



APR 6 - 2010

10 CFR 50
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LR-N10-0119

U.S. Nuclear Regulatory Commission
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Hope Creek Generating Station
Facility Operating License No. NPF-57
NRC Docket Nos. 50-354

Subject: Corrections to the Hope Creek Generating Station License Renewal
Application Environmental Report

Reference: Appendix E (Environmental Report) of the Hope Creek Generating
Station License Renewal Application, Submitted 08/18/2009

PSEG Nuclear, LLC (PSEG) has identified a typographical error related to groundwater allocation and other errors related to tax information that require correction in Appendix E (Environmental Report) of the Hope Creek Generating Station (HCGS) License Renewal Application, submitted 08/18/2009. Accordingly, as a supplement to the HCGS License Renewal Application, PSEG is providing one enclosure containing revised Environmental Report pages 2-58 (related to groundwater allocation) and 2-45, 2-46, 4-30, 4-31, 4-32, 6-5, and 8-10 (related to tax information). Two versions of each changed page are provided, a marked up version and a clean version. The marked up version indicated specific textual changes using strikeout font for deletions and underline font for insertions. The clean version has vertical lines in the right-hand margin beside the lines of text that have been changed, but specific textual changes are not individually marked. Both versions of each changed page contain the phrase "Revised 02/2010" in the footer beneath the page numbers.

The changes related to groundwater allocation are being made to correct a typographical error that resulted in assigning an incorrect magnitude ["164 billion liters (43.2 billion gallons)" instead of "164 million liters (43.2 million gallons)" (emphasis added)] to the allowable combined amount of monthly groundwater diversion by Salem and HCGS. Although the error occurred on only one page and was not propagated into the analyses of impacts in the HCGS License Renewal Environmental Report, correction is necessary to avoid potential inadvertent propagation of the error in the future.

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The changes related to tax information are necessary because only tax payments made by PSEG Nuclear (majority owner) for the Energy and Environmental Resource Center in Salem, New Jersey were reported in the original HCGS License Renewal Environmental Report. Tax payments made by Exelon Generation, LLC (minority owner of the Energy and Environmental Resource Center until 2008) were inadvertently omitted from Chapter 2. Environmental analyses in Chapter 4 that could be affected by the omission have been reviewed, with no substantive changes being necessary to the original conclusions regarding tax impacts. However, conforming editorial changes have been made in Chapter 4 and on summary tables in Chapter 6 and 8.

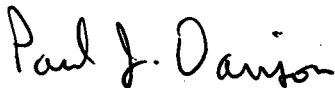
This Environmental Report supplement has been discussed with the NRC License Renewal Environmental Project Manager for the HCGS License Renewal Application. If there are questions, please contact Ed Keating, Senior Environmental Advisor, PSEG Nuclear at 856-339-7902.

This letter and its enclosure contain no regulatory commitments.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 4/2/2010

Sincerely,



Paul J. Davison
Vice President, Operations Support
PSEG Nuclear LLC

Enclosure: Revised Hope Creek License Renewal Environmental Report pages

cc: S. Collins, Regional Administrator – NRC Region I
R. Ennis, Project Manager – USNRC
C. Eccleston, Project Manager – USNRC
NRC Senior Resident Inspector – Hope Creek
P. Mulligan, Manager IV, NJBNE
Lee Marabella – Commitment Coordinator

ENCLOSURE

Revised Hope Creek License Renewal Environmental Report Pages (Docket No. 50-354)

Revised Groundwater Allocation Information

- Marked up page 2-58, Section 2.12.2.1
- Clean page 2-58, Section 2.12.2.1

Revised Tax Information

- Marked up pages 2-45 and 2-46, Section 2.7
- Clean pages 2-45 and 2-46, Section 2.7
- Marked up pages 4-30, 4-31 and 4-32, Section 4.17
- Clean pages 4-30, 4-31 and 4-32, Section 4.17
- Marked up page 6-5, Table 6.1-1
- Clean page 6-5, Table 6.1-1
- Marked up page 8-10, Table 8.0-2
- Clean page 8-10, Table 8.0-2

Revised Groundwater Allocation Information

2.12 Known or Reasonably Foreseeable Projects in Site Vicinity

As indicated on Figure 2.1-2, there is no urban area within the 10-km (6-mi) radius of HCGS, nor is there any industrial development. The immediate vicinity consists of extensive tidal marshlands and low-lying meadowlands.

