

**Testimony of Susan Bass Levin
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The Port Authority of New York and New Jersey
NJ Clean Air Council Public Hearing
Improving Air Quality at Our Ports and Airports
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The Port Authority of New York and New Jersey (Port Authority) is a bi-state agency that owns, operates and manages a vast transportation and trade network of aviation, maritime and rail facilities, vehicular Hudson River crossings and real estate in the New York New Jersey region. With five airports (Newark Liberty International, Teterboro, JFK, LaGuardia and Stewart, 4 bridges (George Washington, Outerbridge, Bayonne and Goethals), two tunnels (Lincoln and Holland), two bus terminals, container cargo and auto marine terminals in Port Elizabeth, Port Newark, Port Jersey, Brooklyn and Howland Hook, the PATH rail transit system and the World Trade Center site in lower Manhattan, the Port Authority is uniquely positioned to improve the quality of life for people who live and work in the region.

On behalf of the Port Authority, I would like to thank the New Jersey Clean Air Council for holding this hearing to discuss clean air initiatives.

Background and Overview

As the Port Authority begins a new era of intense investment in the region's trade and transportation infrastructure, we have made a parallel commitment to ensure that environmental sustainability is paramount to the agency – operating our facilities in a way that conserves the region's resources for future generations. The Port Authority's ten-year capital plan is a guiding framework of the agency's efforts to increase energy efficiency, reduce greenhouse gases, improve our environment and expand the capacity of mass transit. We know that it is not enough to build; we must do so in a way that respects the environment and our communities.

In 2007, Chairman Anthony Coscia announced that the Port Authority would reduce green house gas emissions related to Port Authority facilities by 80% from 2006 levels, by 2050. Last week, the Port Authority Board of Commissioners adopted an Environmental Sustainability Policy with the following goals:

- 1- The Port Authority will reduce green house gas emissions at its facilities by 5 per cent annually through improvements resulting from capital investments and changes in operations.
- 2- The Port Authority will establish a goal of net zero green house gas emissions from its own operations by 2010 through capital investments, changes in operations and emerging marketplace strategies and alternative energy sources.
- 3- The Port Authority will encourage its customers, tenants and partners to conduct their businesses in a more sustainable way.

- 4- The Port Authority will develop strategies that reduce the risk posed by climate change.

In furtherance of our sustainability agenda, the Port Authority has expanded its program of environmentally responsible “clean fleet” vehicles and is committed to the installation of energy efficient LED lighting on the George Washington Bridge and at Lincoln and Holland Tunnels. We are installing advanced energy metering systems at all our facilities to allow for efficient energy management. We have provided funding for open space acquisition for the Hudson-Raritan Estuary Resource Program. We are partners with New Jersey Transit in the ARC tunnel, with a \$3 billion commitment to build a new commuter rail tunnel under the Hudson River, doubling the passenger capacity and reducing trans-Hudson auto trips by more than 35,000. We are investing \$3.3 billion in PATH to expand capacity by thirty percent. That’s just the beginning.

Let’s turn to our seaports and airports.

Seaports

The Port of New York and New Jersey, the third largest in the country, is an economic engine, handling a record \$166 billion in cargo in 2007, creating opportunity by providing 240,000 jobs, \$12 billion in wages and \$6 billion in taxes. With increasing cargo volumes projected to satisfy growing consumer demand, the challenge we face now is how to accommodate cargo growth, with all the economic benefits it brings, and do so in a way that protects the environment and quality of life of people living and working in the communities near the port.

Our key focus in facing that challenge is on improving air quality and finding ways to reduce port air emissions. To offset the increased air emissions from the dredging equipment used in the Harbor Deepening Project, the agency developed the Ferry Retrofit and Marine Vessel Engine Replacement Programs, enabling ferry and tug boat operators to replace or retrofit their older diesel engines with cleaner burning engines. Since its inception, the Port Authority has contributed \$14 million to marine diesel retrofits, and it is estimated that, as a result of this program, Nitrogen Oxide emissions have been reduced by 400 tons per year. The Port Authority has gone on record supporting federal legislation that will mandate a reduction in diesel emissions from marine vessels.

We know that to make a long-term impact, we must understand the sources of air emissions and measure the reductions. Therefore, we have conducted detailed air emission inventories of the primary sources (marine vessels, cargo handling equipment and heavy duty diesel vehicles or trucks) of air emissions at the Port Authority’s port facilities.

A detailed Cargo Handling Equipment Emission Inventory that compared the 2002 fleet with the 2004 fleet, which had been modernized with vehicles that met on-road standards, showed a 30% reduction in air emissions across the full spectrum of criteria air pollutants, such as Nitrogen Oxides, Sulfur Dioxide and particulate matter. These reductions were achieved even with a 25% increase in containers handled, a 19% increase in size of the Cargo Handling Equipment fleet, and a 5% increase in operating hours.

Our recently completed greenhouse gas inventory for all Port Authority facilities determined that travel by trucks to Port Authority port facilities contributed the largest amount of greenhouse gases at 347,487 metric tons of CO2 equivalent. The largest truck contribution was off-terminal trips, followed by on-terminal idling.

