Barnegat Bay Stakeholder Meeting

New Jersey Department of Environmental Protection

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Background

- A number of environmental and biological studies have been completed regarding Barnegat Bay.
- We recognize the efforts of the Barnegat Bay Partnership and others who have worked to identify and understand the issues affecting water quality and aquatic life.
- The experts have reinforced the need for a more comprehensive understanding of:
  - the sources of water quality degradation
  - the flow patterns and water residence time
  - changes to habitat and fisheries

Background (cont.)

- While all of the impacts on Barnegat Bay have not been comprehensively studied, Exelon has performed extensive studies of the impacts of OCGS on the Bay as required by the NJDEP in connection with the plant's NJPDES permit.

Exelon Studies

- To support NJDEP's inventory of the studies of the Bay, Exelon lists the following studies which were commissioned and fully reviewed by NJDEP:
  - Jersey Central Power & Light Company. 1978. Oyster Creek & Forked River Nuclear Generating Stations, 316(a) & (b) Demonstration. Jersey Central Power & Light Company, Morristown, NJ.
  - Versar. 1989. Technical Review and Evaluation of Thermal Effects Studies and Cooling Water Intake Structure Demonstration of Impact for the Oyster Creek Nuclear Generating Station, Revised Final Report, May 1989
  - URS. 2008. Characterization of the Aquatic Resources and Impingement and Entrainment at Oyster Creek Nuclear Generating Station, Revised February 2010, Prepared for Exelon Generation, 2008

316(b) Demonstration Jersey Central Power & Light Company. (1978)

- Comprehensive baseline evaluation of the biological effects of OCGS (1975-1977).
- Detailed life histories, distribution, community structure and number and mortality of impinged and entrained fish, shellfish and zooplankton.
- Assessed impingement losses for each species with respect to population studies conducted in Barnegat Bay.
- Attributed fluctuations in the fish community not to OCGS, but to natural variation also seen in other estuaries.

Impingement and Entrainment Monitoring Studies 1977 through 1985

- Assessed 9 years of impingement and entrainment data.
- Concluded impingement and entrainment at OCGS varied similarly with natural fluctuations of fish populations in Barnegat Bay.

Versar (1989) Technical review of thermal and biological studies at OCGS.

- Modeled effect of OCGS on fisheries.
- Compared OCGS impingement and entrainment studies to Barnegat Bay data.
- NJDEP expressly agreed with report's conclusion that OCGS operations do not adversely affect aquatic populations in Barnegat Bay.

Characterization of the Aquatic Resources and Impingement and Entrainment at OCGS 2008

- Most recent study of impingement and entrainment at OCGS
- Concluded that the numbers of fish and shellfish at OCGS are similar to those seen 30 years ago.

316(a) Demonstration Jersey Central Power & Light Company. (1978)

- Evaluated thermal effects of OCGS operations.
- Detailed life histories, distribution, community structure, temperature avoidance, and likely response of each species to the OCGS thermal plume of common fish, shellfish, and plankton.
- Concluded OCGS's thermal discharges have little to no impact on habitat.

Exelon Commitments under CZMA

- Tidal wetlands restoration
- Hard clam bed restoration
- Oyster bed restoration
- Finninger Farm Land Donation
- Land donation improvements

Conclusions

- Exelon welcomes the opportunity to partner with all stakeholders to scientifically identify all sources affecting the Bay.
- Exelon is committed to work with other stakeholders to implement actions to prevent habitat loss, enhance/restore water quality and improve fisheries.