2.12.1 WATER USERS IN THE DELAWARE RIVER BASIN IN THE VICINITY OF HCGS

In its "Envirofacts Data Warehouse" online database access tool, the EPA provides information about environmental activities that may affect air, land, and water. A search of the Envirofacts "water" database for facilities that hold permits to discharge to waters of the United States in the vicinity of HCGS identified heavy industries, electric generation, and manufacturing, among others. These industries represent the types of existing dischargers to the river in the vicinity of HCGS. They also represent the types of industrial facilities that could be permitted near HCGS in the future. Additional information concerning these facilities may be accessed through the EPA's "Envirofacts Warehouse" (<http://oaspub.epa.gov/enviro/>).

2.12.2 ELECTRIC CAPACITY IN THE IMMEDIATE VICINITY OF HCGS

2.12.2.1 Salem Nuclear Generating Station

The Salem Nuclear Generating Station and HCGS are co-located on Artificial Island. Salem is a two-unit plant utilizing pressurized water reactors (PWRs) designed by Westinghouse Electric. Each unit has a current licensed thermal power at 100 percent power of 3,459 MWt (PSEG 2007a). An air-cooled combustion turbine peaking unit rated at approximately 40 MWe (referred to as "Salem Unit 3") is also present.

Salem has a once-through circulating water system (CWS) for condenser cooling that withdraws water from and discharges water to the Delaware Estuary. The intake structure for the CWS is on the south shore of Artificial Island and the Salem Service Water System (SWS) has an independent intake structure located upstream of the CWS intake. Discharge for both systems is through a submerged pipe that extends 152 m (500 ft) into the estuary approximately halfway between the SWS and CWS intakes. Each unit's CWS pumps approximately 3.97 million liters (1.05 million gallons) per minute from the river.

PSEG has a current NJPDES (No. NJ0005622) permit for Salem that limits intake flow from the Delaware Estuary to a 30-day average of 11.5 billion liters (3.0 billion gallons) per day of circulating water (NJDEP 2004).

PSEG is authorized by the Delaware River Basin Commission (DRBC) to withdraw surface water from the Delaware Estuary through the Salem CWS and SWS intakes for consumptive and non-consumptive use as cooling water not to exceed 367,000 million liters (97,000 million gallons) in a single 30-day period. (DRBC 2001)

PSEG has a single ground-water allocation permit from NJDEP for the diversion by both Salem and HCGS of up to 164 ~~billion-million~~ liters (43.2 ~~billion-million~~ gallons) of ground water per month (NJDEP 2004).

2.12 Known or Reasonably Foreseeable Projects in Site Vicinity

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PSEG has a single ground-water allocation permit from NJDEP for the diversion by both Salem and HCGS of up to 164 million liters (43.2 million gallons) of ground water per month (NJDEP 2004).

Revised Tax Information

2.7 Taxes

New Jersey is one of a few states that initiate the budget process at a local, rather than county, level. In addition, local governments in New Jersey use the calendar year as opposed to a July-June fiscal year. Property taxes collected in Lower Alloways Creek Township are not retained by the township but are provided to Salem County, which provides most services to residents of Lower Alloways Creek Township.

PSEG pays property taxes to Lower Alloways Creek Township for HCGS. Over the last five years, the taxes paid to Lower Alloways Creek Township for HCGS ranged from a low of \$457,029 in 2006 to a high of \$485,624 in 2005 (Table 2.7-1). During the same 5 years, PSEG and Exelon, which was then the minority owner, also pays-paid taxes to the City of Salem for the Energy and Environmental Resource Center, which is located in the City of Salem and is shared by Salem and HCGS. Table 2.7-1 summarizes PSEG's property tax payments to Lower Alloways Creek and the Energy and Environmental Resource Center owners' property tax payments to the City of Salem from 2003 to 2007.

From 2003 through 2007, Lower Alloways Creek Township collected between \$2,099,185 (in 2003) and \$2,325,378 (in 2005) annually in total commercial property tax revenues (Table 2.7-1). From 2003 to 2007, HCGS's property tax payments represented 20.8 to 22.1 percent of Lower Alloways Creek Township's total property tax revenues. PSEG's property tax payment to Lower Alloways Creek Township is These payments were large enough to relieve the Lower Alloways Creek residents of the burden of local municipal property taxes on residences, local school taxes, and open space municipal taxes (a local option). The Lower Alloways Creek residents only pay Salem County taxes and county open space taxes. The PSEG HCGS's property tax payments represented 1.03 to 1.34 percent of Salem County's total property tax revenues during the same time period (Table 2.7-1).

