

African American Environmentalist Association

Testimony of Norris McDonald

President

African American Environmentalist Association

Before the

Board of Public Utilities

State of New Jersey

In the Matter of the Implementation of L. 2018, c. 16

Regarding the Establishment of a Zero Emission Certificate Program For Eligible
Nuclear Power Plants

Public Hearings BPU Docket No. EO18080899

Middlesex County Administration Building

Freeholders Meeting Room

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Introduction

My name is Norris McDonald and I am the founder and president of the African American Environmentalist Association (AAEA). We are the nation's oldest African American-led environmental group and we are dedicated to protecting the environment, promoting the efficient use of natural resources, enhancing human, animal and plant ecologies, promoting increased African American ownership of energy resources and infrastructure and increasing African American participation in the environmental movement.

Earlier this year, we supported state legislation (the Act)¹ that would establish a Zero Emission Certificate (ZEC) Program. We commend the Board of Public Utilities (Board) for holding these hearings in order to get public feedback for establishing an application process for participating in the ZEC Program. We will be supporting the applications of Hope Creek and Salem nuclear power plants specifically because the units make a significant and material contribution to the air quality in the state. The units also minimize harmful emissions that adversely affect the citizens of the state. Finally, if the unit were to be retired, the retirement would significantly and negatively impact New Jersey's ability to comply with State air emissions reduction requirements. Most importantly, the application keeps the State on the right track to achieving ozone attainment.

Hope Creek and Salem are existing, licensed, and operating nuclear power plants that are invaluable assets in mitigating air pollution in New Jersey. The state is in nonattainment for ozone, which is a component of smog, and negatively affects the health of New Jersey residents. The ZEC Program is a Godsend to people suffering from asthma and other air pollution related illnesses. Our testimony will provide specific reasons for including Hope Creek and Salem nuclear plants in the ZEC Program.

Minority communities are particularly vulnerable to air related illnesses with the highest rates of asthma attack, emergency room visits and hospitalizations in the state. These vulnerable communities are helped by the ability of Hope Creek and Salem nuclear facilities to deliver incredible amounts of baseload electricity without producing any of the air pollution that hurts these areas.

The ZEC Program creates a framework whereby existing facilities, such as Hope Creek and Salem, can be considered credited assets in New Jersey's ongoing goals to improve air quality. These power plants operated for many years without being recognized and rewarded for providing emission free electricity to the State of New Jersey. The implementation of the ZEC program fixes this oversight.

¹ On May 23, 2018, Governor Phil Murphy signed into law L. 2018, c. 16 (C.48:3-87.3 to -87.7) ("Act")

We encourage the BPU to adopt the broadest view of requirements when developing the program so that these valuable assets can continue to operate and support the state in meeting its clean air goals.

BACKGROUND

PSEG/Exelon Nuclear Plants

Hope Creek Nuclear Generating Station

Hope Creek is located, along with Salem Generating Station, on a 740 acre site in Salem County, New Jersey. Salem County's western border is the Delaware River and Interstate 95 runs parallel to the river. Electricity generated by Hope Creek produces no greenhouse gas emissions. Hope Creek is the largest employer in Salem County with over 1,500 employees. Hope Creek is a single unit boiling water reactor (BWR) with a total generating capacity of 1,172 megawatts and generates enough electricity to power approximately one million homes each day. Construction began in 1974 with commercial service beginning in 1986. Its license has been renewed by the Nuclear Regulatory Commission (NRC) until 2046. PSEG owns 100% of Hope Creek.²

Salem Nuclear Generating Station

The Salem Nuclear Generating Station has dual unit pressurized water reactors (PWR) with a total generating capacity of 2,296 megawatts (MW) [PSEG portion 1,318 MW] and generates enough electricity to power approximately two million homes each day. Construction began in 1968 and Unit 1 began commercial service in 1977. The NRC has renewed its license until 2036. Unit 2 began commercial service in 1981 and its license has been renewed by the NRC until 2040. PSEG owns 57% of Salem. Exelon Corporation owns the remaining 43%.³

ZEC Program Implementation

The ZEC Program, via the Act's mandate, includes provisions that will allow Hope Creek and Salem nuclear power plants to lend their clean air benefits to mitigating air pollution in New Jersey. These include:

- Helping to keeping two valuable nuclear plants open.
- Keeping diversity in the state's nuclear portfolio.

