STATE OF NEW JERSEY 2020 VOLKSWAGEN SETTLEMENT APPLICATION

Port Newark Container Terminal Straddle Carrier Replacement Program







Application Submitted by:

Port Newark Container Terminal



July 20, 2020

Table of Contents

QUICK	FACTS	3
REQUE	EST	3
IMPOR	RTANCE	3
1.0	PROJECT APPLICATION	6
1.1	Contact Information	6
1.2	Project Name	6
1.3	Project Category or Categories	6
1.4	Project Priority	6
1.5	Project Budget	6
1.6	Project Description	7
1.7	Straddle Carrier Information	7
1.8	COMMUNITY IMPACT	7
1.9	PROJECT PARTNERS	8
1.10	PROJECT TIMELINE	9
1.11	L Similar Projects	9
1.12	2 Alternate Fuels	10
1.13	3 Alternate Grant Funds	10
2.0	STRADDLE CARRIER BENEFIT DETAILS	11
2.1	Environmental	11
2.2	Safety	11
2.3	Productivity	11
2.4	Maintenance	11
3.0	PNCT PROJECT EXPERIENCE	12
3.1	GRANT PROJECTS	12
3.2	EQUIPMENT PROJECTS	13
3.3	MAJOR CAPITAL AND ENGINEERING PROJECTS	14
4.0	SUPPORTING DOCUMENTATION	15
4.1	LEGISLATIVE APPROVALS AND LETTERS OF SUPPORT	15

List of Appendixes

Appendix A – Letters of Support

QUICK FACTS

The State of New Jersey, as a beneficiary of the Trust established pursuant to the national Volkswagen settlement, intends to use its allocation from the mitigation trust to efficiently implement projects that reduce nitrogen oxide (NOx) emissions in a cost effective and technically feasible manner. The implemented projects must meet the criteria of the Consent Decree. New Jersey is issuing this solicitation for project ideas to ensure a broad range of project ideas are considered.

NJDEP anticipates primarily funding pilot electrification projects, including the replacement of heavy-duty vehicles/engines such as buses, trucks, and non-road equipment in urban areas disproportionately impacted by diesel emissions, as well as electric vehicle charging/fueling infrastructure installation in strategic locations across the state.

There are no 100% Electric Straddle Carriers anywhere globally in commercial use. The few 100% Electric Straddle Carriers that have been built are primitive and only used for research and development purposes in Europe. The most electrically powered Straddle Carrier in commercial use is the https://electric/straddle/like/ Europe.

This project includes the procurement, commissioning, and infrastructure work required to purchase two new Hybrid-Electric Straddle Carriers. Straddle Carriers are 85-Ton pieces of machinery that carry and deliver large cargo containers to trucks and segregate containers for loading to/from ships and trains. PNCT handles 20% of all containerized cargo moving through the State of New Jersey with a fleet of 110 straddle carriers on site that run approximately 6,000 hours per unit per year. Straddle Carriers are the vital piece of equipment that make all functions of a container terminal like PNCT function safely and efficiently; keeping cargo moving throughout the State of New Jersey's warehousing, distribution, and retail supply chain.

This project supports the conversion of 2 older diesel powered Straddle Carriers to 2 new state of the art Hybrid-Electric Straddle Carriers in a cost effective and replicable manner that results in 37.0% lower fuel consumption and 90% less nitrogen oxide (NOx) emissions.

REQUEST

Port Newark Container Terminal (PNCT) is requesting \$735,000 from the State of New Jersey to support the \$2.45 million Port Newark Container Terminal (PNCT) Straddle Carrier Replacement Program. The grant will be matched with private investment for a project total cost of \$2.45 million, of which 70% will be privately funded. Once completed, the project will allow PNCT to convert 12,000 annual moves currently performed by fully diesel-operated machines to moves performed by new Hybrid-Electric machines.

IMPORTANCE

These Hybrid-Electric Straddle Carriers will be the first of their kind used in a port operation anywhere in the entire United States. They will become the cornerstone units of PNCT's continuing push to reduce harmful emissions in the surrounding communities with the goal of upgrading our entire Straddle Carrier fleet to Hybrid Electric Straddle Carriers by 2030.

Year	2010	2015	2020
# of Strads	84	98	110
TIER 2 Engine	23%	0%	0%
TIER 3 Engine	77%	100%	45%
TIER 4F Engine	0%	0%	55%

PNCT Straddle Carrier Fleet Breakdown – Last 10 years

TIER 2 Engine Defined: Engine manufactured in and around Year 2002

TIER 3 Engine Defined: Engine manufactured in and around Year 2006

TIER 4F Engine Defined: Engine manufactured in and around Year 2014

The Environmental Protection Agency (EPA) Report (EPA-420-R-16-011) published in September 2016 entitled National Port Strategy Assessment describes the most effective equipment strategy as per the EPA. PNCT has consistently remained ahead of the target scenario (in Table 5-28) and will continue to be at the forefront of emissions reductions in the U.S. Port sector with the introduction of ever more efficient, low emissions Straddle Carriers.

Table 5-28: EPA Most Effective Crane Strategies (Distribution of Rubber Tire Gantries by Engine Tier)									
ENGINE TYPE	ENGINE TYPE 2011 2020 2030 2050								
UNCONTROLLED	6%	1%	0%	0%					
TIER 1	27%	3%	0%	0%					
TIER 2	20%	5%	1%	0%					
TIER 3 - TIER 4	47%	91%	98%	100%					
PNCT (TIER 3 - TIER 4)	77%	100%**	100%**	100%**					
** PNCT's fleet emissions will far exceed the original EPA goal									
of TIER 4 Engine efficiency with TIER 4F and Hybrid-Electric units									
in use.									

