of physical roadway improvements and the installation of new traffic control devices.

The traffic study will include an estimate of the trip generation characteristics of the project during construction. The estimate will include:

- A description of the construction of the project, including the number of employees per shift during the peak and average construction periods, the length of construction, the work shifts timeframes, and the peak construction periods.
- An estimate of the number and frequency of vehicle trips generated during construction of the project, including arrival and departure distribution for both construction workers and trucks, by size and type of vehicle. If oversize vehicles are to be utilized, their specific routes should be provided.

- The vehicle trips generated by the construction of the project will be assigned to the adjacent roadways based on the characteristics of the roadway network, the location of the proposed site access points, existing travel patterns, and likely destination points.

If the trip generation analysis from the construction phase of the project shows that the project could cause more than 35 vehicles to use an intersection during a peak hour during construction, the traffic study will include an analysis and evaluation of the traffic and transportation impacts of the project, including:

- A comparison of projected future traffic conditions with and without the proposed project during construction for each intersection listed above and the site access drive will be conducted for the project. The traffic volumes will be adjusted to future levels.
- An evaluation of the adequacy of the road system to accommodate the projected traffic associated during construction of the completed project.
- An identification and evaluation of reasonable mitigation measures regarding traffic and transportation impacts, if needed, including the construction of physical roadway improvements and the installation of new traffic control devices as well as carpooling and off-peak daily construction start and finish times.

The site layout with regard to access and internal circulation will be reviewed and the off-street parking provided will be evaluated to determine if it is adequate to accommodate the anticipated parking demand for the proposed use.

The transportation evaluation will also include a discussion of relative potential impacts to air navigation, as determined through coordination with the FAA, if necessary, as well as a discussion of relative potential impacts to rail systems and coordination with the Long Island Rail Road, if necessary.

AIR QUALITY

The CLI-II facility will be on a parcel of land that borders the existing Caithness Long Island Energy Center facility. No changes to the existing Caithness Long Island Energy Center facility are being proposed. Nevertheless, for air quality permitting purposes the CLI-II facility would be considered a major modification to an existing major source. However, each facility will be independently operated.

The DEIS will examine the potential adverse impacts of criteria pollutants and other NYSDEC-regulated pollutants ("Criteria Pollutant Study") and non-criteria pollutants ("Non-Criteria Pollutant Study") from the project on air quality. The components of the Criteria Pollutant Study will include identification of climate and air quality conditions, an inventory of proposed emission sources at the proposed CLI II project, and an assessment of project technology and design, emissions, impacts, and cumulative impacts with major combustion sources in the vicinity of the proposed site. The components of the Non-Criteria Pollutant Study will include identification of emission constituents and an assessment of project impacts.

The methodologies, standards, and definitions for assessing air quality will follow procedures outlined, and use data contained, in the following documents:

For performing air quality dispersion modeling:

- NYSDEC, Air Guide 10, NYSDEC Guidelines on Modeling Procedures for Air Quality Impact Analysis (May 2006).

- Air Modeling Protocol to be established to the satisfaction of the USEPA and NYSDEC specifically for this project (hereinafter Air Modeling Protocol).
- USEPA, Draft New Source Review Workshop Manual (October 1990).
- USEPA, Guidelines on Air Quality Models, Appendix W of 40 CFR Part 51.
- USEPA, Draft Guidance for PM2.5 Permit Modeling, (March 2013).

For determining stack height:

- USEPA, Guidelines for Determination of Good Engineering Practice Stack Height (EPA Technical Support Document for the Stack Height Regulations), Document Number EPA-450/4-80-023R (June 1995).

For quantification and assessment of the project's contribution to the New York State total deposition of sulfates and nitrates, in accordance with the State Acid Deposition Control Act:

- Memorandum from Leon Sedefian to IAM Staff (March 4, 1993).

For performing visibility modeling:

- USEPA, Workbook for Plume Visual Impact Screening and Analysis. Document Number EPA-454/R-92-023 (October 1992).

For non-criteria pollutant ambient air guidelines and benchmarks:

- NYSDEC.DAR-1.AGC/SGC Tables. Division of Air Resources, Bureau of Stationary Sources, October 18, 2010.

For assessing fine particulate matter ($PM_{2.5}$) emissions:

- NYSDEC Policy, CP-33/Assessing and Mitigating Impacts of Fine Particulate Matter Emissions, December 29, 2003.
- NYSDEC Subpart 231-12.6. PM2.5 Significant Impact Levels.
- 78 Fed. Reg. 3086, January 15, 2013 PM-2.5 NAAQS.

CRITERIA POLLUTANTS

This study will include:

- An assessment of meteorological data sets from the Long Island MacArthur Airport, Brookhaven/Shirley Airport, The National Weather Service Forecast Office in Upton (Brookhaven National Laboratory), and the Farmingdale Republic Airport to determine the availability and data quality of meteorological data for modeling purposes. The project shall obtain NYSDEC and USEPA approval for the meteorological data to be used in the Part 201 and Part 231 Prevention of Significant Deterioration (PSD) applications.
- An assessment of existing air quality levels and air quality trends for criteria pollutants in the region surrounding the project, including air quality levels and trends taken from regional air quality summaries and air quality trend reports. Monitors in Suffolk County and other nearby counties will be used to determine background ambient air pollutant levels.
- An assessment of the impacts from quantifiable criteria pollutant emissions, including those generated during construction of the project. A qualitative assessment of

construction-related emissions and impacts and an analysis of fugitive dust and a discussion of fugitive dust control measures.