² PSEG Power LLC, https://www.pseg.com/family/power/nuclear/hope_creek.jsp

³ PSEG Power LLC, <https://www.pseg.com/family/power/nuclear/salem.jsp>

- Mitigating air pollution from fossil power plants, thus reducing negative health effects.
- Mitigating climate change and global warming through maintenance of an emission free source of electricity production.
- Helping to meet federal and State clean air requirements (though not recognized or rewarded for it).
- A three year eligibility period.
- Providing monetary recognition for nuclear power's environmental and fuel diversity attributes. This benefit is provided to ratepayers at the very modest amount of \$0.004 cents per kilowatt (KW) hour of total state electricity generation applied to one megawatt hour of electricity generated by the nuclear facilities.
- Financial protections to assure that ratepayers investments in supporting nuclear are viable and legitimate.
- A reasonable methodology for calculating the price of ZECs and a reasonable timetable for utilities to purchase ZECs.
- A reasonable fee for the Board of Public Utilities to defray its costs to administer the ZEC Program.
- Provision for a written report on the efficacy of the ZEC Program.
- Provision to establish solar energy and energy efficiency portfolio standards.
- Provision for a Neighborhood Solar Energy Investment Program.
- Provision for business assistance and job training programs.
- A Department of Environmental Protection methodology for disclosure of emissions based on output pounds per megawatt hour.

The ZEC program provisions address the benefits that will accrue to the state by mitigating air pollution problems in the State. AAEEA supports the ZEC Program for all of these reasons and for additional reasons listed below.

Air Pollution in New Jersey

Most people living in New Jersey live in counties with unhealthy levels of smog, according to an annual report by the American Lung Association, "The State of Air

2017.” The group gave failing grades to 12 of New Jersey’s 21 counties based on measurements of ozone, a pollutant that comes from power plant and vehicle emissions. The data was obtained from the U.S. Environmental Protection Agency’s Air Quality System, which collects data for all of the state’s counties.⁴

According to the report, the air quality in New Jersey ranks among the worst in the nation because of high concentrations of ground-level ozone pollution. The New York-Newark metro area was listed among the “25 Most Polluted Cities” for both ozone smog and fine-particle pollution. The Philadelphia metro region, which includes Camden County and other parts of western New Jersey, was ranked the 22nd worst for ozone, even though it met the national standard for year-round particle pollution, the report says. In terms of ozone pollution, 11 New Jersey counties received an F grade, one received a D and three received a C.⁵ The counties receiving F grades include:

- Bergen
- Camden
- Essex
- Gloucester
- Hudson
- Hunterdon
- Mercer
- Middlesex
- Monmouth
- Morris
- Ocean

According to the State of New Jersey Department of Environmental Protection Division of Air Quality, “New Jersey air quality...exceeds the current standards for ozone throughout the state and fine particles in urban areas.”⁶ Losing a nuclear power

⁴ American Lung Association, “The State of Air 2017,” p. 121, <http://www.lung.org/our-initiatives/healthy-air/sota/key-findings/>

⁵ NJ Advance Media for NJ.com, April 20, 2017, http://www.nj.com/weather/index.ssf/2017/04/these_15_counties_have_the_worst_air_pollution_in.html

⁶ State of New Jersey Department of Environmental Protection Division of Air Quality, <http://www.nj.gov/dep/daq/>

plant will only make that problem worse. No nuclear plant should be allowed to close as long as any area in a state is in noncompliance of the Clean Air Act.⁷

Asthma Rates and Race in the United States

In 2015, almost 2.6 million non-Hispanic blacks reported that they currently have asthma. African American women were 20 percent more likely to have asthma than non-Hispanic whites, in 2015. In 2014, African Americans were almost three times more likely to die from asthma related causes than the white population. In 2015, African American children had a death rate ten times that of non-Hispanic white children. Black children are 4 times more likely to be admitted to the hospital for asthma, as compared to non-Hispanic white children.⁸

Asthma in New Jersey

It is well known that air pollution, particularly in densely populated urban areas with multiple sources of pollution, has real impacts upon short- and long-term human health. Children are especially vulnerable to asthma and other pollution-related symptoms, including death. Numerous studies have shown that Newark, for instance, faces “disproportionate impacts from multiple sources of air pollution.” Other dense urban centers in New Jersey also suffer from multiple sources of air pollution and are home to significant minority and low-income populations. These communities are surrounded by NOx emitters — ports, airports, bridges, tunnels, sewage plants, garbage incinerators, and factories, to name a few — on all sides.⁹

New Jersey cannot reduce its asthma rates as long as its ambient air quality is in noncompliance with the Clean Air Act. According to the State of New Jersey Department of Health:

In New Jersey, more than 600,000 adults and 167,000 children have asthma. Asthma affects all races, ages and genders. More boys have asthma than girls, but in adulthood, more women are diagnosed with asthma than men. Blacks, Hispanics and urban

⁷ U.S. Department of Health and Human Services, Office of Minority Health, “Asthma and African Americans.” <https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=15>

⁸ U.S. Department of Health and Human Services, Office of Minority Health, <https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=15>

⁹ New Jersey Spotlight, Op Ed: VW Settlement-An Opportunity For Environmental Justice, 9/28/2017. <http://www.njspotlight.com/stories/17/09/27/op-ed-vw-settlement-an-opportunity-for-environmental-justice/>

residents are more likely to be affected with asthma symptoms, as are individuals with a family history of the disease.¹⁰

Nuclear power plants do not add emissions into the atmosphere that lead to asthma symptoms.