From 2003 through 2007, the City of Salem collected between \$5,092,527 and \$7,389,319 annually in total property tax revenues (see Table 2.7-1). The City of Salem's property tax revenues are allocated to county services, schools, open space, and municipal services. Including PSEG, there were two owners paying property taxes for the Energy and Environmental Resource Center. From 2003 to 2007, PSEG's the owners' property tax payments for the Energy and Environmental Resource Center represented 2.63.5 to 3.24.3 percent of the City of Salem's total property tax revenues. The City of Salem's property tax revenues are allocated to county services, schools, open space, and municipal services.

Table 2.7-1 Tax Information for HCGS and the Energy and Environmental Resource Center, 2003 - 2007

	PSEG's Property Taxes for HCGS				
	2003	2004	2005	2006	2007
Amount PSEG Paid in Property Tax <u>for HCGS</u>	\$464,677	\$474,512	\$485,624	\$457,029	\$480,476
Lower Alloways Creek Total Property Tax Revenue ^a	\$2,099,185	\$2,251,474	\$2,325,378	\$2,195,746	\$2,310,262
Percent of Lower Alloways Creek Total Property Tax Revenues	22.1	21.1	20.9	20.8	20.8
Salem County Total Property Tax Revenue ^a	\$34,697,781	\$36,320,365	\$40,562,971	\$43,382,037	\$46,667,551
Percent of Salem County Total Property Tax Revenues	1.34	1.34	1.20	1.051	1.03
	PSEG's Property Taxes for the Energy and Environmental Resource Center in Salem New Jersey^b				
	2003	2004	2005	2006	2007
Amount PSEG Paid in Property Tax ^b	<u>\$131,477</u> <u>60</u>	<u>\$156,974</u> <u>55</u>	<u>\$163,695</u> <u>22</u>	<u>\$169,384</u> <u>92</u>	<u>\$236,408</u> <u>10</u>
City of Salem Total Property Tax Revenues ^a	\$5,092,527	\$6,049,675	\$6,294,613	\$6,485,947	\$7,389,319
Percent of City of Salem Total Property Tax Revenues	<u>2.63.5</u>	<u>2.63.5</u>	<u>2.63.5</u>	<u>2.63.5</u>	<u>3.24.3</u>
^a Source: State of New Jersey 2008					
^b Property taxes for the Energy and Environmental Resource Center is provided for information only. The Resource Center would not be affected by any license renewal decision. Includes taxes paid by both PSEG and Exelon.					

2.7 Taxes

New Jersey is one of a few states that initiate the budget process at a local, rather than county, level. In addition, local governments in New Jersey use the calendar year as opposed to a July-June fiscal year. Property taxes collected in Lower Alloways Creek Township are not retained by the township but are provided to Salem County, which provides most services to residents of Lower Alloways Creek Township.

PSEG pays property taxes to Lower Alloways Creek Township for HCGS. Over the last five years, the taxes paid to Lower Alloways Creek Township for HCGS ranged from a low of \$457,029 in 2006 to a high of \$485,624 in 2005 (Table 2.7-1). During the same 5 years, PSEG and Exelon, which was then the minority owner, also paid taxes to the City of Salem for the Energy and Environmental Resource Center, which is located in the City of Salem and is shared by Salem and HCGS. Table 2.7-1 summarizes PSEG's property tax payments to Lower Alloways Creek and the Energy and Environmental Resource Center owners' property tax payments to the City of Salem from 2003 to 2007.

From 2003 through 2007, Lower Alloways Creek Township collected between \$2,099,185 (in 2003) and \$2,325,378 (in 2005) annually in total commercial property tax revenues (Table 2.7-1). From 2003 to 2007, HCGS's property tax payments represented 20.8 to 22.1 percent of Lower Alloways Creek Township's total property tax revenues. These payments were large enough to relieve the Lower Alloways Creek residents of the burden of local municipal property taxes on residences, local school taxes, and open space municipal taxes (a local option). The Lower Alloways Creek residents only pay Salem County taxes and county open space taxes. HCGS's property tax payments represented 1.0 to 1.3 percent of Salem County's total property tax revenues during the same time period (Table 2.7-1).

