



2021 ENVIRONMENTAL SUSTAINABILITY REPORT

NET ZERO BY 2040

Our goal is to reduce our contribution to global climate change and to protect our ocean and marine resources. We have pledged to dramatically reduce our carbon emissions (commonly referred to as carbon dioxide equivalents, CO₂e).

SUSTAINABLE DEVELOPMENT GOALS

INDUSTRY, INNOVATION,
AND INFRASTRUCTURE



CLIMATE
ACTION



LIFE
BELOW WATER



CEO MESSAGE

The Port of Virginia® moves the goods that help drive the economies of our state and the nation. To ensure that we remain an economic engine, we are investing billions of dollars to create one of the fastest-growing and most technologically-advanced port complexes in the world. Now, we are taking this world-class operation and coupling it with a twenty-first century approach to sustainability: **The Port of Virginia is committed to becoming carbon neutral by 2040.**

Through this effort we will reduce our contribution to global climate change, protect our ocean and marine resources and become a better neighbor. Our commitment aligns us with some of the world's leading retailers, manufacturers, suppliers and multinational corporations. It is also a strategic business decision: consumers worldwide are demanding clean – green -- supply chains and our work will put us at the forefront of this change.

Last year, we quietly mapped-out the long-term goal of creating a port that no longer relies on fossil fuels to power its equipment or keep the lights on. As we strategized, we found that our sustainability priorities aligned with three of the United Nations' Sustainable Development Goals: 1) Industry, Innovation, and Infrastructure 2) Climate Action and 3) Life Below Water. Though fortuitous, it was not our intention. Rather, we want to do what is right for this planet.

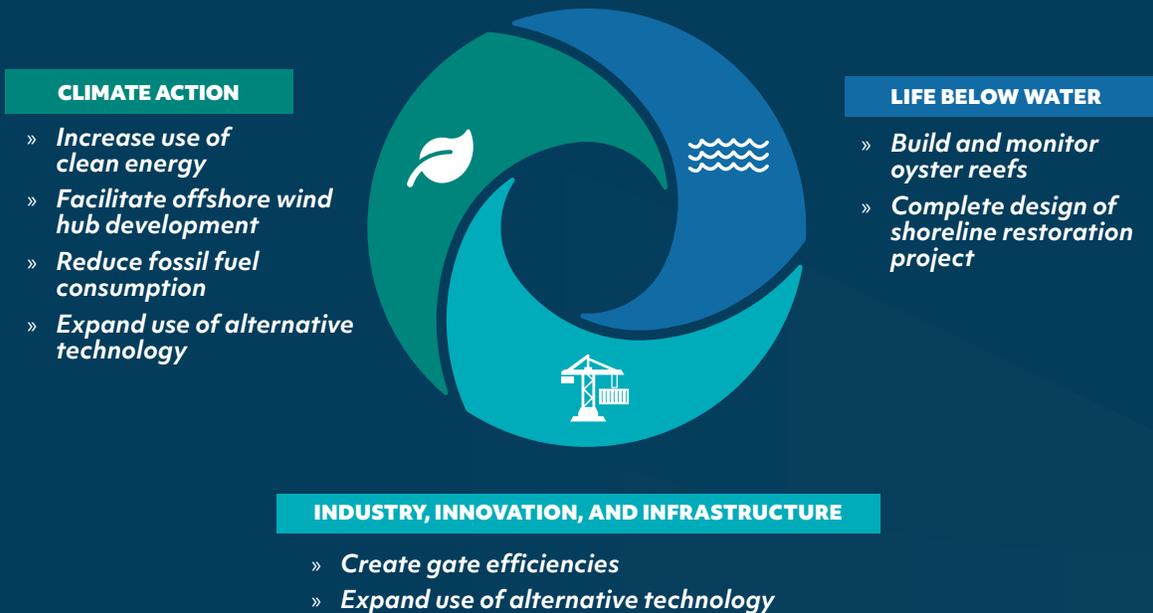
Becoming carbon neutral by 2040 is an important endeavor that requires a long-term commitment. Fortunately, we have a head start. Almost five years ago we began to electrify our operation, audit carbon emissions, replace aging equipment with "greener" machines and make greater use of technology. As a result, more than one-third of the equipment we use on terminal today is electric and our use of technology is driving efficiency. This is a start that we're proud of, but we know we can do better.

Reaching and maintaining carbon neutrality is a perpetual effort requiring teamwork, innovation and an open-minded approach. The Port of Virginia is a leader in trade and is positioning itself to become a leader in the field of sustainability.