As shown above, PNCT has demonstrated a long-term commitment to both expanding its fleet and reducing Straddle Carrier fleet Nitrogen Oxide (NOx) emissions. This project's new Hybrid-Electric Straddle Carriers would be the next step in further lowering Nitrogen Oxide (NOx) emissions at PNCT and the surrounding Essex and Hudson county region. PNCT's long-term plan would be to continue to upgrade to these new Hybrid-Electric models into the future and further lessen the environmental impact of the Straddle Carrier fleet.

THE PROJECT IS READY TO COMMENCE CONSTRUCTION

Design is complete and, if this application is successful, construction could commence immediately.

The project will use significant private funding sources.

The project risks are low and well mitigated.

THIS PROJECT LEVERAGES PAST PROJECTS

This project is the next step in utilizing more environmentally sustainable container handling equipment at the port, going from diesel engines, to diesel electric engines now to diesel-battery-hybrid engines, which would be the first of these units utilized in the US.

THE PROJECT LEVERAGES CAPITAL INVESTMENTS

This project is the next step in a continuing effort for PNCT to continue to utilize more environmentally sustainable equipment and infrastructure in the terminal, such as but not limited to more environmentally friendly container handling equipment, new LED lights throughout the terminal and the installation of a natural gas generator at the terminal.

This project is part of a more than \$500-million overall plan to upgrade and expand PNCT, of which more than \$375 million has already been spent or committed.

THE PROJECT WILL IMPROVE OPERATIONS AND QUALITY OF LIFE ON AND OFF THE TERMINAL

The PNCT Straddle Carrier grant application is to convert 2 older diesel powered Straddle Carriers to all new Hybrid-Electric Straddle Carriers that emit 71% less Particulate Matter and 92% less Nitrogen Oxide (NOx). This will specifically address the issue of Nitrogen Oxide (NOx) reduction and address other major NJ environmental issues.

PNCT operates directly in and around the Hudson and Essex County region that handle a disproportionate burden in terms of air quality in the State of New Jersey. In Sections 1.6 and 1.8 of our application this burden is highlighted using recent EPA and State of New Jersey data and research studies.

It is also emphasized that these units are the stepping-stone towards accelerating PNCT's continuing efforts to reduce harmful emissions via the upgrading of our entire Straddle Carrier fleet to Hybrid Electric Straddle Carriers long before the EPA target year of 2050. PNCT is committed to going above and beyond the environmental standards set for the marine terminal industry.

The project will improve existing services for terminal operations, safety, and maintenance, creating a safer work environment and reducing maintenance needed on equipment.

The project will provide ladders of opportunity though creating of new infrastructure to support the equipment as well as new training and learning opportunities for advanced technology equipment.

The project will improve air quality and safety for neighboring communities.

1.0 PROJECT APPLICATION

1.1 Contact Information

Applicant Name: Port Newark Container Terminal

Applicant Address: 241 Calcutta Street

City, State, Zip Code: Port Newark, NJ 07114

Contact Person: Chris Garbarino

Title/Position: Chief Operating Officer (COO)

Phone: (973) 522-2203

Email: <u>Chris.Garbarino@pnct.net</u>

Owner Name: Port Newark Container Terminal

Owner Address: 241 Calcutta Street

City, State, Zip Code: Port Newark, NJ 07114

Contact Person: Chris Garbarino

Title/Position: Chief Operating Officer (COO)

Phone: (973) 522-2203

Email: Chris.Garbarino@pnct.net

1.2 Project Name

Port Newark Container Terminal (PNCT) Straddle Carrier Replacement Program

1.3 Project Category or Categories

Category 8 - Forklifts and Port Cargo Handling Equipment - Replacement

1.4 Project Priority

Priority 1 of 1 Proposals – No other proposals submitted.

1.5 Project Budget

Grant Funds Requested

PNCT is requesting \$735,000 in State of New Jersey Trust Funds to complement \$1.715 million of private funds for the procurement and construction of two new Hybrid-Electric Straddle Carriers. The total project cost is \$2.45 million (\$2.25 million in equipment + \$200K in infrastructure), of which 70% funded by PNCT. All administrative costs for execution of trust reimbursements handled by PNCT in-house staff that has experience administering previous grant works.

Source of Local Funds

PNCT will find the private contribution of \$1.715 million of the project through free cash flow. PNCT is committed in its Lease with the PANYNJ to spending in excess of \$500 million to improve and expand its facilities by 2030 in order to extend its concession through 2050.

Project Cost Summary	NJ State	Local Match	Total Cost
2 New Hybrid-Electric Straddle Carriers	\$735,000	\$1,515,000	\$2,250,000
New Straddle Carrier Plugs / Infrastructure	\$0	\$200,000	\$200,000
Total Costs	\$735,000	\$1,715,000	\$2,450,000

1.6 Project Description

- Geographic area where emissions reductions will occur:
 - o Primarily Hudson and Essex Counties / Secondarily Union County
- Estimated size of population benefitting from the emission reductions:
 - o **> 1,500,000**
- Estimated useful life of the project:
 - o 20 years
- Number of engines/vehicles/vessels/equipment included in the project:
 - o 2 straddle carrier units

1.7 Straddle Carrier Information

• DEP will be modeling emission benefits for all projects. Please provide the necessary information below:

(Straddle Carrier/Per Unit)	Hybrid-Electric Straddle Carrier (New Units)	Diesel Straddle Carrier (Units being replaced)
Model Year	2020	2004
Horsepower	129kW	320kW
Annual Hours of Use	6,000	6,000
Amount of Fuel Used	13.5 Liters Per Hour	21.4 Liters Per Hour

^{*}Chart above based on per unit replacement – project is for replacement of 2 units.