From 2003 through 2007, the City of Salem collected between \$5,092,527 and \$7,389,319 annually in total property tax revenues (see Table 2.7-1). The City of Salem's property tax revenues are allocated to county services, schools, open space, and municipal services. Including PSEG, there were two owners paying property taxes for the Energy and Environmental Resource Center. From 2003 to 2007, the owners' property tax payments for the Energy and Environmental Resource Center represented 3.5 to 4.3 percent of the City of Salem's total property tax revenues.

Table 2.7-1 Tax Information for HCGS and the Energy and Environmental Resource Center, 2003 - 2007

Property Taxes for HCGS					
	2003	2004	2005	2006	2007
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Lower Alloways Creek Total Property Tax Revenue ^a	\$2,099,185	\$2,251,474	\$2,325,378	\$2,195,746	\$2,310,262
Percent of Lower Alloways Creek Total Property Tax Revenues	22.1	21.1	20.9	20.8	20.8
Salem County Total Property Tax Revenue ^a	\$34,697,781	\$36,320,365	\$40,562,971	\$43,382,037	\$46,667,551
Percent of Salem County Total Property Tax Revenues	1.3	1.3	1.2	1.1	1.0
Property Taxes for the Energy and Environmental Resource Center in Salem New Jersey					
	2003	2004	2005	2006	2007
Amount PSEG Paid in Property Tax ^b	\$177,360	\$211,755	\$220,822	\$228,492	\$318,910
City of Salem Total Property Tax Revenues ^a	\$5,092,527	\$6,049,675	\$6,294,613	\$6,485,947	\$7,389,319
Percent of City of Salem Total Property Tax Revenues	3.5	3.5	3.5	3.5	4.3
^a Source: State of New Jersey 2008					
^b Includes taxes paid by both PSEG and Exelon.					

NRC has determined that the significance of tax payments as a source of local government revenue would be large if the payments are greater than 20 percent of revenue, moderate if the payments are between 10 and 20 percent of revenue, and small if the payments are less than 10 percent of revenue (NRC 1996b).

NRC defined the magnitude of land-use changes as follows (NRC 1996b):

SMALL - very little new development and minimal changes to an area's land-use pattern.

MODERATE - considerable new development and some changes to land-use pattern.

LARGE - large-scale new development and major changes in land-use pattern.

NRC further determined that, "...[I]f the plant's tax payments are projected to be medium to large relative to the community's total revenue, new tax-driven land-use changes would be moderate. This is most likely to be true where the community has no pre-established patterns of development (i.e., land-use plans or controls) or has not provided adequate public services to support and guide development in the past, especially infrastructure that would allow industrial development" (NRC 1996b).

Tax Impacts

Table 2.7-1 provides a comparison of the 2003 to 2007 tax payments made by PSEG to Lower Alloways Creek Township for HCGS and to the City of Salem for the Energy and Environmental Resource Center. Because PSEG's property tax payments to Lower Alloways Creek Township is so substantial (approximately 20 percent or more of the total property taxes collected), the residents of Lower Alloways Creek Township are relieved of local municipal, school, and optional open-space municipal taxes. Therefore, the significance of PSEG's property tax payments to Lower Alloways Creek Township is MODERATE to LARGE. However, while PSEG's property taxes are a large portion of Lower Alloways Creek Township taxes, the town forwards all of its tax revenues to Salem County in return for services Salem County provides to the township. PSEG's property tax payments are of SMALL significance for Salem County (less than 10 percent) and the City of Salem (less than 10 percent).

Land Use Impacts

As described in Section 2.6, Salem County has experienced an annual population growth rate of less than 1 percent for the last 30 years. Salem County has recently updated their comprehensive plan, which recognizes the value of open space, and continues to identify the goals of directing infrastructure development and planning to support smart growth, providing housing for all residents, and developing economic engines to ensure continued growth (Runkenstein and Associates 2004). Because no new construction activities would occur as a result of license renewal, there would be no change in HCGS's tax basis, ~~and consequently, no changes to land use based on~~ resulting from renewal of the license. Hence, new tax-driven land use changes in Salem County would be SMALL because the significance of property tax payments to the County would continue to be small.

