



Innovations and Efficiencies

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SSA Marine



A leading independent marine terminal operator dedicated to creating safe, efficient, and sustainable operations that shape the future of global commerce.

Expertise at scale

The operator of container, conventional cargo, cruise, and intermodal rail facilities across the United States, México, Canada, Central America, South America, and Asia.

The largest container terminal operator in North America

21 long-term leases and concessions and six stevedoring container terminals with a strong regional focus on the Americas. Strategic port operating locations include the U.S. West Coast, Florida, Canada, México, Panamá, Chile, Colombia, and Vietnam.

The leading cruise terminal operator & service provider in North America

A dedicated cruise division committed to innovation, port development, and exclusive service integrations that offer unique solutions to the cruise industry. Our long-term partnerships with major cruise lines and port partners are a testament to our focus on delivering operational excellence while advancing safety and sustainable initiatives at each location.

Best-in-class conventional cargo handling services

We leverage our local expertise and global best practices to provide our bulk and breakbulk customers with the safest and highest-quality cargo handling services and solutions.



Sustainability: we are today....



200+

Zero emission vehicles/cargo handling equipment operating



1.6M kWh+

Of solar energy generated across Carrix



11+

Carrix locations that have transitioned to LED lighting



\$201M+

Of funding awarded for projects

...and where we are going:



2024

SSA Marine/Carrix achieved its first emissions reduction target in 2024, **reducing company wide emissions by 28%** from 2021 baseline.



2030

Reduce emissions by 35% from 2022 baseline.



2035

Reduce emissions by 50% from 2022 baseline.

Sustainability Strategy

We aim to build a thriving business in service of a more prosperous and sustainable global economy. Our approach is focused on **fostering strong partnerships** with stakeholders that **support decarbonization**, long-term **business resilience**, and the safety and well-being of our **people and communities**.

LED Lighting Upgrades

- ✓ Better lit, safer operations
- ✓ ROI in 1-2 years
- ✓ Reduce Scope 2 emissions (electricity)

Equipment Electrification

- ✓ Newer equipment reduces maintenance costs
- ✓ Operators enjoy quieter, cleaner ride
- ✓ Grants/partnerships can offset added costs

Renewable Diesel

- ✓ Reduce Scope 1 emissions (fuel)
- ✓ Drop-in fuel requires no additional configuration
- ✓ “Bridge solution” ahead of electrification

Project Highlight: Zero Emission Forklift Deployment



Outer Harbor (Berth 55)

- Outer Harbor is Carrix's first facility with **100% zero-emission (ZE) cargo handling equipment**
- **44 electric Hyster forklifts** used in **2025 operations**

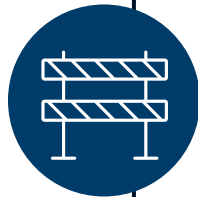


Environmental Benefits



- Reduction of **44,000 gallons/year of propane.**
- Tailpipe emissions reductions of **264 MTCO₂e/year.**
- This shift reduces emissions and creates a cleaner, safer, and more sustainable workplace.

Operational Impacts



- Forklifts **recharged during lunch breaks**, charging from 20% to 100% in under 2 hours
- Transition **improved efficiency** with greater reliability, less downtime, reduce noise, fewer delays and breakdowns

Cost Considerations



- Total project cost was **\$2.92 million** (\$198,000 covered by **CORE voucher funding**)
- Forklifts qualify for DWP's Green Fleet, offering **lower electricity rates** and **utility cost savings**



Equipment Deployment Successes and Challenges:

- The Ports of Stockton and West Sacramento locations were **pioneers and early adopters of ZE high-capacity forklifts**, working in partnership with SSA to deploy equipment and charging infrastructure.
- Early projects provided important lessons learned and opportunities to further innovate.



What makes the port sector unique for ZE deployments?

Marine terminals are space constrained.

Operational requirements can limit charging opportunities.

Terminal infrastructure requires utility upgrades.

Close collaboration and partnership with port authorities.



Importance of partnerships for ZE project success:

- SSA is a key participant in the **EPA Clean Ports Program**, which will fund over 100 pieces of zero emission cargo handling equipment at locations in Oakland, Hueneme, San Diego, Stockton, and Baltimore.
- SSA has developed **master plans and design efforts** with port partners to set pathway for ZE equipment transition.
- Federal, state, and local grant funding, LCFS incentives, and **public-private partnerships play an important role in deploying new equipment.**
- **Collaboration with local utilities** is essential to scale up power capacity at terminal locations.



Check out our 2024 Sustainability Report!
<https://www.ssamarine.com/sustainability-report-2024>



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