- A control technology assessment for pollutants subject to Non-attainment New Source Review (NNSR) promulgated under 6 NYCRR 231 to determine the best available control technology (BACT) and lowest achievable emission rate (LAER) for the applicable pollutants.
- If the project's hazardous air pollutant (HAP) emissions exceed the regulatory thresholds, a case-by-case determination of the Maximum Achievable Control Technology (MACT) for major sources will be conducted to determine an emission limit or control technology.
- The requirements of New Source Performance Standards (NSPS) at 40 CFR Part 60 will be addressed.
- Pursuant to DAR-10, an assessment of an optimal stack height taking into consideration Good Engineering Practice (GEP) stack height for the project and air-quality-related values, visual impacts, and other considerations. The USEPA Building Profile Input Program (BPIP) will be used to determine directionally dependent-building dimensions for use in air quality modeling.
- An assessment of stack emissions of criteria pollutants, stack emissions being provided in hourly and annual estimates based on manufacturer's data, available emission factors, design control efficiencies, and other data or regulatory specifications related to the design of the project.
- A calculation of the number of NO_x and volatile organic compounds (VOCs) emission offsets if required to be obtained at a 1.3 to 1.0 ratio and how those offsets will be obtained in accordance with 6 NYCRR 231. The project's compliance with the NO_x Reasonable Available Control Technology (RACT) provisions of 6 NYCRR Part 227-2 will be addressed. In addition, prior to commencing operation, Caithness will submit to the Department complete CAIR NOx Ozone Season and CAIR NOx Annual Trading Program permit applications as required under Subparts 243-3.3 and 244-3.1. Further, Caithness is subject to the CAIR SO2 Trading Program and will submit a complete application to the Department prior to commencing operation in accordance with 6 NYCRR Part 245.
- Pursuant to "Draft Guidance for PM2.5 Permit Modeling" NO_2 and SO_2 emissions will be used to include precursors to PM2.5 formation.
- Criteria pollutant modeling will be done in accordance with the NYSDEC's DAR-10 and USEPA Guideline on Air Quality Models (Revised). Computer input (including meteorological data) and output files of the dispersion modeling results will be provided to NYSDEC and USEPA. The maximum criteria pollutant specific impacts of the project will be displayed in graphical format on a map of the surrounding community. A wind rose of the meteorological data will be provided.
- A comparison of the predicted air quality impacts from the dispersion modeling analysis to the Significant Impact Levels (SILs) identified in Subpart 231-12, and to the New York Ambient Air Quality Standards (NYAAQS) as identified in Part 257, and the National Ambient Air Quality Standards (NAAQS).

- In accordance with the State Acid Deposition Control Act, an assessment of the project's contribution to the New York State total deposition of sulfates and nitrates at 18 NYSDEC-defined sensitive receptors in New York State, New England, and Canada.
- The DEIS will include a cumulative impact analysis including the existing Caithness Long Island Energy Center, Caithness Long Island Energy Center II and all LIPA-sponsored and -constructed power generation projects recently constructed, under construction, or proposed. The modeled cumulative source impacts plus a representative background will be compared to and ensure compliance with the applicable NAAQS and/or NYAAQS.
- The DEIS will include a local large combustion source cumulative impact analysis, including the Caithness Long Island Energy Center II and any large combustion sources located in the vicinity (i.e., no more than 10 miles from the proposed project site) that have been approved or have actions pending. The cumulative source impacts plus a representative background will be compared to and ensure compliance with the applicable NAAQS and/or NYAAQS.
- A cumulative source impact analysis will be performed for any criteria pollutant for which the project has impacts above SILs pursuant to Subpart 231-8. The additional sources to be analyzed to determine whether the project, in conjunction with existing and proposed major sources, will cause or contribute to exceedances of applicable NAAQS and/or NYAAQS, will include those identified as “nearby” existing sources, as defined in the USEPA Modeling Guidelines and NSR Workshop Manual, and by the Air Guide 26 procedures. The inventory of existing major sources will be developed using data obtained from the NYSDEC as well as New Jersey and Connecticut (if necessary). The inventory, if necessary, will be included as an appendix to the air permit application and verified by the source state or per DAR-10 requirements and the Air Modeling Protocol. The air permit application will be submitted only after the inventory is approved by the NYSDEC and USEPA. All information submitted in support of the inventory of nearby sources, including verification worksheets will become public information.
- Start-up and shut-down conditions will be addressed by the project's air quality modeling. Ancillary emission sources and aqueous ammonia accidental release scenarios will be included and specified in the air modeling analysis.

NON-CRITERIA POLLUTANTS

The Non-Criteria Pollutant Study will include:

- A review of pertinent available data provided in USEPA AP-42 on non-criteria pollutants that may be emitted by combustion sources at the project and identification of emission factors for those pollutants. The specific source, including publication date, of each emission factor will be clearly identified and referenced in the DEIS.
- An assessment of the emission rates for non-criteria pollutants that may be emitted from the combustion sources at the project. All emission rate calculation methodologies will be described in detail, with appropriate equations and examples provided. These descriptions either will accompany or specifically be cited in, any corresponding tabulated emissions data presented in the application.