According to the Village Voice, one in four Newark children suffers from asthma; the hospitalization rate is 150 percent greater for kids living in the city than in the rest of the state, and more than thirty times the rate nationwide. Asthma attacks are now a leading cause of school absenteeism in the region.¹¹

Nuclear Power Benefits Are Essential To Compliance with Clean Air Regulations

States are required to submit State Implementation Plans (SIP) to show how they intend to comply with the air quality standards set in accordance with the Clean Air Act. SIPs do not explicitly include nuclear power emissions free operations as a compliance tool in meeting the requirements of the Clean Air Act. However they do implicitly include nuclear generation in that these resources emissions a state must offset just to get back to baseline. Penalties for not achieving air standards include the possibility of losing highway construction funds and expensive permitting hurdles for new or expanded manufacturing and other facilities important to economic development. Therefore, preservation of existing nuclear power plants is an important compliance tool and numerous studies highlight the cost effectiveness of preserving existing power plants as compared to other emissions reduction options.

According to the Clean Air Act:

When the United States Environmental Protection Agency (USEPA) establishes a new or makes a revision to a National Ambient Air Quality Standards (NAAQS), the Federal Clean Air Act requires the states to submit to the USEPA a State Implementation Plan (SIP) or certification indicating that the State has the authority to develop, implement, and enforce an air quality management program that provides for attainment and maintenance of the NAAQS. These elements are sometimes compiled and submitted separately in what is referred to as an “Infrastructure” SIP.¹²

¹⁰ State of New Jersey Department of Health, Chronic Disease Programs, <http://nj.gov/health/fhs/chronic/asthma/in-nj/>

¹¹ The Village Voice, “Hell on Wheels: Port Authority’s Broken Promise Is Choking Newark’s Kids,” May 3, 2016. <https://www.villagevoice.com/2016/05/03/hell-on-wheels-port-authoritys-broken-promise-is-choking-newarks-kids/>

¹² The State of New Jersey Department of Environmental Protection, Certification For Meeting the Infrastructure Requirements in the Clean Air Act, for 35 µg/m³ 24-Hour (2006) Fine Particulate Matter National Ambient Air

Air Pollution and Environmental Justice in New Jersey

The State of New Jersey has an Office of Environmental Justice (OEJ) that is located at the Department of Environmental Protection (DEP). To help address environmental inequities, the New Jersey DEP launched the Environmental Justice Program to ensure fair treatment for people of all races, cultures, and incomes, in the development, implementation and enforcement of environmental laws, regulations and policies. The DEP's Environmental Justice Program aims to empower citizens who are often outside of the decision-making process of government, and strives to address environmental concerns to improve the quality of life in New Jersey's urban and older suburban communities.¹³

Unfortunately, the OEJ has no authority to enforce disproportionate air pollution impacts. The state legislature needs a law that regulates locating facility and thoroughfare development projects in environmental justice areas. AAEA authored and led the campaign to pass an environmental justice law for the City of New York. We intend to explore the feasibility of passing a similar law for the State of New Jersey. New Jersey Senator Cory Booker has introduced environmental justice legislation that would address the issue at the national level. The Environmental Justice Act of 2018 would require federal agencies to address environmental justice through agency actions and permitting decisions, and strengthens legal protections against environmental injustice for communities of color, low-income communities, and indigenous communities.¹⁴ AAEA supports Senator Booker's bill.

New Jersey in Nonattainment for Ozone

New Jersey is required to meet air quality standards established by the United States Environmental Protection Agency (USEPA). These standards are known as National Ambient Air Quality Standards (NAAQS). On Oct. 1, 2015, the USEPA strengthened the air quality standard for ground-level ozone to improve public health and environmental protection. The NAAQS for ozone was reduced from 75 parts per billion (ppb) to 70 parts per billion, based on extensive scientific evidence about ozone's effects on public health and welfare. On May 21, 2012, the USEPA designated the entire state of New Jersey as nonattainment for the previous 0.075 ppm 8-hour ozone

Quality Standard, January 2010, Page viii.