From 1990 to 2000, the population in Lower Alloways Creek Township remained almost constant. As described in Section 2.8, there has been little change in the Township's land-use patterns since the last Master Plan review in 1999. With no new construction activities planned as a result of license renewal, there would be no change in Lower Alloways Creek Township's tax basis, ~~and consequently, no changes to land use based on~~ resulting from renewal of the

license. Hence, the significance of tax payments to Lower Alloways Creek for HCGS would continue to be MODERATE to LARGE because residents would continue to be relieved of many local taxes. However, because the Township would continue to forward all tax revenues to Salem County in return for services, new tax-driven land use changes would mirror those for Salem County, which would be SMALL.

The City of Salem has experienced a significant decline in population over the past several decades (Salem Main Street 2003). There is room for growth; however, PSEG's property tax is only a small portion of the City of Salem's total property tax revenues. With no new construction activities as a result of license renewal, there would be no change in Salem's tax basis, and consequently, no changes to land use based on resulting from renewal of the license. Hence, new tax-driven land use changes in the City of Salem would be SMALL because the significance of property tax payments to the City would continue to be small.

Conclusion

As described in Section 3.2, PSEG has no plans for refurbishment activities at HCGS. Therefore, PSEG anticipates neither an increase in the assessed value of HCGS due to refurbishment-related improvements, nor any related tax-increase-driven changes to offsite land-use and development patterns. Also, as explained above, HCGS property tax payments are of MODERATE to LARGE significance to Lower Alloways Creek Township residents because they eliminate the need for most other taxes, but the magnitude of the tax revenues from HCGS has not affected land-use patterns. The HCGS property tax payments are of SMALL significance to Salem County, which provides services to Lower Alloways Creek Township, and land-use changes in the county have been minimal. PSEG's pProperty tax payments by both owners to the City of Salem for the Energy and Environmental Resource Center are of SMALL significance, and land-use changes in the city have been minimal. Hence, PSEG concludes that the impacts of license renewal for HCGS on both tax revenues and land-use in Salem County would be SMALL.

Property Values

The City of Salem has experienced significant decline in population over the past several decades (Salem Main Street 2003). There is room for growth; however, PSEG's property tax is only a small portion of the City of Salem and Salem County's total property tax revenues. With no new construction activities as a result of license renewal, there would be no change in the tax basis, and consequently, no changes to land use based on renewal of the license.

PSEG considered whether the presence of HCGS has a depressing effect on property values that would be continued during the license-renewal term. NRC considered this question for seven nuclear plants in its GEIS and found no depressed property values resulting from construction and operation or license renewal of these plants (NRC 1996b). Published literature on the subject comes to varying conclusions. Of the studies claiming to show a depressing effect, the geographic extent of the claimed effect ranges from less than 3.2 km (2 mi) to as many as 96.5 km (60 mi; Blomquist 1974, Clark and Nieves 1994, Folland and Hough 2000, Sheppard 2007). Some studies demonstrate no effects (Gamble and Downing 1982, Nelson 1981, Rephann undated). The Nuclear Energy Institute (NEI) has studied economic benefits of several nuclear plants, including Salem (NEI 2006a), and found that property (housing) values are enhanced by the presence of nuclear plants, a conclusion that aligns with NRC 1996b and other studies (Bezdek and Wendling 2006; Clark et al. 1997; Farrell and Hall 2004; Metz et al.

1997; NEI 2003, NEI 2004a, NEI 2004b, NEI 2004c, NEI 2004d, NEI 2005a, NEI 2005b, and NEI 2006b).

Sheppard (2007), which concludes that property values are depressed within 3.2 km (2 mi) of a nuclear plant, is based on the Blomquist (1974) study of a single fossil-fueled plant located in a residential area. Blomquist (1974) noted that "[T]he findings of this study are based on a rather special instance...where the community is composed of primarily single-family residences...." The Blomquist proposition does not apply to HCGS because there are no residential properties within 3.2 km (2 mi) of HCGS. The area within 3.2 km (2 mi) of the HCGS site is water (Delaware River); dredged spoil disposal sites (owned by the U. S. government), and open space (marsh; owned by the U.S. government and State of New Jersey). Hence, given the ownership and New Jersey wetlands protection requirements, further development of these offsite areas for residential use is unlikely.