- An estimation of the maximum potential ground level air concentrations (short-term and annual averages) of non-criteria pollutants due to the project, quantified using the models and approach as approved by the USEPA and NYSDEC.
- A comparison of the maximum predicted air concentrations of non-criteria pollutants to NYSDEC Short-term and Annual Guideline Concentrations (SGCs and AGCs).

OTHER ANALYSES

The DEIS will provide a general visibility impairment and analysis for scenic vistas using VISCREEN or other appropriate model and a stack plume visibility analysis to assess the extent and frequency of any visible condensed water vapor plumes created by the proposed project.

The DEIS will include an analysis of an accidental release scenario for aqueous ammonia for the project alone, following EPA's procedures for off-site consequence analyses, irrespective of applicability under section 112 (r) of the Clean Air Act.

GREENHOUSE GAS EMISSIONS

On July 15, 2009 the NYSDEC issued its Draft Commissioner's Policy "Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements". The purpose of this Policy is to assist DEC staff in reviewing how energy use and GHG emissions are identified and analyzed in the DEIS, in order for staff to meet DEC's obligation under SEQR, as well as to maximize energy efficiency and minimize potential climate change of the proposed action. The DEIS will:

- quantify direct and indirect carbon dioxide (CO_2) emissions from the project during construction and operation of the new pipeline lateral and during construction and operation of the new generating station;
- provide a comparison of annual and total project lifetime CO_2 emissions to other sources of power generation, including both fossil fuel fired and feasible proposed Town and region-wide alternative energy projects utilizing green energy technologies; and,
- provide a menu of possible mitigation options.

The project's compliance with Title 6 NYCRR Part 251 "CO2 Performance Standards for Major Electric Generating Facilities" and the Regional Greenhouse Gas Initiative also will be addressed.

NOISE

The DEIS will include a technical noise assessment of the potential noise impacts associated with the construction and operation of the project. The assessment will include quantifying the existing noise environment through an ambient noise monitoring program, and a noise modeling and mitigation analysis to determine future project related noise levels.

The existing ambient noise levels at the noise-sensitive areas identified near the site will be determined through an ambient noise monitoring program. The ambient noise monitoring program will consist of short-term (15-minute) measurements conducted during the day and late at night (e.g., 12 to 5 AM) using a Type 1 precision sound level meter (SLM). Measurements will be conducted on two weekday days and nights. Additionally, continuous measurements will be made at one of the nearest identified residential receptors over a nominal 48-hour period. The

meter and calibrator will have been calibrated by a certified laboratory within 1 year of the measurement program.

The meters will be set to fast response and the microphones mounted at a height of approximately 5 feet above grade. Field calibration of the SLMs will be conducted periodically during the noise monitoring program. Monitoring will be conducted during meteorological conditions that include no precipitation and light winds (e.g., generally 5 to 10 miles per hour or less at night).

The DEIS will mainly utilize the L_{eq} noise descriptor. The L_{eq}, which is a single value of sound that includes all of the varying sound energy in a given duration, is the equivalent noise level over a specified period of time (i.e., 1-hour) and is the parameter utilized under New York State noise impact assessment guidelines.

A description of the noise standards and guidelines applicable to the project will be provided. There are no state or federal noise standards directly applicable to the project. However, the Town of Brookhaven has a noise ordinance which limits allowable noise levels based on the land use category where the receptor is located. The most restrictive levels are for residential land uses, for which there are different daytime and nighttime limits. The ordinance limits project-generated noise to no greater than 65 dBA and 50 dBA at any residential location during the daytime (7 AM to 10 PM) and nighttime hours (10 PM to 7 AM), respectively, and 75 dBA at the project property line adjoining other industrially zoned properties during all hours. For purposes of determining project compliance with the standard, the proposed facility will be considered a separate entity from the existing Caithness I facility.

Potential project-related noise impacts will be assessed in accordance with the NYSDEC noise policy. NYSDEC issued a program guidance document entitled "Assessing and Mitigating Noise Impacts" in October 2000. The NYSDEC guidance recommends that for non-industrial (e.g., residential) settings, the addition of any noise source should probably not exceed ambient noise levels by more than 6 dBA at any given receptor. Therefore, for purposes of evaluating noise impacts for the project, an increase in the L_{eq} noise levels of 6 dBA or more will be considered a significant adverse impact.

Project noise levels during operation will be calculated through use of CadnaA, a commercially available noise prediction model. Noise level data for all major noise producing sources associated with the project will either be obtained from vendors or, if not readily available, the data will be developed following accepted industry procedures found in Edison Electric Institute's "Electric Power Plant Environmental Noise Guide."

The CadnaA model will be configured to accept hemispherical spreading and atmospheric absorption for this analysis. Standard conditions of 50 degrees F and 70 percent relative humidity will be assumed, and the model default setting of downwind conditions will be applied. Directivity effects for noise from the stack and air cooled condensers will also be considered. Modeling receptors will be chosen in the same locations as where background monitoring was performed in order that direct comparison of existing to projected future noise levels can be made. Receptors will also be placed along the project property line. Additionally, a noise contour map of the entire area will be prepared such that project noise levels at any location can be determined. The model will account for the noise emissions from each project source that propagates to each point on a specified receptor grid.

The noise modeling will be used as a design tool in order to determine the degree of silencing required on individual noise sources within the facility, if needed, to meet applicable noise

guidelines and standards. A listing of the noise control measures incorporated into the analysis will also be provided.

A construction noise analysis will also be conducted utilizing the same general methodology as described above for operational noise.

The results of the noise assessment will be detailed in the DEIS. A complete technical noise report will be included as an Appendix to the DEIS.