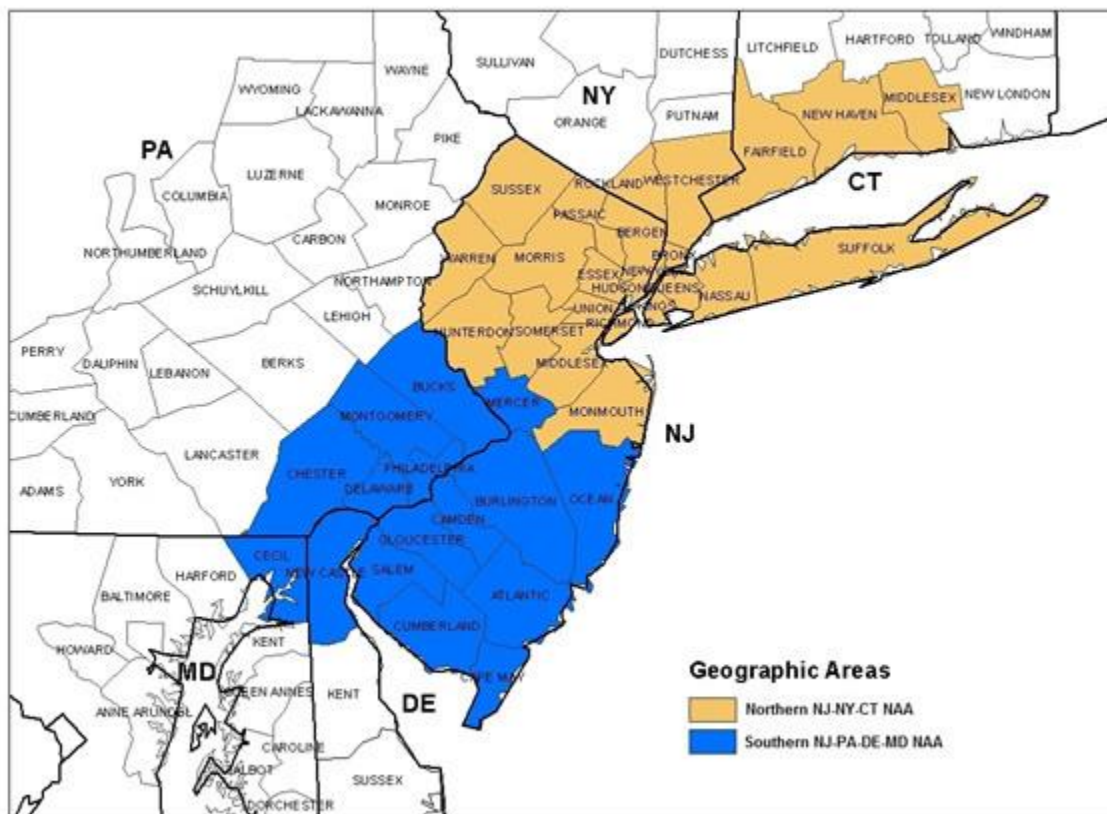
http://www.state.nj.us/dep/baqp/sip/Letter%20Infrastructure%20certification%20Appendices_FINAL.pdf

¹³ State of New Jersey Office of Environmental Justice, Department of Environmental Protection, <http://www.nj.gov/dep/ej/resources.html>

¹⁴ Cory Booker, United States Senator for New Jersey, Booker Announces Landmark Environmental Justice Bill, October 23, 2017. https://www.booker.senate.gov/?p=press_release&id=685

NAAQS. The entire state of New Jersey continues to be in nonattainment for ozone standards under the Clean Air Act.^{15/16}

New Jersey 8-Hour Ground-Level Ozone Multi-State Nonattainment Areas



Source: State of New Jersey Department of Environmental Protection

Demographics and Asthma Rates in Select Cities in New Jersey

New Jersey is 15% African American and 20% Latino.¹⁷ Much of New Jersey is in nonattainment for air pollution under the Clean Air Act. Ozone is a major problem,

¹⁵ NRC, New Jersey Department of Environmental Protection, Bureau of Air Quality Planning. <https://www.nrc.gov/docs/ML1315/ML13157A142.pdf>

¹⁶ State of New Jersey Department of Environmental Protection, "Federal Standards for Ground Level Ozone." <http://www.nj.gov/dep/cleanairnj/ozone.html>

¹⁷ United States Census Bureau, Quick Facts, New Jersey. <https://www.census.gov/quickfacts/NJ>

particularly in urban areas. New Jersey's larger cities have ozone problems that exacerbate asthma for its residents. Children are particularly vulnerable and miss school due to asthma attacks. Again, nuclear power plants do not contribute to ozone production and are a major asset in any state that happens to have them.