1.8 Community Impact

- Will the project benefit one or more communities that are disproportionately impacted by air pollution? If so, please describe?
 - O As per the New Jersey State Health Assessment Data (SHAD), Nitrogen Oxide (NOx) emissions exceeded the 2010 stricter air quality standards multiple times for nitrogen and sulfur oxides. Nitrogen Oxide (NOx) levels alone were exceeded 10 times between 2010 and 2018. These exceedances occurred at two air-monitoring sites both located directly adjacent to PNCT. One site is located in <u>Hudson County</u> (Bayonne) and the other site is located at Exit 13 of the NJ Turnpike which is the Southern entrance/exit for the Newark/Elizabeth Port Complex.

- New Jersey health benchmark level for diesel particulate matter per cubic meter of air is 0.0033 ug/m3. The highest ambient air concentration of harmful diesel particulate matter per cubic meter of air can be found in <u>Hudson County</u> at 1.52 ug/m3 (460x the NJ Health Benchmark level) and <u>Essex County</u> at 0.76 ug/m3 (230x above the NJ Health Benchmark level. PNCT is located in <u>Essex County</u> and directly adjacent to <u>Hudson County</u>.
- O New Jersey State Health Assessment Data (SHAD) also shows a significantly higher rate of Asthma hospitalizations and ER Visits for Hudson and Essex counties. The overall State of New Jersey rate is 7.8 hospitalized persons per 10,000 residents. Hudson County was almost 9% higher at 8.4 hospitalized persons per 10,000 residents and Essex County was over 65% higher at 12.9 hospitalized persons per 10,000 residents. Per USEPA Integrated Science Assessment (ISA) for Oxides of Nitrogen Health Criteria (Final Report, January 28, 2016), Oxides of nitrogen are one of six principal (or criteria) pollutants for which the USEPA has established national ambient air quality standards. The cumulative body of evidence indicates that short-term exposure to nitrogen dioxide (NO2) can cause respiratory effects, in particular, effects related to asthma exacerbation.

1.9 Project Partners

• Only shovel ready projects will be considered. Please list project partners.

PNCT is seeking funds for this project for the improvement of container handling equipment on the terminal that will greatly reduce emissions at the terminal as well as improve the safety and quality of the operations.

To realize the full benefits from this project, the following organizations will need to contribute to the project execution and long-term use.

The major stakeholders and their project roles are as follows:

PNCT – Construction, Implementation, and Management. Project management, grant administration, construction contracting, and construction management executed by PNCT. PNCT has contracted, delivered, and committed over \$375 million in capital development projects since its lease amendment with the PANYNJ in 2011 with the help of its shareholders, and is committed to additional spending of at least \$125 million over the next 10 years. PNCT's other ongoing projects to upgrade cargo handling capacities will complement efforts made through this project. With recent project completions completed, PNCT has demonstrated a successful track record of delivering projects on schedule and on budget.

Ports America and Terminal Investment Limited (TIL) – Funding. As the shareholders of PNCT, Ports America, Inc. (Ports America) and TIL will provide the private portion of the funding required for the project. Ports America and TIL have committed to supporting PNCT's effort to develop the terminal by reinvesting profits from the terminal as well as supporting funding of capital projects. Both Ports America and TIL are significant global terminal operators who provide expert engineering, contracting, financial, and management resources to PNCT to use for development of projects such as that described in this application. Ports America and TIL will provide financial and governance oversight.

Ports America is the largest US terminal operator and stevedore, with operations in every major port in the nation. Ports America has over 85 years of experience through predecessor companies and its operations span all three U.S Coasts. With a primary focus on containers, Ports America provides stevedoring and in some cases terminal management services for Containers, RoRo, Cruise, Bulk, and Breakbulk cargos. Currently, the company has operations in more than 83 locations at 44 ports. This unique footprint serving the largest markets including New York/New Jersey, LA/Long Beach, Oakland, Tacoma, Savannah, and Baltimore, provides Ports America with a strong and stable market position. Its long-standing customer base includes many of the world's leading shipping lines.

TIL, the second owner of PNCT, is a large and geographically diverse container terminal business, with material equity interests in 29 operating terminals and 3 greenfield developments, across 20 countries in five continents. TIL's assets are highly strategic and located in key gateways for global trade. The company's primary customer is MSC, the world's second largest container shipping line, which accounted for approximately 88% of all of TIL's throughput in 2010. TIL and MSC have a very strong relationship, whereby TIL is operating container terminals on the most important nodes of MSC's routing schedule. TIL has expanded to become the sixth largest portfolio of port assets globally since its founding in 2000.

PANYNJ – **Owner**, **Permits**, **and Approvals**. The PANYNJ will provide the land through its lease with PNCT for the project and is the primary agency for permitting. **PANYNJ** is a financially self-supporting public bi-state agency between the States of New York and New Jersey, and authorized by the US Congress to oversee much of the regional transportation infrastructure, including bridges, tunnels, airports, and seaports, within the PANYNJ. The PANYNJ is a landlord to PNCT and the other marine terminals and is funding major projects to increase the PANYNJ's capacity.

Konecranes – Engineering and Equipment. PNCT has engaged Konecranes, one of the leaders in Container Handling Equipment worldwide, for the design and eventual procurement of the two new Hybrid-Electric Straddle Carriers. Konecranes Straddle Carriers make up 96% of the current PNCT fleet and have been utilized with much success as they continue to evolve cleaner engine technologies. Konecranes has completed design of the new Hybrid-Electric Straddle Carrier and is prepared to commence manufacturing upon approval.

1.10 Project Timeline

• Estimated timeframe for project implementation? Include a project timeline that identifies start and end dates, as well as the timeline for key milestones.