GEOLOGY, SEISMOLOGY, AND SOILS

The DEIS will include a study of the potential geology, seismology, and soils impacts of the project. The components of the study will include identification and mapping of existing conditions, impact analysis, and proposed mitigation, where applicable.

GEOLOGY

Regarding potential geologic impacts, the assessment will include the following:

- A map based on the most recent 1:24000 scale USGS or NYSDOT quadrangle maps showing topographic contours, the project site, and interconnection routes.
- A site plan showing existing and proposed contours for the project site, at a scale sufficient to show all proposed buildings, structures, paved and vegetative areas, and construction areas.
    - A preliminary calculation of the quantity of cut and fill necessary to construct the project.
    - A description and preliminary calculation of the amount of fill material to be brought in to the project site, if any.
    - A description and preliminary calculation of the amount of cut material or spoil to be removed from the project site, if any. Regulatory requirements pertaining to offsite disposal will be identified, and the procedures that will be implemented to assure proper disposal of any such materials will be described.
    - A delineation of temporary cut and/or fill storage areas to be employed.
    - A description and results of a geotechnical investigation of subsurface units at the site.
    - A description of excavation techniques to be employed.

SEISMOLOGY

The assessment of seismic conditions at the project site will include the following:

- A description of the regional geology, tectonic setting, and seismology of the project vicinity.
- An analysis of the expected impacts of construction and operation of the project with respect to regional geology.
- An analysis of the impacts of typical seismic activity experienced in the project area on the operation of the project.

SOILS

The assessment of soil conditions at the project site will include a map delineating soil types on the project site and interconnections. The DEIS will further provide a description of the characteristics and suitability for construction purposes of each soil type identified.

FOUNDATION DESIGN

The DEIS will provide a summary of the evaluation conducted for the project to determine suitable building and equipment foundations.

INFRASTRUCTURE

The infrastructure section will include analyses of water supply, wastewater collection and treatment, stormwater runoff, solid waste collection and management, and energy supply, as described below.

WATER SUPPLY

The DEIS will provide the following information and assessments relative to the project's water demand:

- An estimate of the hourly and daily peak and the hourly and daily average water supply needs and consumptive water losses of the project, in gallons, broken down by power production and domestic uses.
- An estimate of the fire suppression peak and average flow rate needs of the project, in gallons per minute, and a demonstration that an adequate water supply is available (both quantity and pressure) for fire protection.
- A description of the methodology used (i.e., estimate, comparison, data, calculation) to prepare the water supply needs and minimum and maximum flow rate estimates stating all factors used.
- A description of the water chemistry requirements for water to be supplied to the project, indicating any requirements that are more stringent than NYS standards for potable water. A description of any additional water treatment that would be necessary to obtain the required chemical characteristics. An identification of the public water supply source or sources proposed to be used by the project, including an assessment of the available capacity of the water supply source and an analysis of the impacts, in terms of quantity, quality, and pressure, as a result of the project's water use on the water supply system. The assessment will also include an identification of all infrastructure improvements, if any, necessary to serve the project including treatment requirements.
- An identification and evaluation of other reasonable water supply alternatives and mitigation measures to avoid or minimize water supply impacts, if identified.

WASTEWATER

The DEIS will provide the following information and assessments relative to the project's wastewater discharge requirements and/or disposal methods:

- A water balance diagram for hourly and daily peak and hourly and daily average water use operating conditions for the project that shows in detail all water sources, plant

water uses, water treatment facilities, wastewater treatment facilities, and wastewater discharges; and explains which effluents would be discharged, and where. The DEIS will provide information on the characteristics (e.g., volume, temperature, constituent concentrations) of water use and discharge under all operating conditions.

- An identification and description of all reasonable discharge or disposal methods for wastewater generated from the project. The analysis will include the impacts on water quality and quantity in affected groundwater and surface water resources.
- For each proposed discharge and/or disposal method, an identification and description of any project wastewater treatment facilities and discharge structures, including a demonstration that each facility and/or effluent discharge is capable of meeting all applicable effluent limitations or pretreatment standards.
- A completed application for a SPDES permit for proposed discharges, if applicable, and a demonstration that the discharge complies with all applicable technology-based and water-quality-based effluent limits will be included as an appendix.

STORMWATER RUNOFF

The DEIS will provide the following information relative to the project's operational stormwater plan:

- A description of all techniques that would be used to prevent stormwater and spill contamination, and a conceptual site plan showing all intended structures and improvements to prevent stormwater contamination, including chemicals or other contaminants from storage facilities, product delivery, plant operation, plant maintenance, waste handling activities, and vehicles in parking lots or other areas.
- A completed application for a SPDES permit for operational stormwater discharges, if applicable.

SPILL PREVENTION AND CONTROL PLAN

The DEIS will provide the following information relative to the management of aqueous ammonia (<20%), wastewater, and other chemical, petroleum, or hazardous substances at the project site:

- A description of the spill prevention and control measures to be in place for aqueous ammonia storage, wastewater storage, and other chemical, petroleum or hazardous substances stored on site, including an evaluation of alternatives and mitigation measures.
- An identification of whether the storage of ammonia, wastewater, other chemicals, petroleum or hazardous substances on site is subject to regulation under the State of New York's chemical and petroleum bulk storage programs, and if so, a demonstration of compliance with such regulations.
- An identification of whether the storage of ammonia, wastewater, other chemicals, petroleum or hazardous substances on site is subject to regulation under Articles VII and XII of the Suffolk County Code, and if so, a demonstration of the degree of compliance with such local laws.