Newark is 49% African American, 34% Hispanic and 13% White.¹⁸ According to the Village Voice, "One in four Newark children suffers from asthma; the hospitalization rate is 150 percent greater for kids living in the city than in the rest of the state, and more than thirty times the rate nationwide. Asthma attacks are now a leading cause of school absenteeism in the region."¹⁹ A New Jersey Department of Health study that assessed the associations of ozone and fine particulate matter (PM2.5) with pediatric emergency room visits in Newark, New Jersey concluded that, "Ozone was statistically positively associated with pediatric asthma emergency room visits in Newark, NJ."²⁰ Newark residents have disproportionately high rates of hospitalization and emergency room visits as a result of asthma attacks, according to the New Jersey Department of Health and Senior Services.²¹

Trenton is 51% African American, 32% Latino and 15% White.²² The New Jersey Department of Health's analysis of asthma-related emergency department visits by municipality showed that Trenton's rate was 3.8 times the state average and accounted for 76 percent of Mercer County's asthma emergency department visits, although Trenton residents comprise only 23 percent of the county's population. Asthma affects all races, ages and genders. But, blacks, Hispanics and urban residents are more likely to be affected with asthma symptoms, as are individuals with a family history of the disease.²³

¹⁸ Census Reporter. <https://censusreporter.org/profiles/06000US3401351000-newark-city-essex-county-nj/>

¹⁹ Village Voice, 5/3/2016. <https://www.villagevoice.com/2016/05/03/hell-on-wheels-port-authoritys-broken-promise-is-choking-newarks-kids/>

²⁰ New Jersey Department of Health, Jessie A. Gleason, "Associations of Daily Pediatric Asthma Emergency Department Visits With Air Pollution in Newark, NJ: Utilizing Time – Series and Case – Crossover Study Designs," July, 2015.

https://www.researchgate.net/publication/280537764_Associations_of_daily_pediatric_asthma_emergency_department_visits_with_air_pollution_in_Newark_NJ_Utilizing_time-series_and_case-crossover_study_designs

²¹ RT Magazine, "EPA Funds Study to Look at Pollution, Psychological Asthma Triggers in Children," 1/27/2011. <http://www.rtmagazine.com/2011/01/epa-funds-study-to-look-at-pollution-psychological-asthma-triggers-in-children/>

²² Statistical Atlas, "Race and Ethnicity in Trenton, New Jersey." <https://statisticalatlas.com/place/New-Jersey/Trenton/Race-and-Ethnicity>

²³ The Geraldine R. Dodge Foundation, The Dodge Blog, "Sustainable Jersey: School nurses take on asthma in Trenton providing needed link between healthcare, school and home," 7/19/2017. <http://blog.grdodge.org/2017/07/19/sustainable-jersey-school-nurses-take-on-asthma-in-trenton-providing-needed-link-between-healthcare-school-and-home/>

Camden is 53% African American, 39% Latino and 17% White.²⁴ In Camden, 18% of residents suffer from asthma and the city reports some of the highest asthma hospitalization rates in the state.²⁵ From 2002 to 2012, pediatric asthma-related hospitalizations nearly doubled in Camden, New Jersey.²⁶

Asthma Hospitalizations by Racial Groups (County) in New Jersey

The 11 counties that received an 'F' grade from the American Lung Association in their report, "The State of Air 2017," have their asthma data by race and county listed below. African Americans top the list of asthma hospitalizations in all counties listed. Additional New Jersey counties are also listed after the failing grade counties.

In 2008, an estimated 572,877 adults in New Jersey had asthma. Adult lifetime asthma prevalence was 12.8% and adult current asthma prevalence was 8.6% compared with U.S. rates of 13.3% and 8.5%, respectively. In 2008 an estimated 174,346 children in New Jersey had asthma. Child lifetime asthma prevalence was 12.9% and child current asthma prevalence was 8.6% compared with the 38 participating states' rates of 13.3% and 9.0%, respectively. Adult current asthma prevalence was higher among non-Hispanic blacks and lower among non-Hispanic persons of other races than non-Hispanic whites in New Jersey; however, rates were higher among non-Hispanic multirace persons and non-Hispanic blacks throughout the U.S. Child current asthma prevalence was higher among non-Hispanic blacks than non-Hispanic whites in New Jersey; however, rates were higher among non-Hispanic blacks and non-Hispanic multirace persons throughout the 38 participating states.²⁷ These rates will go up if the nuclear plants do not continue to run because the replacement generation that will operate is emitting emissions that are upwind of Salem County.

County Specific Data

Salem County. Non-Hispanic black residents of Salem County had the highest asthma hospitalization rate—3.1 times the rate for non-Hispanic white residents and 3.7 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 0.84 times (16 percent below) the rate for non-Hispanic white residents. When comparing Salem County racial and ethnic groups to their state averages, the

²⁴ Area Connect. <http://camdennj.areaconnect.com/statistics.htm>

²⁵ Archive, "Breathe Easy Camden." <http://archiveglobal.org/camden-new-jersey/>

²⁶ University of Michigan Medical School, Mahshid Abir, MD, MSc, "Cluster Analysis of Acute Care Utilization Yields Insights for Tailored Pediatric Asthma Interventions." <https://www.eventscribe.com/2017/SAEM/ajaxcalls/PresentationInfo.asp?efp=SFFWWlhCWFYzMzA1&PresentationID=267655&rnd=0.4069341>