PSEG also notes that the plant that Blomquist (1974) studied was small, about 27 megawatts, burned oil and coal, and began commercial operation in 1949 (EIA 1996). The workforce at such a facility would likely be much smaller than one at a large nuclear plant such as HCGS. Accordingly, the multiplier effect of the HCGS workforce would be larger for tax contributions than the comparable multiplier effect for a 27-MW fossil-fueled facility. This could demonstrably increase, rather than decrease, property values. For this reason, PSEG believes the Blomquist (1974) methodology should not be applied to evaluate impacts of nuclear plants such as HCGS, on property values. PSEG suspects that such an effect, if any, is outweighed by positive benefits beyond as was done in Sheppard (2007).

Conclusion

Because the Sheppard (2007) assumptions do not apply to Salem, PSEG concludes, consistent with the GEIS (NRC 1996b), NEI (2006a), and the other studies cited above, that impacts on property values from HCGS, if any, are positive, and that license renewal would not alter this status.

NRC has determined that the significance of tax payments as a source of local government revenue would be large if the payments are greater than 20 percent of revenue, moderate if the payments are between 10 and 20 percent of revenue, and small if the payments are less than 10 percent of revenue (NRC 1996b).

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From 1990 to 2000, the population in Lower Alloways Creek Township remained almost constant. As described in Section 2.8, there has been little change in the Township's land-use patterns since the last Master Plan review in 1999. With no new construction activities planned as a result of license renewal, there would be no change in Lower Alloways Creek Township's tax basis resulting from renewal of the license. Hence, the significance of tax payments to Lower Alloways Creek for HCGS would continue to be MODERATE to LARGE because

residents would continue to be relieved of many local taxes. However, because the Township would continue to forward all tax revenues to Salem County in return for services, new tax-driven land use changes would mirror those for Salem County, which would be SMALL.

The City of Salem has experienced a significant decline in population over the past several decades (Salem Main Street 2003). There is room for growth; however with no new construction activities as a result of license renewal, there would be no change in Salem's tax basis resulting from renewal of the license. Hence, new tax-driven land use changes in the City of Salem would be SMALL because the significance of property tax payments to the City would continue to be small.

Conclusion

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Property Values

The City of Salem has experienced significant decline in population over the past several decades (Salem Main Street 2003). There is room for growth; however, PSEG's property tax is only a small portion of the City of Salem and Salem County's total property tax revenues. With no new construction activities as a result of license renewal, there would be no change in the tax basis, and consequently, no changes to land use based on renewal of the license.

PSEG considered whether the presence of HCGS has a depressing effect on property values that would be continued during the license-renewal term. NRC considered this question for seven nuclear plants in its GEIS and found no depressed property values resulting from construction and operation or license renewal of these plants (NRC 1996b). Published literature on the subject comes to varying conclusions. Of the studies claiming to show a depressing effect, the geographic extent of the claimed effect ranges from less than 3.2 km (2 mi) to as many as 96.5 km (60 mi; Blomquist 1974, Clark and Nieves 1994, Folland and Hough 2000, Sheppard 2007). Some studies demonstrate no effects (Gamble and Downing 1982, Nelson 1981, Rephann undated). The Nuclear Energy Institute (NEI) has studied economic benefits of several nuclear plants, including Salem (NEI 2006a), and found that property (housing) values are enhanced by the presence of nuclear plants, a conclusion that aligns with NRC 1996b and other studies (Bezdek and Wendling 2006; Clark et al. 1997; Farrell and Hall 2004; Metz et al. 1997; NEI 2003, NEI 2004a, NEI 2004b, NEI 2004c, NEI 2004d, NEI 2005a, NEI 2005b, and NEI 2006b).

Sheppard (2007), which concludes that property values are depressed within 3.2 km (2 mi) of a nuclear plant, is based on the Blomquist (1974) study of a single fossil-fueled plant located in a residential area. Blomquist (1974) noted that "[T]he findings of this study are based on a rather special instance...where the community is composed of primarily single-family residences...." The Blomquist proposition does not apply to HCGS because there are no residential properties within 3.2 km (2 mi) of HCGS. The area within 3.2 km (2 mi) of the HCGS site is water (Delaware River), dredged spoil disposal sites (owned by the U. S. government), and open space (marsh; owned by the U.S. government and State of New Jersey). Hence, given the ownership and New Jersey wetlands protection requirements, further development of these offsite areas for residential use is unlikely.