SOLID WASTE MANAGEMENT

The DEIS will provide an estimate of the amount of solid waste to be generated as a result of facility operations and associated potential increases in the demand for municipal solid waste and sanitation services. Measures will be assessed, as necessary, to mitigate potential significant adverse impacts.

ENERGY

The DEIS will include an assessment of the energy that would be consumed and produced during operation of the proposed project. Energy conservation measures will be described. The potential effects of the project's energy consumption on the local energy supply system will be described within the DEIS.

ELECTROMAGNETIC FIELDS (EMF)

The DEIS will contain a qualitative discussion of EMF that may be found at sensitive receptors near or adjacent to the on-site electric transmission lines and substations/switchyard.

DECOMMISSIONING

The DEIS will include a discussion of requirements associated with the eventual closure of the project at the end of its useful life.

WATER RESOURCES

This section of the DEIS will provide a description of the local water resources in the vicinity of the project site and the potential impacts the construction and operations of the proposed facility will have on the Suffolk County Water Authority (SCWA) resources.

SURFACE WATERS

For any surface waters that have the potential to experience a significant adverse environmental impacts as a result of the project, the DEIS will include the following:

- A description of the water quality, flow, and other characteristics of surface water features, including intermittent streams and vernal ponds.
- An identification of the extent of all Waters of the State of New York and the United States, within the project site or interconnections.
- An analysis of the impact of the construction and operation of the project and interconnections on the surface waters identified above.
- An identification and evaluation of reasonable mitigation measures regarding impacts on Waters of the State of New York and the United States and the other surface waters identified above.

Additionally, the proposed project lies in the 25 to 50 year groundwater contributing area to the Carmans River, a tributary to the Great South Bay, with surface waters located approximately 2.5 miles to the east of the site. The potential for significant adverse impacts to the Carmans River and consistency with the *Carmans River Conservation and Management Plan* will be evaluated within the DEIS.

GROUNDWATER

The subject properties are located within Suffolk County Department of Health Services (SCDHS) Groundwater Management Zone VI.

The DEIS will include the following with respect to groundwater resources:

- A site map showing estimated depths to high groundwater in increments appropriate for the project site.
- An analysis and evaluation of potential impacts from the operation of the project on drinking water supplies, groundwater quality, and quantity in the project area.

CONTAMINATED MATERIALS

A Phase I Environmental Site Assessment (ESA) will be conducted in accordance with the American Society for Testing Materials (ASTM E-1527 Standard Practice for Environmental Site Assessments) for the property comprising the proposed project site. The results of the Phase I ESA will be used to assess the potential for significant impacts and to identify locations where further investigation (e.g., a Phase II ESA or other appropriate investigation) or management may be required. The results of the Phase I ESA and Phase II ESA, if applicable, will be summarized in the DEIS. Where a Phase II ESA or other appropriate investigation is required, that investigation will be undertaken and the results and proposed mitigation measures to address any recognized conditions will also be identified in the DEIS, with consultation, as appropriate, with NYSDEC and SCDHS.

TERRESTRIAL ECOLOGY

The DEIS will provide a study of the potential adverse impacts on terrestrial resources from the construction and operation of the project. The assessment of terrestrial ecology impacts within the DEIS will address potential vegetation, wildlife, and wetland impacts as well as potential adverse impacts to federally and state-listed rare, threatened, and endangered plant and animal species will be assessed.

VEGETATION

The on-site terrestrial ecology as well as the ecological characteristics of proposed interconnection routes will be reviewed as follows:

- The ecological communities will be described according to *Ecological Communities of New York State*, Second Edition (Edinger et al. 2002)
- A characterization of the type of plant communities present, the structure of these communities and the species composition of each community, based on reconnaissance surveys.
- A delineation of the vegetative communities or cover type present on the basis of recent aerial photography and field observations, including the identification and delineation of any unusual habitats or natural communities, which could support listed species or species of special concern.
- Documentation of the structure of these communities (canopy, understory, and ground cover) by visual observations of either representative sample plots or sampling transects.

The structure and composition of the plant communities will be identified based on dominant species. All species observed being recorded for the purpose of site inventory.

- An analysis of the impact of the operation of the on-site interconnections on the vegetation identified, including a delineation of the vegetation areas to be removed or disturbed, mapped at an appropriate scale.
- An identification and evaluation of reasonable mitigation measures, including the use of alternative technologies, regarding vegetation impacts identified. The project will work with the appropriate agencies to determine the most appropriate site conditions for the undisturbed portions of the project site.

WILDLIFE

The DEIS will provide the following information regarding wildlife and wildlife habitat for the project site and for the proposed on-site interconnection routes:

- A characterization of the project site and proposed on-site interconnection corridors as to the wildlife (including mammals, birds, amphibians, and reptiles) and wildlife habitats, that occur in, on, or in the vicinity of the project site and interconnections, based on spring and/or summer reconnaissance or systematic surveys, supplemented by available data from the New York State (NYS) Amphibian and Reptile Atlas project, the NYS Breeding Bird Atlas and range maps, and other similar reference sources, including an identification and delineation of any unusual habitats or natural communities which could support listed species or species of special concern.
- A list of the species of mammals, birds, amphibians, and reptiles reasonably likely to occur in, on, or in the vicinity of the project site based on site observations and supplemented by publicly available sources.
- An analysis of the impact of operation, including air emissions, of the project and interconnections on the wildlife (including listed rare species or species of special concern), wildlife habitats, and wildlife travel corridors identified above.
- An identification and evaluation of reasonable mitigation measures, including the use of alternative technologies, regarding wildlife impacts identified.