The Port Authority has developed several initiatives to address this problem:

- Express Rail
- Smart Way Plus to assist with the financing of newer, more energy efficient trucks
- Reducing the length of off-terminal trips, through near-port warehouse/distribution centers on Portfields
- Reducing on-terminal congestion and associated idling, through electronic gates, extended gate hours and reorientation of terminal footprints

I would like to discuss these initiatives briefly, and can certainly provide more detailed information if the Council so desires.

Express Rail: Express Rail is a comprehensive rail program that creates dedicated on-dock rail facilities at each of our container terminals. With ExpressRail, a container comes off a ship and is put right on a rail car with no truck transport necessary. This on-dock rail capability has significant environmental benefit, as it saves 1.7 truck trips per container. It has helped us realize the goal of accommodating increased cargo volume with less congestion and fewer emissions. When the ExpressRail system is completed in 2011, it will take approximately 2.5 million trucks off the roads.

SmartWay Plus: Smart Way Plus, a program sponsored by the US Environmental Protection Agency (USEPA), offers low interest loans to finance acquisition of newer trucks, equipped with a particulate matter filter that costs the truck owner \$100-200 less/month than they are paying for their current vehicle. The program also includes the installation of SmartWay upgrade kits, which can achieve 20-90% particulate matter reduction. We are working with lenders and other funding sources to promote USEPA's SmartWay Partnership for trucks serving the port.

Portfields: We have also partnered with the NJ Economic Development Authority in our Portfields initiative to establish nearby port warehouse and distribution centers on abandoned former industrial sites. Such redevelopment reduces vehicle miles traveled by trucks serving the marine terminals, thereby reducing energy consumption and air emissions. We are studying the feasibility of a Virtual Container Yard (VCY) to reduce dead head truck trips to pick up empty containers. If 25% of trucks repositioning empty containers take advantage of VCY, we estimate that could reduce over 50 tons Nitrogen Oxide per year.

Reducing On-terminal Congestion: The Port Authority is a landlord port, and in addition to improvements within our agency, we are working with our terminal and warehouse operators, who have also undertaken voluntary air emission reduction initiatives, such as:

- Installing electric cranes
- Reorienting terminal footprints to make them more efficient

- Installing electronic gates and extending gate hours to reduce congestion
- Equipping a switcher locomotive with Kim Hot Start anti-idling device
- Installed solar panels on a 350,000 sq ft warehouse at Elizabeth PA Marine Terminal
- Using Ultra Low Sulfur Diesel fuel in Cargo Handling Equipment and Compressed Natural Gas (CNG), propane or electricity to power forklifts.
- Establishing a Green Practices Task Force to exchange information on and identify resources to support green initiatives, which are those that go beyond what is required by law or regulation.
- Implementation of no-idling policies on our terminals
- Participating in a pilot program to evaluate the operational performance of Hybrid Yard Hostlers, or tractors, at both the APM container terminal in Elizabeth and the NY Container Terminal in Staten Island. Yard hostlers comprise 45% of Cargo Handling Equipment, the largest share at our marine terminal (433 units), and contribute the largest portion of all Cargo Handling Equipment air emissions. Hybrid technology has the potential to reduce these emissions by 40% as well as improve fuel economy by 50-60%, reducing emission of greenhouse gases.

It is important to note that we cannot solve this problem alone. The Port Authority, along with NJDOT, NJDEP and various New York City and State agencies, are hosting the first ever Faster Freight Cleaner Air (FFCA) conference on the east coast in July 2008. The FFCA conference will focus on identifying solutions and resources to improve operations in the freight movement industry in order to reduce air emissions.

We are also working with the Port of Rotterdam, with whom we formed a Sustainable Port Partnership, to organize the C40 World Ports Climate Conference, scheduled for July 2008, which will bring leaders of the world's most important ports and port cities together to sign a world Ports Climate Declaration and, by doing so, subscribe to a tangible program of action to reduce greenhouse gas emissions.

In sum, we know that our port is continuing to grow and that is great news, with all of the associated economic benefits such growth brings. However, we realize that to be successful, we must be a sustainable port, and that means finding ways to accommodate port growth that also protects the environment.

Airports

Addressing Air Quality issues at airports is a unique task. Our airports are brimming with customers, traffic and cargo. This is great economic news for the region – but it presents practical and environmental challenges. Our airports served 109,983,372 passengers in 2007, an increase of more than 5% over 2006 levels. The region is growing and we are adapting to the new model of doing business in transportation.

Like at our ports, we are a landlord airport owner; we own the airports but operate only a few of the terminals. As such, we are undertaking efforts both at the Port Authority facilities and in conjunction with our tenants, to improve air quality in the areas surrounding our airports.