PSEG also notes that the plant that Blomquist (1974) studied was small, about 27 megawatts, burned oil and coal, and began commercial operation in 1949 (EIA 1996). The workforce at such a facility would likely be much smaller than one at a large nuclear plant such as HCGS. Accordingly, the multiplier effect of the HCGS workforce would be larger for tax contributions than the comparable multiplier effect for a 27-MW fossil-fueled facility. This could demonstrably increase, rather than decrease, property values. For this reason, PSEG believes the Blomquist (1974) methodology should not be applied to evaluate impacts of nuclear plants such as HCGS, on property values. PSEG suspects that such an effect, if any, is outweighed by positive benefits beyond as was done in Sheppard (2007).

Conclusion

Because the Sheppard (2007) assumptions do not apply to Salem, PSEG concludes, consistent with the GEIS (NRC 1996b), NEI (2006a), and the other studies cited above, that impacts on property values from HCGS, if any, are positive, and that license renewal would not alter this status.

**Table 6.1-1 Environmental Impacts Related to License Renewal at HCGS Unit 1
(Continued)**

No.	Category 2 Issue	Environmental Impact
Air Quality		
50	Air quality during refurbishment (non-attainment and maintenance areas)	NONE. This issue does not apply because refurbishment is not planned for HCGS.
Human Health		
57	Microbiological organisms (public health) (plants using lakes or canals, or cooling towers or cooling ponds that discharge to a small river)	NONE. This issue does not apply because HCGS does not use a lake or canals, and does not use cooling towers or cooling ponds that discharge to a small river.
59	Electromagnetic fields, acute effects (electric shock)	SMALL. For the one transmission line constructed to connect HCGS to the electric grid, modeling predicts induced currents of 4.0 milliamperes or less, which is less than the maximum induced current recommended by the National Electrical Safety Code (i.e., 5 milliamperes) for preventing electric shock from induced current.
Socioeconomics		
63	Housing impacts	SMALL. The addition of 60 jobs would not noticeably affect a potential housing market of more than two million housing units.
65	Public water supply: public utilities	SMALL. Water suppliers in Salem, Gloucester, and Cumberland counties, New Jersey, and New Castle County, Delaware, have excess capacity. The addition of 60 jobs would not adversely affect the available public water supply.
66	Public services: education (refurbishment)	NONE. This issue does not apply because refurbishment is not planned for HCGS.
68	Off-site land use (refurbishment)	NONE. This issue does not apply because refurbishment is not planned for HCGS.
69	Off-site land use (license renewal term)	SMALL. No station-induced changes to off-site land use are expected from license renewal because although HCGS taxes represent <u>approximately more than 20</u> percent of the taxes paid to Lower Alloways Creek Township, the Township's property tax payments are forwarded to Salem County in return for services. HCGS taxes comprise less than two <u>10</u> percent of Salem County tax revenues. Taxes on the Energy and Environmental Resources Center are less than three <u>10</u> percent of Salem city property tax revenues.
70	Public services: transportation	SMALL. The addition of 60 employees would not noticeably increase traffic or adversely affect level of service in the vicinity of Salem.
71	Historic and archaeological resources	SMALL. HCGS is located on Artificial Island, which is a manmade land area created during the early 1900s. As such, the site never contained historical or archaeological resources. In addition, no archaeological or historical resources are known to exist on the transmission line corridor associated with HCGS, and construction is not planned on-site or in the transmission corridor during the license renewal terms. Hence, no impacts to historic or archaeological resources are expected.

**Table 6.1-1 Environmental Impacts Related to License Renewal at HCGS Unit 1
(Continued)**

No.	Category 2 Issue	Environmental Impact
Air Quality		
50	Air quality during refurbishment (non-attainment and maintenance areas)	NONE. This issue does not apply because refurbishment is not planned for HCGS.
Human Health		
57	Microbiological organisms (public health) (plants using lakes or canals, or cooling towers or cooling ponds that discharge to a small river)	NONE. This issue does not apply because HCGS does not use a lake or canals, and does not use cooling towers or cooling ponds that discharge to a small river.
59	Electromagnetic fields, acute effects (electric shock)	SMALL. For the one transmission line constructed to connect HCGS to the electric grid, modeling predicts induced currents of 4.0 milliamperes or less, which is less than the maximum induced current recommended by the National Electrical Safety Code (i.e., 5 milliamperes) for preventing electric shock from induced current.
Socioeconomics		
63	Housing impacts	SMALL. The addition of 60 jobs would not noticeably affect a potential housing market of more than two million housing units.
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66	Public services: education (refurbishment)	NONE. This issue does not apply because refurbishment is not planned for HCGS.
68	Off-site land use (refurbishment)	NONE. This issue does not apply because refurbishment is not planned for HCGS.
69	Off-site land use (license renewal term)	SMALL. No station-induced changes to off-site land use are expected from license renewal because although HCGS taxes represent more than 20 percent of the taxes paid to Lower Alloways Creek Township, the Township's property tax payments are forwarded to Salem County in return for services. HCGS taxes comprise less than 10 percent of Salem County tax revenues. Taxes on the Energy and Environmental Resources Center are less than 10 percent of Salem city property tax revenues.
70	Public services: transportation	SMALL. The addition of 60 employees would not noticeably increase traffic or adversely affect level of service in the vicinity of Salem.
71	Historic and archaeological resources	SMALL. HCGS is located on Artificial Island, which is a manmade land area created during the early 1900s. As such, the site never contained historical or archaeological resources. In addition, no archaeological or historical resources are known to exist on the transmission line corridor associated with HCGS, and construction is not planned on-site or in the transmission corridor during the license renewal terms. Hence, no impacts to historic or archaeological resources are expected.