D	0	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names	Qtr 3 Qtr 4 Qtr 1 Qtr 2 Qtr 3
1		*	Notice To Proceed	0 days	Thu 10/1/20	Thu 10/1/20			10/1
2		*	Shop Drawing Approval	4 wks	Thu 10/1/20	Wed 10/28/20	1		•
3		*	Construction	6 mons	Wed 10/28/20	Tue 4/13/21	2		*
4		*	Shipping	4 wks	Tue 4/13/21	Mon 5/10/21	3		*
5		*	Commissioning	2 wks	Mon 5/10/21	Fri 5/21/21	4		ii,
6		*	Handover	0 days	Fri 5/21/21	Fri 5/21/21	5		5/21

1.11 Similar Projects

- Demonstrated success in implementing similar projects.
 - PNCT has purchased 88 new straddle carriers over the past 10 years to supplement and replace Straddle Carriers that have outlived their life cycle. As demonstrated in the chart below – PNCT has continued to upgrade the engine quality over time as well.

Number of Strads	Year	Manufacturer	Engine Tier
4	2010	Kalmar	Tier 3
24	2012	Konecranes	Tier 3
20	2014	Konecranes	Tier 4
20	2015	Konecranes	Tier 4
20	2018	Konecranes	Tier 4

1.12 Alternate Fuels

- If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure.
 - This project does not propose the use of any alternate fuels, the reduction of emissions is through the use of electric and battery power substituting for diesel power.

1.13 Alternate Grant Funds

- Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details.
 - O No, this project has not been approved to receive or expend any other grant funds.

2.0 STRADDLE CARRIER BENEFIT DETAILS

2.1 Environmental

The new Hybrid-Electric Straddle Carriers are the first step in PNCT's conversion of its Straddle Carrier fleet to the latest in environmentally friendly Straddle Carriers. Below is a chart demonstrating a comparison in the emissions and other environmental factors between the Hybrid-Electric Straddle Carriers and the Straddle Carriers being replaced on a PER UNIT basis:

Strad Type	NOx (g/kW-hr)	*PM (g/kW-hr)	Fuel (L/hr)	CO2/year (Tons)
Diesel (replaced)	3.90	.07	21.4	385.2
Hybrid-Electric (new)	0.28	.02	13.5	217.1
% Reduction	- 92.82%	- 71.43%	- 37.00%	-43.75%

^{*}Particulate Matter

PNCT is committed to the continued improvement of the environmental effects of their Straddle Carriers and other components of the terminal.

2.2 Safety

The new Hybrid-Electric Straddle Carriers are based on automotive architecture and designed to deliver high reliability and safety standards with system simplicity. Hybrid-Electric Straddle Carriers completely readdress the use of hydraulic fluids. This eliminates the risk of fire associated with hydraulic fluids and is a major safety advancement for ILA Longshoremen operating these units and ILA Mechanics that repair them. The units are also equipped with the latest driver assist technology ensuring the straddle carriers are never at risk of turning over, eliminating another major safety issue.

2.3 Productivity

The Hybrid-Electric Straddle Carriers for PNCT are significant steps forward in productivity. These machines allow PNCT to stack >50% more cargo containers within our current 272 acre facility. This benefits both PNCT and the larger Port of New York/New Jersey complex allowing for the continued capture of cargo growth over the next 10 years without the need for land expansion to accommodate cargo growth.

2.4 Maintenance

Konecranes Hybrid Electric Straddle Carriers provide a safe, efficient means for completing predictive, preventive, and reactive maintenance on the machines and new enhancements to the design componentry allow for ease of maintenance. Preventive maintenance schedules for the units are conducted at 1,000 hour, 2,000 hour, and 10,000 hour intervals.

3.0 PNCT PROJECT EXPERIENCE

PNCT has executed over \$375 million dollars' worth of capital improvements since a lease agreement with the landlord (PANYNJ) was amended in 2011 to extend PNCT's lease until 2030 with the option to extend to 2050 with PNCT's investment of \$500M in infrastructure, which PNCT is committed to completing, ensuring a long term presence in New Jersey and at our current footprint.

3.1 Grant Projects

PNCT has completed multiple grant projects and has worked with county, state and federal agencies to administer these grants. PNCT's has in-house resources handle all grant administration paperwork as well as follow all regulations and rules that apply to these grants.

The below grant projects have been 100% completed and grants closed out, with all mandated follow-up reporting ongoing:

Project Title	Project Description	Project Dates	Grant Amount
Security TWIC Project	Installation of new security devices/cameras to increase port security at the terminal. Administered under a Port Security Grant at a 50/50 cost share with PNCT.	2014-2015	\$654,000
Crane Simulator	Installation of new crane/straddle carrier simulator that will allow for training of labor for regular teaching and new technologies. Project funded in portion through grant award.	2017	\$246,000
Port Newark Terminal Gate and Terminal Expansion	31 acre yard expansion including new gate and support facilities. This project will include raising and strengthening critical facilities post-Sandy. Project was awarded the TIGER6 Grant. Overall project was a \$60 million dollar capital investment into the terminal and involved civil, infrastructure and equipment components.	2014-2018	\$14,900,000

3.2 **Equipment Projects**

PNCT has relevant experience procuring major container handling and other equipment at the terminal similar to Straddle Carriers. These projects are examples of PNCT executing the procurement process from start to finish (bid, contracting, management and handover). All projects listed below were 100% funded by PNCT, and many include environmental benefits:

Project Title	Project Description	Project Dates	Project Type
PNCT Yard Relighting Project	PNCT retrofitted 750 old high-pressure sodium lighting fixtures with new state of the art LED fixtures for all the high mast light poles at the terminal. This project increased light levels at the terminal while reducing electrical costs by 40% and reducing maintenance costs.	2019-2020	Environmental Sustainability and Equipment Purchase
Straddle Carriers	88 new straddle carriers purchased over the last 10 years. These million dollar machines are the primary mover for containers from the ship to the yard and to the truck/train and have an average life span of about 20 years. PNCT has a fleet of 110 currently and continues to replace and expand the fleet.	Ongoing	Equipment Purchase (same structure)
Wharf Revitalization and Improvement Project – Berth 55/57 Upgrades	Rebuilding and upgrade of 200 feet of decommissioned wharf and upgrade of existing 300 feet of operational wharf to service Ultra Large Container Vessels. Supply and install four new ship-to-shore gantry cranes that are 22 containers wide, 147.6 feet high, and capable of handling new larger ships that will call after the raised Bayonne Bridge.	2018-2020	Equipment Purchase (4 cranes) and Major Civil Infrastructure Project
IT Upgrades	New Wi-Fi system allowing transmission of work instructions to container handlers in the field, data terminals to receive work instructions, and IT infrastructure with secure data rooms.	Ongoing	Equipment / Technology
Sandy Equipment Replacement	Four straddle carriers, 47 hustler trucks, eight empty container handlers, and various other equipment.	2013	Equipment Purchase
Counter Balance Equipment	Three reach stackers and five empty handlers. These container handlers support the straddle carriers in delivery of containers to the ship, rail, and trucks.	2012-2013	Equipment Purchase
Bombcart Chassis	20 bombcart chassis to support new rail operations over the new flyover bridge.	2013	Equipment Purchase

3.3 Major Capital and Engineering Projects

PNCT has completed many major capital projects as well as managed the design/engineering of these projects. These projects are components of our \$375 million dollar investment commitment to the State of New Jersey and the Port Authority of New York/New Jersey and managed directly by PNCT:

Project Type	Project Description	Project Dates	Project Type
Phase 3 Yard Expansion	18 acre expansion of yard and truck queuing area. Installation of new reefer rack steel structure.	2018-2020	Major Capital Project
Pavement Repair	Ongoing upgrade of 300 acres of existing pavement. Annual investment of both capital and maintenance repair of pavement to promote operational, safety and maintenance benefits to the terminal.	Ongoing	Major Capital Project
Design Engineering	Design engineering supporting various project including infrastructure, equipment, IT and various other projects.	Ongoing	Project Management
Existing Berth Improvements	Berths 59-61 strengthening to accept larger ships that call the terminal post Bayonne Bridge raising.	2015-2017	Major Capital Project
Wharf Crane Hardware	New pins and tie downs securing new cranes against high wind events.	2014	Major Capital Project
New Crane Substation	New substation supporting delivery of future ship-to-shore gantry cranes.	2014	Major Capital Project
Ship to Shore Gantry Cranes	Three new ship-to-shore gantry cranes 22 containers wide and 147.6 feet high. Capable of handling new larger ships that call the terminal post Bayonne Bridge raising.	2014	Equipment Purchase
Rail Yard RTG Cranes	Three new rubber tired gantry cranes that are used as the loading cranes for cargo to the rail. These machines' procurement were critical to the terminal to double the rail handling capacity at PNCT's rail yard.	2014	Equipment Purchase
Crane Upgrades	Upgrade of current six ship to shore cranes to modernize computer and safety systems.	2013-2014	Equipment Upgrade
Straddle Carrier Shop	Four bay 3+1 high straddle carrier maintenance shop.	2013	Major Capital Project
Phase 1 Yard Expansion	33 acre expansion of yard and truck queuing area. Expanded yard handling capacity by 25%.	2012	Major Capital Project

4.0 SUPPORTING DOCUMENTATION

4.1 Legislative Approvals and Letters of Support

The PNCT Straddle Carrier Replacement Program has complete support from throughout the region. Letters confirming this support attached in Appendix A.

ROBERT MENENDEZ NEW JERSEY

COMMITTEES:

BANKING, HOUSING, AND URBAN AFFAIRS FINANCE FOREIGN RELATIONS

United States Senate
WASHINGTON, DC 20510-3005

528 SENATE HART OFFICE BUILDING WASHINGTON, DC 20510 (202) 224-4744

> ONE GATEWAY CENTER 11TH FLOOR NEWARK, NJ 07102 (973) 645-3030

208 WHITE HORSE PIKE SUITE 18-19 BARRINGTON, NJ 08007 (856) 757-5353

July 2, 2020

The Honorable Catherine R. McCabe Commissioner New Jersey Department of Environmental Protection 401 East State Street Trenton, New Jersey 08608-1501

Dear Commissioner McCabe:

I am writing to express my support for the VW Beneficiary Mitigation Plan pilot project proposal submitted by Port Newark Container Terminal, LLC (PNCT) to the New Jersey Department of Environmental Protection.

As you may know, PNCT is proposing a pilot project to demonstrate the combined NOx emission-reduction capabilities and sustained operational performance capabilities of the newest, highest state-of-the-art, ultra-low emission, advanced hybrid-electric straddle carrier model. If selected, the PNCT pilot project would incentivize the replacement of older, dirtier diesel straddle carrier fleets with new hybrid-electric models. To carry out its pilot demonstration project, PNCT proposes to replace two 2004 diesel engine straddle carriers with ultra-low-emission, state-of-the-art hybrid-electric models to carry out 12,000 annual moves while reducing harmful emissions and improving air quality in the surrounding Hudson County-Essex County region.

PNCT is the highest-utilized terminal per acre in the Port of New York/New Jersey, handling more than 1.5 million TEU annually (20% of PoNYNJ's container volumes) and supporting nearly10,000 jobs throughout the State of New Jersey. Over the past nine years, PNCT has invested \$310-million of a total of \$500-million in capital improvements required by 2029 under its lease agreement with PANYNJ. These improvements increase productivity, efficiency, and environmental resiliency of the marine terminal, and expand intermodal capability and capacity to carry increasing volumes of inbound and outbound container freight.

