

NRG Astoria Gas Turbine Power LLC -- Repowering Project
State Environmental Quality Review (SEQR)
Scoping Document for Draft Environmental Impact Statement
October 8, 2008

NRG Astoria Gas Turbine Power LLC (“Astoria”), owner of the Astoria Generating Station (the “Station”), has prepared this scoping analysis and work scope (“Scoping Document”) for a site repowering project (the “Proposed Project”) through the pre-application review process in consultation with the New York State Department of Environmental Conservation (“DEC”).

This scoping analysis covers the Proposed Project which will use two 260 MW Siemens SCC6-5000F combustion turbines, or functionally equivalent state-of-the-art quick start turbines, for the Phase I of the Proposed Project and proposes to add two additional combustion turbines (for a total of four units) during Phase II. After review and consideration of public and agency comments, a final scope will be issued for the Draft Environmental Impact Statement (“DEIS”).

Because the specific type of replacement turbine has not yet been identified, all analyses will assume the more conservative values of the potential choices.

Purpose of Scoping and the SEQR Process

On December 17, 2007, the DEC received an Application for a Title V Air Permit from Astoria Gas Turbine Power LLC for development of the Proposed Action. DEC determined that the Project was a Type I Action under the New York State Environmental Quality Review Act (“SEQRA”). Accordingly [pursuant to 6 NYCRR §617.6(b)(3)] on April 8, 2008, DEC circulated a Lead Agency Coordination Letter and Environmental Assessment Statement form Part 1 to all other Involved Agencies. In this correspondence, DEC indicated its intention to act as Lead Agency for the purpose of a coordinated SEQRA review of the Proposed Action. No objections were made to DEC acting as Lead Agency by any of the Involved Agencies; therefore, DEC determined that it will be the Lead Agency for the SEQRA review of this action on October 8, 2008. The applicant will submit a modified application for a two-phase project.

On October 8, 2008, DEC, as Lead Agency, determined that the Proposed Project may have the potential for a significant adverse environmental impact on the environment and that a DEIS must be prepared.

Also pursuant to 6 NYCRR §617.8, DEC is requiring Public Scoping for the Proposed Action. Public Scoping under 6 NYCRR §617.8 is the process by which the Lead Agency, in cooperation with the public and involved or interested agencies, identifies potentially significant adverse impacts that should be considered in a DEIS. As part of the Environmental Impact Statement (“EIS”) process and in accordance with 6 NYCRR §617.8, this Draft Scoping document has been prepared under the review of DEC. 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 DEC to the public and all involved and interested agencies for review and comment. After consideration of public and agency comments, DEC will issue a Final Scope of Work for the DEIS.

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Executive Summary of Scoping Issues

The Proposed Project, as outlined below, will incorporate a two-phase development process. In Phase I approximately 120 MW of 1970-vintage uncontrolled Westinghouse oil-fired peaking turbines will be retired and demolished. This capacity will be replaced with approximately 520 MW of new state-of-the-art combustion turbines. In Phase II approximately 480 MW of 1970-vintage Pratt & Whitney capacity will be retired. This Pratt & Whitney capacity will then be replaced with approximately 520 MW of new state-of-the-art combustion turbines. Thus, the two-phase project will result in the replacement of the existing approximately 600 MW of peaking only capacity with 1040 MW of state-of-the-art turbines with ultra low emissions and dual fuel firing capability. The units will be constructed within the boundaries of the existing Station. This project lies within the overall Astoria complex, which is the site of several existing power generation facilities and has been occupied by power generating plants since at least 1904.

The Proposed Project will result in more efficient electricity production (greater than 48% efficiency for the proposed units as compared to approximately 35% efficiency for the existing units) and dramatically reduced emissions at the Station. In addition, the project will provide greater electric generation capability in megawatts per hour and more available hours per year. Depending on dispatch and contract needs, the new units will be able to operate for more than 7000 hours per year per turbine, in comparison to just a few hundred hours per year per turbine for the existing units, thus providing a far more reliable electric supply to the grid. The new units will provide more reliable power output in an intermediate operating mode -- they can be used both as peaking units and as base loaded units. Additionally, the new units will provide 10-minute rapid start capability nearly equivalent to black start units. The new turbines included in the Proposed Project have high thermal efficiencies and ultra-low emissions potential. Unlike the existing turbines, the new turbines will be equipped with state-of-the-art emissions controls and continuous emissions monitoring equipment. The new units will substantially reduce emissions of nitrogen oxides (“NOx”), as compared to the current units, and overall significantly reduce emissions on High Energy Demand Days (“HEDD”). Other measurable operating and emissions parameters will be improved. Air quality impacts will be assessed using DEC approved air quality modeling protocols.