²⁷ CDC's National Asthma Control Program, Asthma In New Jersey. https://www.cdc.gov/asthma/stateprofiles/asthma_in_nj.pdf

rate for Hispanic residents was 28 percent below the state average for Hispanic people. The rate for non-Hispanic black residents was 41 percent above their state average and the rate for non-Hispanic white residents was 54 percent above their state average.²⁸

Bergen County. As with rates of asthma emergency room visits, Bergen County's rate of asthma hospitalizations was highest for non-Hispanic black residents (3.2 times the rate for non-Hispanic white residents and 2.5 times the rate for Hispanic residents). The rates of asthma hospitalization for residents of all racial and ethnic groups were below their state averages (15 percent below for non-Hispanic white residents, 20 percent below for non-Hispanic black residents, and 30 percent below for Hispanic residents).²⁹

Camden County. For all racial and ethnic groups examined, Camden County is above the state average for similar groups—by 36 percent for non-Hispanic black residents, 46 percent for non-Hispanic white residents, and 89 percent for Hispanic residents. The asthma hospitalization rate for non-Hispanic black residents of Camden County was 3.2 times the rate for non-Hispanic white residents and 1.5 times higher than the rate for Hispanic residents. The rate for Hispanic residents was twice the rate for non-Hispanic white residents.³⁰

Essex County. As with rates of asthma emergency room visits, Essex County's rate of asthma hospitalizations was highest and exceeded the state average for both non-Hispanic black residents (10 percent higher than the state average for non-Hispanic black people) and Hispanic residents (42 percent above the state average for Hispanic people). For non-Hispanic white residents, Essex County's asthma hospitalization rate was three percent below the state average. Disparities between racial and ethnic emergency room groups in Essex County were less pronounced for asthma hospitalizations than for emergency room visits. The asthma hospitalization rate for non-Hispanic black residents was 3.9 times the rate for non-Hispanic white residents, and 1.7 times the rate for Hispanic residents. The rate for Hispanic residents was 2.3 times the rate for non-Hispanic white residents.³¹

²⁸ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Salem County and the state of New Jersey from 2009–2012. New Jersey Department of Health, "Asthma in New Jersey," Salem County Asthma Profile, p. 6. http://www.state.nj.us/health/fhs/chronic/documents/asthma_profiles/salem.pdf

²⁹ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Bergen County and the state of New Jersey from 2009–2012. New Jersey Department of Health, "Asthma in New Jersey," Bergen County Asthma Profile, p. 7. http://www.nj.gov/health/fhs/chronic/documents/asthma_profiles/bergen.pdf

³⁰ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Camden County and the state of New Jersey from 2009–2012. New Jersey Department of Health, "Asthma in New Jersey," Camden County Asthma Profile, p. 6. http://www.nj.gov/health/fhs/chronic/documents/asthma_profiles/camden.pdf

³¹ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Essex County and the state of New Jersey from 2009–2012. New Jersey Department of Health, "Asthma in New Jersey," Essex County Asthma Profile, p. 6. http://www.state.nj.us/health/fhs/chronic/documents/asthma_profiles/essex.pdf

Gloucester County. Non-Hispanic black residents of Gloucester County had the highest asthma hospitalization rate—2.4 times the rate for non-Hispanic white residents and 2.8 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 0.88 times (12 percent below) the rate for non-Hispanic white residents. When comparing Gloucester County racial and ethnic groups to their state averages, the rate for Hispanic residents was below the state average for Hispanic people by 38 percent and the rate for non-Hispanic black residents was 20 percent below their state average. The rate for non-Hispanic white residents was above their state average by 12 percent.³²

Hudson County. NonHispanic black residents of Hudson County had the highest asthma hospitalization rate—2.8 times the rate for non-Hispanic white residents and 2.2 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 1.3 times the rate for non-Hispanic white residents. When comparing Hudson County racial and ethnic groups to their state averages, the rate for Hispanic residents was five percent above the state average for Hispanic people, the rate for non-Hispanic black residents was eight percent above their state average, and the rate for nonHispanic white residents was 30 percent above their state average.³³

Hunterdon County. For all racial and ethnic groups examined, Hunterdon County is below the state average (by 43 percent for non-Hispanic white residents, 60 percent for non-Hispanic black residents, and 75 percent for Hispanic residents). The rate of asthma hospitalization for non-Hispanic black residents of Hunterdon County was 2.4 times the rates for non-Hispanic white residents and 3.5 times the rate for Hispanic residents. The rate for Hispanic residents was 0.68 times (32 percent below) the rate for non-Hispanic white residents.³⁴

Mercer County. Non-Hispanic black residents of Mercer County had the highest asthma hospitalization rate—3.4 times the rate for non-Hispanic white residents and 2.3 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 1.5 times the rate for non-Hispanic white residents. When comparing Mercer County racial and ethnic groups to their state averages, rates for non-Hispanic

³² Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Gloucester County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Gloucester County Asthma Profile, p. 6.

http://www.state.nj.us/health/fhs/chronic/documents/asthma_profiles/gloucester.pdf

³³ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Hudson County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Hudson County Asthma Profile, p. 6. http://www.nj.gov/health/fhs/chronic/documents/asthma_profiles/hudson.pdf

³⁴ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Hunterdon County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Hunderton County Asthma Profile, p. 6. http://nj.gov/health/fhs/chronic/documents/asthma_profiles/hunterdon.pdf

black residents were six percent above the state average for non-Hispanic black people, those for non-Hispanic white residents were also six percent above their state average. Rates for Hispanic residents were less than one percent above their state average.³⁵

Middlesex County. Non-Hispanic black residents of Middlesex County had the highest asthma hospitalization rate—2.4 times the rate for non-Hispanic white residents and 1.4 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 1.7 times the rate for non-Hispanic white residents. When comparing Middlesex County racial and ethnic groups to their state averages, the rate for non-Hispanic black residents was 37 percent below the state average for non-Hispanic black people, the rate for non-Hispanic white residents was 11 percent below their state average and the rate for Hispanic residents was five percent below their state average.³⁶

Monmouth County. Non-Hispanic black residents of Monmouth County had the highest asthma hospitalization rate—4.2 times the rate for non-Hispanic white residents and 3.6 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 1.2 times the rate for non-Hispanic white residents. When comparing Monmouth County racial and ethnic groups to their state averages, the rate for non-Hispanic black residents was above the state average for non-Hispanic black people by 15 percent, while the rate for non-Hispanic white residents was below their state average by eight percent and the rate for Hispanic residents was below their state average by 31 percent.³⁷

Morris County. Non-Hispanic black residents of Morris County had the highest asthma hospitalization rate—3.6 times the rate for non-Hispanic white residents and 2.8 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 1.3 times the rate for non-Hispanic white residents. When comparing Morris County racial and ethnic groups to their state averages, the rate for Hispanic residents was 59 percent below the state average for Hispanic people, the rate for non-

³⁵ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Mercer County and the state of New Jersey for 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Mercer County Asthma Profile, p. 6. http://nj.gov/health/fhs/chronic/documents/asthma_profiles/mercer.pdf

³⁶ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Middlesex County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Middlesex County Asthma Profile, p. 6. http://www.nj.gov/health/fhs/chronic/documents/asthma_profiles/middlesex.pdf

³⁷ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Monmouth County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Monmouth County Asthma Profile, p. 7. http://nj.gov/health/fhs/chronic/documents/asthma_profiles/monmouth.pdf

Hispanic white residents was 50 percent below their state average and the rate for non-Hispanic black residents was 48 percent below their state average.³⁸

Ocean County. As with rates of asthma emergency room visits, Ocean County's rate of asthma hospitalizations was highest for non-Hispanic black residents (2.5 times the rate for non-Hispanic white residents and 2.8 times the rate for Hispanic residents). The rate of asthma hospitalization for non-Hispanic black residents was five percent below the state average for non-Hispanic black people. The rate for Hispanic residents was 27 percent below their state average. For non-Hispanic white residents of Ocean County, however, the asthma hospitalization rate was 28 percent higher than their state average.³⁹

Atlantic County. Non-Hispanic black residents of Atlantic County had the highest asthma hospitalization rate—3.4 times the rate for non-Hispanic white residents and 3.4 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 0.99 times (one percent below) the rate for non-Hispanic white residents. When comparing Atlantic County racial and ethnic groups to their state averages, the rate for non-Hispanic black residents was 22 percent above the state average for non-Hispanic black people, and the rate for non-Hispanic white residents was 24 percent above their state average. The rate for Hispanic residents was 23 percent below their state average.⁴⁰

Cape May. NonHispanic black residents of Cape May County had the highest asthma hospitalization rate—3.6 times the rate for non-Hispanic white residents and 3.9 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 0.92 times (eight percent below) the rate for non-Hispanic white residents. When comparing Cape May County racial and ethnic groups to their state averages, the rate for non-Hispanic black residents was 37 percent above the state average for non-Hispanic black people, and the rate for non-Hispanic white residents was 29 percent above their state average. The rate for Hispanic residents was 25 percent below their state average.⁴¹

³⁸ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Morris County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Morris County Asthma Profile, p. 7. http://state.nj.us/health/fhs/chronic/documents/asthma_profiles/morris.pdf

³⁹ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Ocean County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Ocean County Asthma Profile, p. 7. http://www.nj.gov/health/fhs/chronic/documents/asthma_profiles/ocean.pdf