I believe that PNCT's proposed pilot demonstration project will make an important contribution to reducing harmful NOx and diesel particulate emissions from New Jersey's ports and therefore it merits both my support and the thoughtful consideration of NJDEP. Sincerely,

Robert Menendez

United States Senator

ALBIO SIRES
8TH DISTRICT, NEW JERSEY

COMMITTEE ON FOREIGN AFFAIRS
SUBCOMMITTES:
CHAIRMAN, WESTERN HEMSPHERE, CIVILIAN
SECURITY, AND TRADE
EUROPE, EURASIA, ENERGY, AND THE

ENVIRONMENT

COMMITTEE ON TRANSPORTATION

AND INFRASTRUCTURE

SUBCOMMITTEES:
HIGHWAYS AND TRANSIT
RAILROADS, PIPELINES, AND
HAZARDOUS MATERIALS

COMMITTEE ON THE BUDGET



2268 RAYBURN HOUSE OFFICE BUILDING WASHINGTON, DC 20515 (202) 226-7919

5500 PALISADE AVENUE, SUITE A WEST NEW YORK, NJ 07093 (201) 558-0800

257 CORNEUSON AVENUE, SUITE 4408 JERSEY CITY, NJ 07302 (201) 309-0301

> 800 ANNA STREET ELIZABETH, NJ 07201 (908) 820-0692

HTTP://WWW.SIRES.HOUSE.GOV

The Honorable Catherine R. McCabe Commissioner New Jersey Department of Environmental Protection 401 East State Street Trenton, New Jersey 08608-1501

Re: Port Newark Container Terminal Pilot Project Proposal for Volkswagen (VW) Mitigation Trust Funds

Dear Commissioner McCabe:

I am writing to express my support for the VW Beneficiary Mitigation Plan pilot project proposal submitted to NJDEP by Port Newark Container Terminal, LLC (PNCT). As a Member of the House Committee on Transportation and Infrastructure and the Representative for New Jersey's 8th Congressional District, which includes major intermodal transportation infrastructure assets in the Port of New York and New Jersey, I am focused both on the critical economic role of our seaports, as well as the importance of their commitment to ongoing improvements that benefit both the environment and public health. The pilot demonstration project proposed by PNCT for VW Mitigation Trust funding consideration is aligned with these important public policy priorities.

The PNCT project will replace two 2004 full-diesel straddle carriers with two state-of-the-art, ultra-low emission, advanced hybrid-electric straddle carriers to carry out 12,000 annual moves while reducing harmful emissions and improving air quality in the surrounding Hudson County-Essex County region. PNCT is requesting \$735,000 in VW Trust grant funding to support the \$2.45-million project, representing a 70% private funding share.

It is my understanding that there are currently no operationally reliable all-electric straddle carriers being produced anywhere in the world. PNCT's pilot project will demonstrate the combined NOx/diesel particulates emission-reduction capabilities and sustained operational performance capabilities of the newest, state-of-the-art, advanced hybrid-electric straddle carrier model. In terms of mitigation strategies, the PNCT pilot project will incentivize hybrid replacement of diesel straddle carrier fleets rather than keeping old, full-diesel straddle carriers in service until a fully electric straddle carrier model is available in the future. Importantly, this proposed pilot demonstration builds on an impressive record of improvements by PNCT that has transformed an obsolete, dilapidated, and unproductive marine terminal property into a 21st century intermodal freight transportation hub.

To date, PNCT has invested more than \$300 million on capital improvements and new equipment to increase productivity, efficiency, and environmental resiliency of the marine terminal. These investments have expanded intermodal capability and capacity to transport an ever-increasing volume of inbound and outbound container freight by on-terminal rail connection, short sea shipping and trans-Hudson River barges, taking more than 700 daily drayage truck trips off local roads, bridges and highways in northern New Jersey. PNCT is now the highest-utilized terminal per acre in the Port of New York/New Jersey, handling 20% of the port's container volumes (1.5-million TEU annually), and supporting nearly 10,000 jobs throughout the State of New Jersey. The two new advanced hybrid-electric straddle carriers to be deployed for PNCT's proposed pilot project will become the cornerstone units of PNCT's continuing push to upgrade to the latest in ultra-low emissions container handling equipment.

I am pleased to relay to you my strong support for PNCT's proposed pilot demonstration project because it will make a very important contribution to reducing harmful NOx and diesel particulate emissions from New Jersey's ports while increasing the efficiency, productivity and global competitiveness of our State's most vital marine transportation asset.

Sincerely yours,

Albio Sires

Member of Congress

Quan Sices

DONALD M. PAYNE, JR. 10th District, New Jersey

COMMITTEE ON HOMELAND SECURITY
SUBCOMMITTEE ON EMERGENCY PREPAREDNESS,
RESPONSE AND RECOVERY
CHAIRMAN
SUBCOMMITTEE ON BORDER SECURITY.

FACILITATION, AND OPERATIONS

COMMITTEE ON TRANSPORTATION

AND INFRASTRUCTURE

SUBCOMMITTEE ON AVIATION

SUBCOMMITTEE ON HIGHWAYS AND TRANSIT

SUBCOMMITTEE ON RAILROADS,
PIPELINES AND HAZARDOUS MATERIALS

Congress of the United States House of Representatives Washington, DC 20515-3010

WASHINGTON OFFICE 103 CANNON HOUSE OFFICE BUILDING WASHINGTON, DC 20515 (202) 225-3436

DISTRICT OFFICES

LEROY SMITH PUBLIC SAFETY BUILDING
60 NELSON PLACE, 14TM FLOOR

NEWARK, NJ 07102
(973) 645-3213

253 MARTIN LUTHER KING DRIVE JERSEY CITY, NJ 07305 (201) 369-0392

> 1455 LIBERTY AVENUE HILLSIDE, NJ 07205 (862) 229-2994

July 15, 2020

The Honorable Catherine R. McCabe Commissioner New Jersey Department of Environmental Protection 401 East State Street Trenton, New Jersey 08608-1501

Dear Commissioner McCabe:

I write to express my strong support for the VW Beneficiary Mitigation Plan pilot project proposal submitted by Port Newark Container Terminal (PNCT) to the New Jersey Department of Environmental Protection (NJDEP). PNCT is requesting \$735 thousand in trust funds from the State of New Jersey to complement \$1.715 million of private funds for the procurement and construction of two new hybrid-electric straddle carriers. The total project cost is \$2.45 million (\$2.25 million in equipment plus \$200 thousand in infrastructure), of which PNCT will fund 70 percent.