Table 8.0-2. Impacts Comparison Detail (Continued)

Proposed Action (License Renewal)	Base (Decommissioning)	No-Action Alternatives			
		With New Nuclear Power	With Coal-Fired Generation	With Gas-Fired Generation	With Purchased Power
Socioeconomic Impacts					
SMALL – Adopting by reference Category 1 issue findings (Table A-1, Issues 64, 67). Two Category 2 issues findings are not applicable (Section 4.16, Issue 66 and Section 4.17.1, Issue 68). Location in high population area with no growth controls minimizes potential for housing impacts. Section 4.14, Issue 63). Station property tax payments represents <u>more than 20</u> percent of the tax revenues paid to Lower Alloways Creek Township, and less than 10 percent each of the city of Salem and Salem County's total tax revenues (Section 4.17.2, Issue 69). Because the tax revenues collected from HCGS are provided to Salem County by Lower Alloways Creek Township in exchange for government services, and impacts to the county are small, the impacts of license renewal are considered SMALL.	SMALL – Adopting by reference Category 1 issue finding (Table A-1, Issue 91)	Construction: MODERATE to LARGE – Peak construction workforce of 3650 could affect housing and public services in surrounding counties. Operation: SMALL – Impacts would be comparable to those associated with the continued operation of HCGS (Section 7.2.2.3)	MODERATE – Reduction in permanent workforce at HCGS could adversely affect surrounding counties. (Section 7.2.2.2)	MODERATE – Reduction in permanent workforce at HCGS could adversely affect surrounding counties. (Section 7.2.2.1)	MODERATE – Adopting by reference GEIS description of socioeconomic impacts from alternate technologies (NRC 1996b)

Table 8.0-2. Impacts Comparison Detail (Continued)

Proposed Action (License Renewal)	Base (Decommissioning)	No-Action Alternatives			
		With New Nuclear Power	With Coal-Fired Generation	With Gas-Fired Generation	With Purchased Power
Socioeconomic Impacts					
SMALL – Adopting by reference Category 1 issue findings (Table A-1, Issues 64, 67). Two Category 2 issues findings are not applicable (Section 4.16, Issue 66 and Section 4.17.1, Issue 68). Location in high population area with no growth controls minimizes potential for housing impacts. Section 4.14, Issue 63). Station property tax payments represent more than 20 percent of the tax revenues paid to Lower Alloways Creek Township, and less than 10 percent each of the city of Salem and Salem County's total tax revenues (Section 4.17.2, Issue 69). Because the tax revenues collected from HCGS are provided to Salem County by Lower Alloways Creek Township in exchange for government services, and impacts to the county are small, the impacts of license renewal are considered SMALL.	SMALL – Adopting by reference Category 1 issue finding (Table A-1, Issue 91)	Construction: MODERATE to LARGE – Peak construction workforce of 3650 could affect housing and public services in surrounding counties. Operation: SMALL – Impacts would be comparable to those associated with the continued operation of HCGS (Section 7.2.2.3)	MODERATE – Reduction in permanent workforce at HCGS could adversely affect surrounding counties. (Section 7.2.2.2)	MODERATE – Reduction in permanent workforce at HCGS could adversely affect surrounding counties. (Section 7.2.2.1)	MODERATE – Adopting by reference GEIS description of socioeconomic impacts from alternate technologies (NRC 1996b)