⁴⁰ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Atlantic County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Atlantic County Asthma Profile, p. 7. http://nj.gov/health/fhs/chronic/documents/asthma_profiles/atlantic.pdf

⁴¹ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Cape May County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Cape May County Asthma Profile, p. 6. http://www.nj.gov/health/fhs/chronic/documents/asthma_profiles/capemay.pdf

Cumberland County. Non-Hispanic black residents of Cumberland County had the highest asthma hospitalization rate—2.2 times the rate for non-Hispanic white residents and 1.9 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 1.2 times the rate for non-Hispanic white residents. When comparing Cumberland County racial and ethnic groups to their state averages, the rate for non-Hispanic black residents was ten percent below the state average for non-Hispanic black people. The rate for Hispanic residents was one percent above their state average and the rate for non-Hispanic white residents was 38 percent above their state average.⁴²

Passaic County. All groups had rates larger than the state average for similar groups—non-Hispanic white residents by four percent, Hispanic residents by 47 percent and non-Hispanic black residents by 56 percent. Non-Hispanic black residents had the highest rates, 5.1 times the rate for non-Hispanic white residents and 2.3 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents of Passaic County was 2.2 times the rate for non-Hispanic white residents.⁴³

Somerset County. Non-Hispanic black residents of Somerset County had the highest asthma hospitalization rate—2.1 times the rate for non-Hispanic white residents and 2.2 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 0.98 times (two percent below) the rate for non-Hispanic white residents. When comparing Somerset County racial and ethnic groups to their state averages, rates for all groups were below their state averages (non-Hispanic black residents by 58 percent, Hispanic residents by 59 percent and non-Hispanic white residents by 33 percent).⁴⁴

Sussex County. Non-Hispanic black residents of Sussex County had the highest asthma hospitalization rate—4.2 times the rate for non-Hispanic white residents and 4.6 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 0.91 times (nine percent below) the rate for non-Hispanic white residents. When comparing Sussex County racial and ethnic groups to their state averages, the rate for non-Hispanic black residents differed less than one percent from the state average for non-Hispanic black people, while the rate for non-Hispanic white residents

⁴² Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Cumberland County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Cumberland County Asthma Profile, p. 6. http://www.nj.gov/health/fhs/chronic/documents/asthma_profiles/cumberland.pdf

⁴³ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Passaic County and the state of New Jersey for 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Passaic County Asthma Profile, p. 6. http://www.nj.gov/health/fhs/chronic/documents/asthma_profiles/passaic.pdf

⁴⁴ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Somerset County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Somerset County Asthma Profile, p. 6. http://www.state.nj.us/health/fhs/chronic/documents/asthma_profiles/somerset.pdf

was below their state average by 18 percent and the rate for Hispanic residents was below their state average by 53 percent.⁴⁵

Union County. Non-Hispanic black residents of Union County had the highest asthma hospitalization rate—2.5 times the rate for non-Hispanic white residents and 1.7 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 1.4 times the rate for non-Hispanic white residents. When comparing Union County racial and ethnic groups to their state averages, the rate for nonHispanic black residents was 44 percent below the state average for non-Hispanic black people, the rate for Hispanic residents was 29 percent below their state average and the rate for non-Hispanic white residents was 22 percent below their state average.⁴⁶

Warren County. Non-Hispanic black residents of Warren County had the highest asthma hospitalization rate—2.7 times the rate for nonHispanic white residents and 4.9 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 0.55 times (45 percent below) the rate for non-Hispanic white residents. When comparing Warren County racial and ethnic groups to their state averages, the rate for non-Hispanic black residents was 17 percent below the state average for nonHispanic black people, and the rate for Hispanic residents was 63 percent below their state average. The rate for non-Hispanic white residents was five percent above their state average.⁴⁷

Conclusion

Hope Creek and Salem nuclear power plants represent invaluable clean air assets in the Mid-Atlantic Region. New Jersey will never meet its Clean Air Act goals if any of these plants close. This means that citizen health will continue to deteriorate. The unique emission free generating characteristics of nuclear power plants make them state treasures. The plants represent direct health benefits to asthmatics. The plants are extra special in serving as a mitigating factor for air pollution for minorities in the state. New Jersey needs to do whatever is necessary to keep these power plants open.

⁴⁵ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Sussex May County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Sussex County Asthma Profile, p. 6. http://www.nj.gov/health/fhs/chronic/documents/asthma_profiles/sussex.pdf

⁴⁶ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Union County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Union County Asthma Profile, p. 6. http://www.nj.gov/health/fhs/chronic/documents/asthma_profiles/union.pdf

⁴⁷ Asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Warren County and the state of New Jersey from 2009–2012. New Jersey Department of Health, “Asthma in New Jersey,” Warren County Asthma Profile, p. 6. http://www.state.nj.us/health/fhs/chronic/documents/asthma_profiles/warren.pdf