As you may know, PNCT is proposing a pilot project to demonstrate the combined NOx emission reduction capabilities and sustained operational performance capabilities of the newest, state-of-the-art, ultra-low emission, advanced hybrid-electric straddle carrier model. If selected, the PNCT pilot project would incentivize the replacement of older, dirtier diesel straddle carrier fleets with new hybrid-electric models. To carry out its pilot demonstration project, PNCT proposes to replace two 2004 diesel engine straddle carriers with ultra-low-emission, state-of-the-art hybrid-electric models to facilitate 12,000 annual moves while reducing harmful emissions and improving air quality in the Essex County region.

PNCT is the most utilized terminal per acre in the Port of New York and New Jersey, handling more than 1.5 million twenty-foot equivalent units annually (20 percent of the Port of New York and New Jersey's container volumes) and supporting nearly 13,000 direct and indirect jobs throughout the State of New Jersey. Over the past nine years, PNCT has invested \$375 million of a total of \$500 million in capital improvements required by 2029 under its lease agreement with the Port Authority of New York and New Jersey. These improvements increase productivity, efficiency, and environmental resiliency of the marine terminal. They also expand intermodal capability and capacity to carry increasing volumes of inbound and outbound container freight.

The purchase of these two hybrid-electric units would be the first in the United States and would serve as a foundation toward PNCT eventually upgrading the entire fleet to these units well ahead of the Environmental Protection Agency suggested timeframe per its National Port Strategy Assessment. Because the proposal would increase productivity at the marine terminal and benefit the local environment, it merits my strong support and I respectfully request NJDEP give it full and favorable consideration.

Sincerely,

Donald M. Payne, Jr. Member of Congress



Mayor Newark, New Jersey

July 14, 2020

The Honorable Catherine R. McCabe Commissioner New Jersey Department of Environmental Protection 401 East State Street Trenton, New Jersey 08608-1501

Re: Port Newark Container Terminal Pilot Project Proposal for Volkswagen (VW) Mitigation Trust Funds

Dear Commissioner McCabe:

I write to express my strong support for the VW Beneficiary Mitigation Plan pilot project proposal submitted by Port Newark Container Terminal (PNCT) to the New Jersey Department of Environmental Protection to reduce harmful emissions of nitrogen dioxide (NO2) and diesel particular matter which disproportionately affects the health of children and adults in the City of Newark.

As you may know, PNCT is proposing a pilot project to demonstrate the combined NOx emission reduction capabilities and sustained operational performance capabilities of the newest, highest state-of-the-art, ultra-low emission, advanced hybrid-electric straddle carrier model. If selected, the PNCT pilot project would incentivize the replacement of older, dirtier diesel straddle carrier fleets with new hybrid-electric models. To carry out its pilot demonstration project, PNCT proposes to replace two 2004 diesel engine straddle carriers with ultra-low-emission, state-of-the-art hybrid-electric models to carry out 12,000 annual moves. PNCT is requesting \$735,000 in the State of New Jersey Trust Funds to complement \$1.715 million of private funds for the procurement and construction of two new Hybrid-Electric Straddle Carriers. Of note, the total project cost is \$2.45 million (\$2.25 million in equipment plus \$200K in infrastructure), of which PNCT will fund 70%.

PNCT is the highest-utilized terminal per acre in the Port of New York/New Jersey, handling more than 1.5 million TEU annually (20% of PoNYNJ's container volumes) and supporting nearly 13,000 direct and indirect jobs throughout the State of New Jersey. Over the past nine years, PNCT has invested \$310-million of a total of \$500-million in capital improvements

required by 2029 under its lease agreement with PANYNJ. These improvements increase productivity, efficiency, and environmental resiliency of the marine terminal and expand intermodal capability and capacity to carry increasing volumes of inbound and outbound container freight.

The purchase of these two Hybrid-Electric units would be the first in the United States and would serve as a foundation towards PNCT, eventually upgrading the entire fleet to these units well ahead of the EPA suggested timeframe as per the EPA's National Port Strategy Assessment paper. I have full confidence that PNCT's pilot demonstration project proposed for VW Mitigation Trust funding assistance will improve air quality for the citizens of the City of Newark. Therefore it merits both my strong support and the thoughtful consideration of NJDEP.

Sincerely

Ras J. Baraka

Mayor

Nicholas A. Chiaravalloti Majority Whip Assembly, 31^{st.} District Parts of Hudson County 836 Broadway Bayonne, NJ 07002

Tel: 201 471 2347 Fax: 201 417 23500

Email: AsmChiaravalloti@njleg.org



Committees
Human Services, Vice-Chair
Commerce and Economic Development
Judiciary

June 17, 2020

The Honorable Catherine R. McCabe Commissioner New Jersey Department of Environmental Protection 401 East State Street Trenton, New Jersey 08608-1501

Re: Port Newark Container Terminal Pilot Project Proposal for Volkswagen (VW) Mitigation Trust Funds

Dear Commissioner McCabe:

I am writing to express my support for the VW Beneficiary Mitigation Plan pilot project proposal submitted by Port Newark Container Terminal, LLC (PNCT) to the New Jersey Department of Environmental Protection to replace two 2004 full-diesel straddle carriers with two state-of-the-art, ultra-low emission, advanced hybrid-electric straddle carriers to carry out 12,000 annual moves while reducing harmful emissions and improving air quality in the surrounding Hudson County-Essex County region, including Newark, Jersey City and my own home community of Bayonne. PNCT is requesting \$735,000 in VW Trust grant funding to support the \$2.45-million project, representing a 70% private funding share.