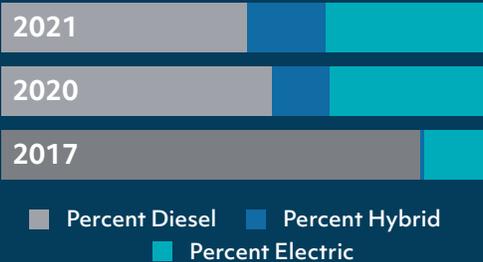
In the following 2021 *Environmental Sustainability Report*, you'll see what we have achieved and where we are headed. We welcome your feedback and ideas, and appreciate your support.

Sincerely,
Stephen A. Edwards

ALIGNMENT OF PORT ACTIONS WITH SUSTAINABILITY GOALS



NET ZERO PROGRESS

Target	Progress	Action	Status
	<p>Total Fuel Consumption per TEU</p> 	Reduce fuel consumption	 <p>42% reduction in fuel since 2017</p>
	<p>Total CO₂e MT per TEU</p> 	Reduce Scope 1 & 2 GHG emissions	 <p>30% reduction in GHG emissions since 2017</p>
 	<p>Percent Electric Equipment</p>  <p>■ Percent Diesel ■ Percent Hybrid ■ Percent Electric</p>	Evaluate and deploy cleaner technology	 <p>In 2021, 33% of equipment are electric and 16% are hybrid</p>
 	<p>Virginia International Gateway Turn Time, minutes</p> 	Maintain best-in-class 50 minute turn time	 <p>Turn time is 47.1 minutes</p>
 	<p>Norfolk International Terminals Turn Time, minutes</p> 	Maintain best-in-class 50 minute turn time	 <p>Turn time is 40.8 minutes</p>

TEU: Twenty-foot equivalent unit GHG: Greenhouse gas emissions CO₂e: Carbon dioxide equivalent MT: Metric Tonnes

SUMMARY OF ACHIEVEMENTS



58% OF SHUTTLE AND STRADDLE CARRIERS ARE HYBRID

Reducing fuel consumption results in reduced CO₂e emissions.



RICHMOND MARINE TERMINAL BARGE SERVICE

Less trucks equals lower CO₂e emissions. Since 2017 the port has increased container moves by barge by 67%.

Working with our partners to source

100% CLEAN ENERGY

for our terminals by 2032.



THE PORT OF VIRGINIA®

LOOKING FORWARD

» Pilot programs bringing electric yard tractors and forklifts to the Port.



PORTSMOUTH MARINE TERMINAL OFFSHORE WIND HUB

The Port is an active partner in the development of clean energy in our region by summer of 2025.

COMMITMENT TO ENVIRONMENTAL EXCELLENCE AND PARTNERS

- » Chesapeake Bay Foundation
- » Elizabeth River Project
- » United States Army Corps of Engineers
- » United States Environmental Protection Agency
- » United States Maritime Administration
- » Virginia Department of Environmental Quality
- » Virginia Marine Resources Commission

RICHMOND BARGE SERVICE



EMISSIONS REDUCTION

Our barge service connects terminals in the Hampton Roads region to points inland, driving commerce while reducing truck traffic and emissions on area roads. Using barges results in 35% less oxides of nitrogen and 60% less CO₂ emissions as compared to moving freight by truck.

FLEET CONVERSION TO HYBRID SHUTTLE CARRIERS



EMISSIONS REDUCTION

Thanks to Environmental Protection Agency Diesel Emissions Reduction Act funding, we continue to replace legacy diesel straddle carriers with hybrid shuttle carriers at our two largest container terminals. Each hybrid shuttle results in 90% lower NOx emissions and 50% lower diesel fuel consumption compared to a traditional diesel unit.



ENERGY INITIATIVES



Working with our partners to source 100% clean energy for our terminals by 2032. Unfinished blades will be assembled, bonded, sanded, and coated to become finished blades ready for installation at Portsmouth Marine Terminal.



Portsmouth Marine Terminal Offshore Wind Lease Areas

CLEAN WATER PROJECTS



Members of The Port of Virginia's Maintenance Staff at Norfolk International Terminals had a great idea in 2021, construct an oyster reef in a tidal water body on terminal... it was a success! For more than 5 years the port has been monitoring over 15 acres of oyster bed in the Elizabeth River. This groundbreaking research can now be used to inform others in the watershed.



The Port of Virginia, working with its partners, is planning to restore approximately 3,600 feet of shoreline at the Norfolk International Terminals. The Port is currently completing designs to include living shoreline measures.

INNOVATION AND INFRASTRUCTURE INITIATIVES



33% OF TOTAL EQUIPMENT ARE ELECTRIC.

New electric equipment allows the Port to retire older, higher polluting diesel equipment, resulting in reduced CO₂e emissions by relying on cleaner power from the grid.

GATE EFFICIENCIES AND RESERVATION SYSTEM AUTOMATION.

The Port has been implementing automation and truck reservation systems across our terminals, achieving faster turn times, reducing truck idling times, and lowering emissions by at least 20%.



LOOKING FORWARD





www.portofvirginia.com



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