When you think airports, you think delays – and so do we. If we decrease flight delays, we will decrease emissions since flight delays increase aircraft idling time by increasing runway congestion. The Port Authority Flight Delay Task Force recommended 77 initiatives to the Federal Aviation Administration (FAA) to increase capacity and reduce flight delays. We have a long way to go to convince the FAA to take the necessary action, but we are hopeful, that with the assistance of our congressional delegation, the FAA will take appropriate action. The Port Authority is doing its part – renovating runway access roads and increasing the connections between those roads to minimize aircraft congestion as they approach the runways.

In order to reduce congestion at our region’s airports, the Port Authority recently acquired Stewart Airport in Newburgh, New York. We have pledged to make Stewart Airport a cutting edge, environmentally friendly airport that we plan to develop into the country’s first carbon-negative airport. The gates at Stewart Airport will be upgraded with 400-megahertz power and pre-conditioned air, so that aircraft can simply plug in, reducing the use of jet fuel as aircraft are serviced at gates. We are also pursuing the purchase of hydrogen-fueled tugs for aircraft, and electric aircraft ground service equipment – two other great opportunities to use low-emission technology to reduce carbon emissions. We have partnered with Rensselaer Polytechnic Institute to develop proposals that will make Stewart a test bed for renewable technology. This is a critical example of the new era of growth at the Port Authority: expansion married to sustainability.

In order to reduce emissions, we have to know our status quo – where are the emissions coming from and at what levels. Therefore, as at our airports, we have embarked on an effort to measure air emissions from aircraft, ground service equipment and cars, through a computer modeling process. The Port Authority’s commitment to environmental sustainability in this new period of growth means reducing emissions from all of those sources – and finding ways to continue to expand in a greener, more sustainable way. We are a member of the EPA/FAA Emission Reduction Stakeholder Process for airports, which is working to promote the long-term reduction of aircraft emissions. The stakeholder process is made up of representatives from engine makers, aircraft manufacturers, FAA, EPA, airlines, and airports, all working together to promote lower emissions.

To make our airports more sustainable, we introduced greener buses to the shuttle fleet at our airports—21 hybrid diesel-electric buses and 30 clean technology diesel buses. For the first time ever at an airport, we are using geothermal energy to power one of our airport buildings, with more to come. We are replacing inefficient baggage handling equipment with electric energy efficient equipment. We have 150 Compressed Natural Gas (CNG) vehicles at our airports using geothermal energy. And AirTrain at both Newark and JFK is significantly reducing auto vehicle miles traveled at the two airports.

Our tenants at the airports have also made strides towards improving air quality. At Newark’s Terminal C, Continental Airlines has modified jetbridges to supply preconditioned air and power to aircraft parked at the gate with the engines off. These jetbridge modifications provide heating and cooling of the aircraft and allow the aircraft electrical systems to be operational. These measures effectively reduce emissions and fuel consumption by eliminating the use of the

aircraft's auxiliary power unit or engines. Continental has added winglets to many of its planes, lowering aircraft drag and resulting in up to a five percent reduction in emissions and noise.

Delta Shuttle recently converted its entire fleet of ground service equipment at the Delta Shuttle terminal at LaGuardia to electric equipment with zero emissions. This ground service equipment uses state-of-the-art fast charging technology. Continental is investigating use of the same type of equipment at Newark.

At Teterboro, Jet Aviation is installing solar panels on the roofs of its hangars, reducing the use of fossil fuels and First Aviation has installed a fuel farm in its facilities, saving vehicle miles and reducing emissions in the local community, as aircraft fueling tanker trucks don't have to travel local roadways to offsite fuel farms to fuel up.

We know that we have a long way to go – and we are committed to continuing to improve air quality. At Teterboro Airport, the Port Authority worked closely with the Meadowlands Commission and NJDEP to fund an air quality study, completed earlier this year. Simultaneously, the PANYNJ announced that it would request that the Teterboro Airport Noise Abatement Advisory Committee (TANAAC), an independent panel of local, state and federal elected officials, create an Air Quality Committee to examine this issue in-depth and deliver recommendations. The Port Authority and its tenants have invested in excess of \$100 million on capital projects with an environmental benefit at Teterboro Airport, including:

- Development of a more efficient taxiway and runway system. Runways and taxiways now intersect at less acute angles, so planes enter and exit runways with much greater efficiency, resulting in less ground run-up time, fewer emissions and less noise. Aircraft queues are shorter, which further cuts emissions and noise, and idle for less time, in part because of the Port Authority's Departure Clearance Email System. This program notifies pilots at the airport when they have been cleared for takeoff so that they do not run engines unnecessarily, again decreasing emissions and noise.
- The purchase of several hybrid vehicles, which replaced older, gasoline-powered vehicles.
- A program to install three large solar panels measuring a total of about 15,000 square feet on the rooftops of three hangars at fixed-base operator Jet Aviation.

Conclusion

Our airports and seaports are busy and crowded, and our regional economy depends on growth. However, even as we move ahead to implement our new building agenda, we recognize the need for new approaches to the way we conduct our business. Environmental sustainability is absolutely vital to the future of our region. The environmental challenge at our airports and seaports is to continue to meet current demand as well as to grow in a way that improves and reduces the environmental impact. We look forward to continuing to adopt new, innovative strategies in our push for long-term sustainability.