The issue of adverse public health impacts from NOx and diesel particulate emissions from road and non-road mobile sources is of great importance to me because my Assembly District includes Hudson County, which NJ Department of Health data confirms as having the highest ambient air concentration of diesel particulate emissions in the entire State, and my home community of Bayonne, which is the site of one of two State air monitors where ten exceedances of air quality standards governing NO2 have been recorded between 2010 and 2018. Adding to my concerns is a recent National Center for Economic Research working paper report focused on the negative short-term and long-term impacts of NO2 and diesel particulate emissions on academic achievement and behavior of elementary and secondary public-school students, including low-income minorities.

It is my understanding that there are currently no operationally-reliable all-electric straddle carriers being produced anywhere in the world. PNCT proposes a pilot project to demonstrate the combined NOx/diesel particulates emission-reduction capabilities and sustained operational performance capabilities of the newest, highest state-of-the-art, ultra-low emission, advanced hybrid-electric straddle carrier model. In terms of mitigation strategies, the PNCT pilot project would incentivize hybrid-electric replacement of diesel straddle carrier fleets rather than keeping

[Type here]

old, full-diesel strads in service until a full-electric straddle carrier model is designed and produced somewhere in the world at some future time.

Bayonne's air quality also matters to PNCT's CEO, who is a lifetime resident of the community, along with his parents, siblings and extended family. Under his leadership, PNCT has invested more than \$300-million to date on capital improvements and new equipment to increase productivity, efficiency and environmental resiliency of the marine terminal, and expand intermodal capability and capacity to transport an ever-increasing volume of inbound and outbound container freight by on-terminal rail connection, short sea shipping and trans-Hudson River barges, taking more than 700 daily drayage truck trips off of local roads, bridges and highways in northern New Jersey. PNCT is now the highest-utilized terminal per acre in the Port of New York/New Jersey, handling 20% of the port's container volumes (1.5-million TEU annually), and supporting nearly 10,000 jobs throughout the State of New Jersey. The two new advanced hybrid-electric straddle carriers to be deployed for PNCT's proposed pilot project will become the cornerstone units of PNCT's continuing push to upgrade to the latest in ultra-low emissions container handling equipment.

I believe that PNCT's proposed pilot demonstration project will make an important contribution to reducing harmful NOx and diesel particulate emissions from New Jersey's ports , and therefore it merits my support and very thoughtful consideration by NJDEP.

Sincerely yours,

Nicholas A. Chiaravalloti New Jersey Assembly District 31



OFFICE OF THE COUNTY EXECUTIVE

Hall of Records, Room 405, Newark, New Jersey 07102 973.621.4400 --- 973.621.6343 (Fax) www.essexcountynj.org

Joseph N. DiVincenzo, Jr.

Essex County Executive

July 14, 2020

The Honorable Catherine R. McCabe Commissioner New Jersey Department of Environmental Protection 401 East State Street Trenton, NJ 08608-1501

Dear Commissioner McCabe:

I write to express my strong support for the VW Beneficiary Mitigation Plan pilot project proposal submitted by Port Newark Container Terminal (PNCT) to the New Jersey Department of Environmental Protection. PNCT is requesting \$735,000 in State of New Jersey Trust Funds to complement \$1.715 million of private funds for the procurement and construction of two new Hybrid-Electric Straddle Carriers. Of note, the total project cost is \$2.45 million (\$2.25 million in equipment plus \$200 million in infrastructure), of which PNCT will fund 70 percent.

As you may know, PNCT is proposing a pilot project to demonstrate the combined NOx emission reduction capabilities and sustained operational performance capabilities of the newest, highest state-of-the-art, ultra-low emission, advanced hybrid-electric straddle carrier model. If selected, the PNCT pilot project would incentivize the replacement of older, dirtier diesel straddle carrier fleets with new hybrid-electric models. To carry out its pilot demonstration project, PNCT proposes to replace two 2004 diesel engine straddle carriers with ultra-low-emission, state-of-the-art hybrid-electric models to carry out 12,000 annual moves while reducing harmful emissions and improving air quality in the Essex County region.

PNCT is the highest-utilized terminal per acre in the Port of New York/New Jersey, handling more than 1.5 million TEU annually (20% of PoNYNJ's container volumes) and supporting nearly 13,000 direct and indirect jobs throughout the State of New Jersey. Over the past nine years, PNCT has invested \$310 million of a total of \$500 million in capital improvements required by 2029 under its lease agreement with PANYNJ. These improvements increase productivity, efficiency, and environmental resiliency of the marine





terminal and expand intermodal capability and capacity to carry increasing volumes of inbound and outbound container freight.

The purchase of these two Hybrid-Electric units would be the first in the United States and would serve as a foundation toward PNCT eventually upgrading the entire fleet to these units well ahead of the EPA suggested timeframe as per the EPA's National Port Strategy Assessment paper. Therefore, it merits both my strong support and the thoughtful consideration of NJDEP.

Sincerely,

Joseph DiVincenzo, Jr.
Essex County Executive



June 22, 2020

State of New Jersey
Department of Environmental Protection
P.O. Box 420
Trenton, NJ 08625-0420

RE: Letter of Support for the PNCT Straddle Carrier Replacement Program

To Whom It May Concern,

The Port Authority of New York & New Jersey (PANYNJ) is pleased to support the Port Newark Container Terminal's submission to the New Jersey Department of Environmental Protection for funding to complete one of the region's first deployment of hybrid-battery electric straddle carriers.

We are very interested in following the results of the proposed project. By supporting terminal operators at Port of New York and New Jersey to demonstrate new technologies in numbers significant enough to make an appreciable impact on emissions, the data generated will provide a valuable technical and economic validation.

Again, we are excited about the proposed project and look forward to following its progress.

Sincerely,

Charles Liou

Manager, Environmental Initiatives

Port Department

Port Authority of New York & New Jersey

4 World Trade Center

150 Greenwich Street, 17th Floor

New York, NY 10007