WETLANDS

The project site will be investigated for the presence of on-site wetlands. The presence of any on-site wetlands will be identified in the DEIS. Appropriate maps from NYSDEC, the Town of Brookhaven, and the U.S. Fish and Wildlife Service will be examined for mapped wetlands. The methodology for assessing the potential adverse impacts to wetlands will follow the procedures and use the predictive data provided in the "U.S. Army Corps of Engineers Wetlands Delineation Manual (1987)" and its supplemental clarifying memorandum (Williams, A.E. 1992).

Should wetlands be identified, the DEIS will provide the following information regarding wetlands:

- An identification of the extent of all federal, state, and locally-regulated wetlands that may be impacted by the project or interconnections.

- A description of the characteristics of all federal wetlands and state wetlands identified, if any, including a description of the vegetation, soils, and hydrology data collected for each wetland site identified, based on actual on-site wetland observations.
- An on-site identification and delineation of all federal wetlands and state-regulated wetlands identified, if any.
- A survey or coordinate map of the location of all federal wetland and state-regulated wetland boundaries identified above.
- An identification and evaluation of reasonable mitigation measures, including the use of alternative technologies and control of potential phosphorus and nitrogen sources from the project, to avoid or minimize adverse wetlands impacts, if any.

CONSTRUCTION IMPACTS

Construction impacts, while temporary in nature, will be described and their significance analyzed in the DEIS. The assessment of construction impacts will include:

- A description of the anticipated phasing for construction and the construction period for all components of the project, including the expected starting and ending dates. An estimate of the number of employees per shift for the major phase of construction will be provided.
- A narrative description of each phase of construction, including a description of the construction equipment to be used during each phase of construction, the hours during which it is planned that construction and component transportation vehicles would operate; and an identification of which roads would be utilized for transportation of construction equipment and project components.
    - A description of planned site security measures during construction, as well as the measures planned to deal with solid and sanitary waste generated by construction activities.
    - An assessment of potential traffic, air quality, noise, water quality, natural resources and hazardous material impacts that may be created by or encountered during project construction.
    - The DEIS will provide a preliminary plan for the collection and treatment of stormwater runoff from the site during construction including a description of techniques that would be used to prevent or control soil erosion, runoff and subsequent sedimentation in areas that have been cleared and graded an analysis of related impacts.

An evaluation of the impact of construction noise will be conducted. Typical construction noise levels by phase will be provided and compared to the measured daytime L_{eq} noise levels.

If necessary, an identification of mitigation measures designed to minimize any potentially significant adverse construction impacts will be performed.

HAZARD MITIGATION

Mitigation from and responses to potential natural and man-made disasters will be evaluated within the DEIS and the components of a preliminary hazard emergency management plan will be developed in coordination with local, state, and federal officials in aspects of planning,

resource management, and emergency response and recovery activities. Health and Safety Plan requirements will also be discussed.

CUMULATIVE IMPACTS

Cumulative impacts can result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. The DEIS will include the following cumulative impact studies:

- A local air quality cumulative impact analysis, following the procedures established in NYSDEC DAR-10, including the existing Caithness Long Island Energy Center, the proposed Caithness Long Island Energy Center II and any approved or pending large combustion sources located within 10 miles of the proposed site, will be conducted. The modeled cumulative source impacts plus a representative background will be compared to and ensure compliance with the applicable NAAQS and/or NYAAQS.
- Potential cumulative impacts on water supply associated with new and proposed power generation facilities will be evaluated and presented. This will include consideration of power generation facilities proposed or permitted under NYS SEQRA and/or Article 10 jurisdiction and recent power development projects for which power purchase agreements have been executed with LIPA.
- Cumulative impact analyses on other technical areas, such as traffic, noise and land use, will be done for operations. In addition, if the construction of another project could overlap with construction of the Caithness Long Island Energy Center II, a cumulative construction impact analysis will be done.

OTHER ENVIRONMENTAL IMPACTS

The DEIS will also identify and discuss the following to the extent applicable and significant.

REASONABLY RELATED SHORT-TERM AND LONG-TERM IMPACTS, CUMULATIVE IMPACTS, AND OTHER ASSOCIATED IMPACTS

This section will address those short-term and long-term impacts, cumulative impacts, and other environmental impacts associated with the project as identified in the DEIS environmental analyses.

ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

This section of the DEIS will identify any adverse impacts associated with the project which cannot be avoided or fully mitigated if the proposed action is implemented.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

This section will include those natural and human resources identified in the DEIS environmental analyses that will be consumed, converted, or otherwise made unavailable for future use if the project is implemented.

GROWTH-INDUCING ASPECTS OF THE PROPOSED ACTION

This section will define any secondary impacts the project may have in inducing economic growth or development in the vicinity of the project site, in Suffolk County, and Long Island as a whole.

EFFECT OF THE PROPOSED ACTION ON THE USE AND CONSERVATION OF ENERGY

This section of the DEIS will discuss the effects of the project on the use and conservation of energy.

