

Carbon Neutral EcoCreation Plan Turns Cruise Ship Plastic Waste Into Marine Fuel

Cutting-edge South Korean waste-to-fuel technology transforms cruise plastic waste into usable energy

FORT LEE, NJ, UNITED STATES, January 8, 2026 /EINPresswire.com/ -- Carbon Neutral LLC today announced strategic collaboration discussions with EcoCreation LTD, a South Korea-based waste to Fuel technology company specializing in advanced plastic-to-oil chemical pyrolysis systems, to deploy port-based infrastructure addressing hard-to-recycle plastic waste generated by cruise ship operations across the Caribbean.



Waste Plastic onboard Cruise Ship

Cruise ships operate as floating cities, producing substantial volumes of solid waste that must be managed in compliance with international maritime and port-state regulations. Plastics—particularly mixed, contaminated, and low-value packaging materials—remain among the most challenging waste streams due to limited mechanical recycling options and strict prohibitions on ocean discharge. The Carbon Neutral-EcoCreation initiative is designed to support compliant waste diversion by converting eligible plastic waste into usable outputs through advanced recycling technologies, operated under applicable permits and environmental controls.

The Caribbean is the world's most active cruise market, accounting for a significant share of global cruise itineraries and passenger traffic. High vessel density, frequent port calls, and large passenger volumes create recurring waste-management demands at regional ports, making the region well suited for port-based advanced recycling infrastructure tailored to maritime operations.

Puerto Rico has been identified as the initial deployment location due to its role as a major Caribbean cruise hub, its U.S. regulatory framework, and its established port and logistics infrastructure. The island serves as a regular port of call for major cruise operators, including

Royal Caribbean International, Carnival Cruise Line, Norwegian Cruise Line, MSC Cruises, Disney Cruise Line, Celebrity Cruises, and Princess Cruises. Following initial implementation, Carbon Neutral LLC plans to expand operations to additional high-traffic Caribbean cruise ports, subject to commercial agreements, permitting, and site readiness.

The initiative aligns with international maritime waste regulations, including the International Maritime Organization's MARPOL Annex V, which prohibits the discharge of plastics at sea and requires vessels to retain plastic waste for handling at approved port reception facilities. By focusing on port-based processing, the platform is designed to complement existing MARPOL compliance frameworks while improving end-of-life outcomes for plastics landed at port.

Over the next decade, Carbon Neutral LLC plans to deploy up to 120 pyrolysis processing facilities at strategic Caribbean ports. Subject to permitting, financing, and final agreements, these facilities are designed to process up to 300,000 metric tons of plastic waste annually. At an estimated 50% yield, this capacity could generate approximately 150,000 metric tons of pyrolysis oil per year, equivalent to roughly one million barrels annually, depending on feedstock composition and operating conditions.

At commercial scale, pyrolysis oil is intended to serve as a functional substitute or blendstock for residual marine fuels, including Bunker C. When upgraded or blended to meet applicable fuel specifications, it may help offset fossil-derived marine fuels while supporting circular-economy objectives within maritime fuel supply chains.

EcoCreation LTD has deployed multiple commercial plastic-to-oil facilities, demonstrating stable, continuous operation under real-world industrial conditions. Its chemical pyrolysis platform is among the most mature and field-proven systems capable of processing mixed plastic waste streams unsuitable for conventional recycling.

"This partnership reflects a practical, infrastructure-driven response to one of the maritime industry's most persistent waste challenges," said Walter Hong, CEO of Carbon Neutral LLC. "By focusing on port-based solutions and long-term investment, we aim to deploy durable infrastructure that operates at real scale, supporting compliance and improved waste-diversion outcomes for cruise operators and port communities across the Caribbean."

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