ALTERNATIVES

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 action." Among the alternatives that will be considered are the following:

- No action alternative.
- Alternative methods that LIPA could implement, such as demand side management and renewable sources. Proposed wind and solar/photovoltaic alternative energy projects, Town and region-wide, will be discussed in their relation to feasibility as an alternative to the proposed Caithness Long Island Energy Center II and compliance with the LIPA Board of Trustees adopted *Electric Resource Plan 2010-2020*.
- Alternative project sites, limited to those which are owned by or under option by the project sponsor (required under SEQRA). Alternative project technology, including different turbine and cooling technologies.
- Alternative project design and operational modes.
- Alternative scale or magnitude of the project.

APPENDICES TO ACCOMPANY DEIS

In accordance with the environmental scope discussed above, the project will prepare a number of studies, reports, and engineer drawings related to identifying and describing the potential environmental impacts of the proposed project. These reports, to be attached as appendices to the DEIS, will include the following:

- Agency Correspondence;
- Project Engineering Plans and Site Plan Drawings;
- Air Quality Modeling Protocol and Air Quality Impact Analysis Documentation
- Phase IA/IB Cultural Resource Report (as applicable);
- Traffic Impact Analysis Report;
- Noise Impact Assessment Technical Report;
- ASTM Environmental Site Investigation Report(s);
- Geotechnical Site Investigation Report; and
- SPDES permit application.

Issues Deemed Not Relevant, Not Environmentally Significant or Adequately Addressed in Prior Environmental Review

The intent of the DEIS is to disclose and analyze all potential significant adverse environmental impacts associated with the proposed project. The Draft Scope has been the subject of a public scoping process in conformance with SEQRA Part 617.8, which will conclude with the issuance of this Final Scope by the Lead Agency.

This document is intended to fulfill the Lead Agency requirements for issuance of a Final Scope in accordance with SEQRA Part 617.8. The document assists the Lead Agency in evaluating the DEIS for content and adequacy for public review, assists the applicant in understanding the extent and quality of information needed to evaluate the proposed project, and allows the Lead Agency and involved agencies to obtain the information necessary to reach an informed decision on the project.

Adopted By:

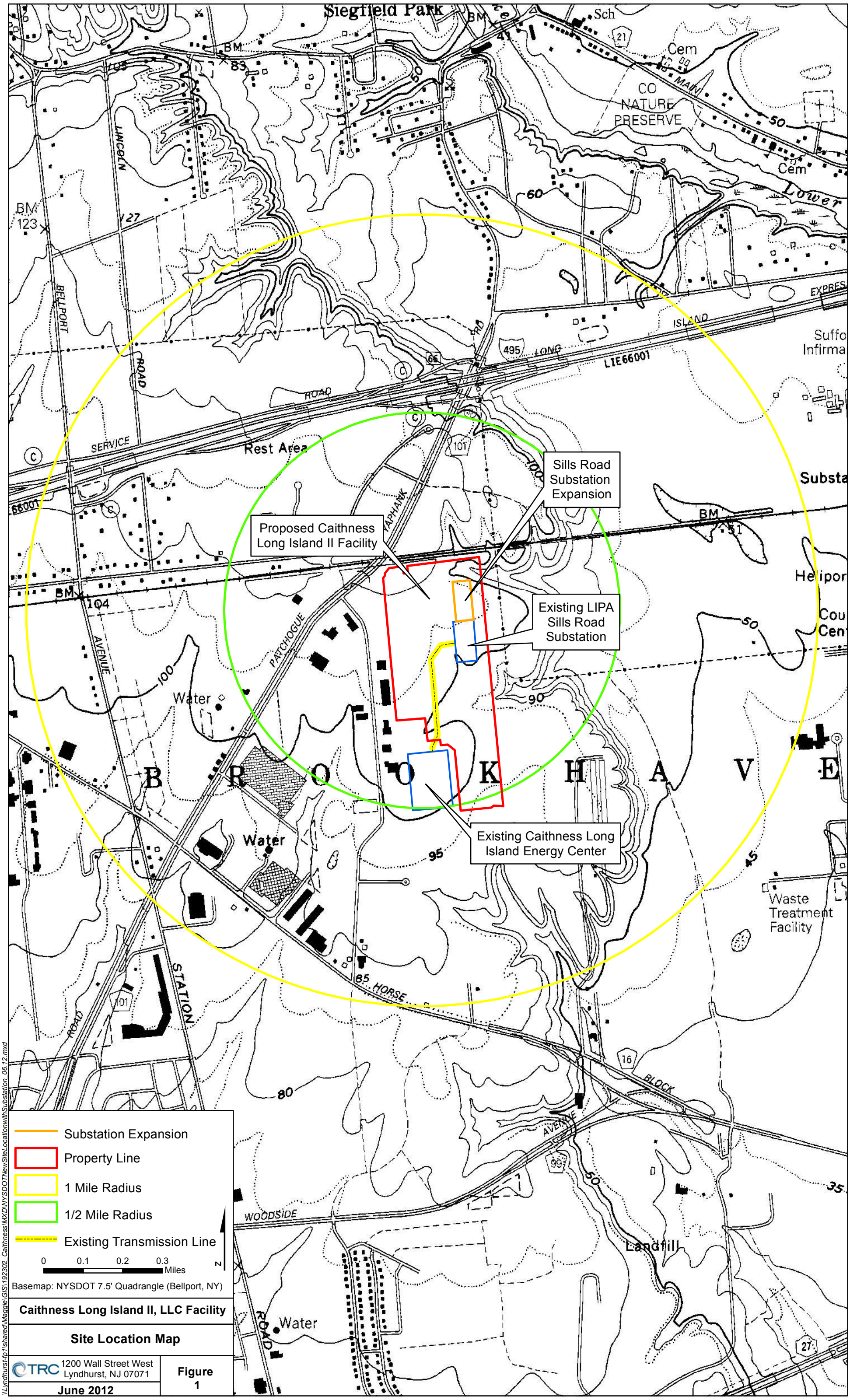
Tullio Bertoli

October 31, 2013

Tullio Bertoli

Date

Commissioner, Department of Planning, Environmental, and Land Management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Proposed Caithness Long Island II Facility
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PATCHOGUE
AVENUE
Water
B R O O K H A V E
Existing Caithness Long Island Energy Center
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Waste Treatment Facility
STATION
ROAD
HORSE
BLOCK
AVENUE
WOODSIDE
Landfill
ROAD
Water
Substation Expansion
Property Line
1 Mile Radius
1/2 Mile Radius
Existing Transmission Line
0 0.1 0.2 0.3 Miles
N
Basemap: NYSDOT 7.5' Quadrangle (Bellport, NY)
Caithness Long Island II, LLC Facility
Site Location Map
TRC 1200 Wall Street West Lyndhurst, NJ 07071
June 2012
Figure 1
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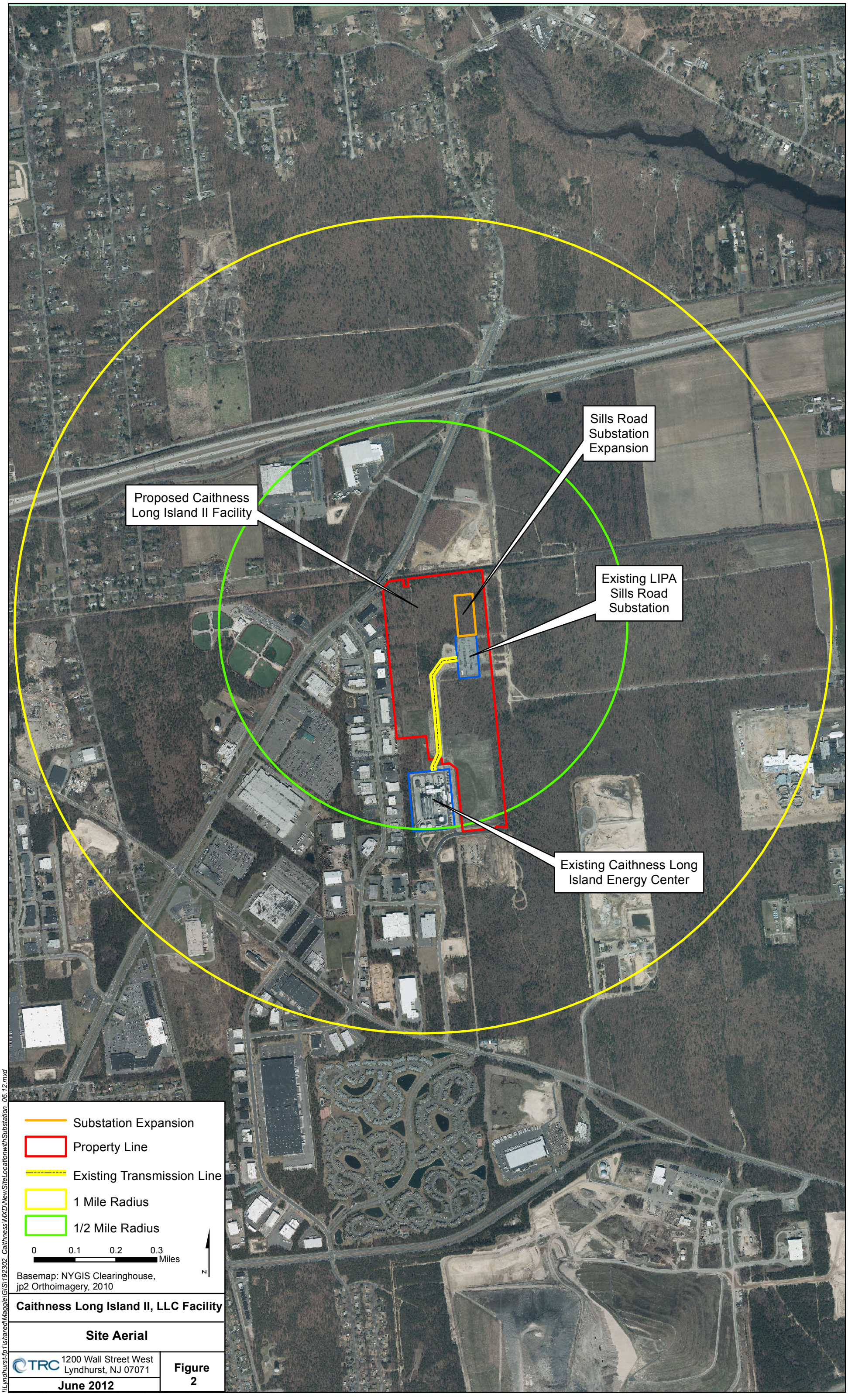

Caithness Long Island II, LLC Facility

Site Aerial

TRC 1200 Wall Street West Lyndhurst, NJ 07071

June 2012

Figure 2

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