

PortMiami, cruise lines pledge to expand technology to cut emissions from ships

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Miami-Dade County is upping its commitment to shore power at PortMiami, a technological upgrade that allows ships to plug into the local grid at port instead of continuing to burn fuel—and spew water and

air pollution—in downtown Miami.

Last year, Mayor Daniella Levine Cava committed the county to build one [shore](#) power hookup at the Carnival terminal by fall 2023.

Now, PortMiami Director Hydi Webb told the Miami Herald, those ambitions have expanded. The county is now aiming to build five shore power hookups at PortMiami that will allow three [ships](#) to be plugged in simultaneously.

"We are going to be the first [port](#) on the eastern coast that will be able to plug in multiple ships at the same time," Webb said. "We are extremely excited about bringing shore power to the port."

The new shore power hookups will be installed at five terminals: Carnival Cruise Line, MSC, Norwegian Cruise Line, Virgin and Royal Caribbean.

Becky Hope, head of sustainability for the Port, said the design work is done and the county plans to look for bidders this summer.

"Our priority and the mayor's priority is to have this open and operating by winter 2023," she said. "We're really in an all-out effort to get this done."

The county first announced plans to build shore power at PortMiami last year after a Miami Herald report detailed how Miami-Dade County had pledged to install the technology for a decade but hadn't followed through. The Herald analysis also found that more than a dozen shore-power-enabled ships had visited PortMiami hundreds of times in recent years, mirroring a trend in the shipping industry.

In a major announcement at a Miami shipping conference this week, the

global industry group for cruising, Cruise Lines International Association, committed to having all of its cruise ships shore-power enabled by 2035.

'The industry is invested'

All five brands involved in the PortMiami project say they will have ships with shore power technology. Carnival says it's converting one ship to be shore-power capable and that it expects to have at least two ships scheduled to regularly call in PortMiami by the time shore power is up and running. Royal Caribbean has eight ships with shore power and Norwegian has nine. MSC says all of its ships built after 2017 have shore power capabilities, a grand total of seven. Newcomer Virgin Voyages' ship is shore-power capable, along with its three ships that are still being built.

"MSC is investing a huge amount in Miami," Pierfrancesco Vago, the former CEO and current chairman of MSC Cruises, a Geneva-based brand that is building a new terminal at PortMiami, which will be the largest cruise terminal in the country when its done in fall 2023. "Our investment is long term, so that's why we're investing in shore power. From the political side, the county is very much at the table and then I'm going that direction."

One unsettled aspect of this plan: the cost.

Estimates for installing shore power at the Carnival terminal alone topped \$10 million—\$2 million of which was from an EPA grant and the rest from Miami-Dade. Hope confirmed that the county has a back-of-the-envelope calculation for the expanded project but declined to share it with the Miami Herald.

While the land-based part of the technology is largely up to

governments, Vago, the chairman of MSC, said the company is willing to spend on the project.

"It's not a question of money at MSC," Vago said. "The industry is invested to ensure there will be this technology."

PortMiami is one of the biggest moneymakers in the county, bringing in north of \$300 million in revenue every year. In the last decade, Miami-Dade has spent more than \$700 million to build five new cruise terminals and given \$2 million to \$9 million rewards to cruise lines that bring in lots of passengers.

A powerful tool to slash emissions

Most cruise ships run on heavy fuel oil, among the dirtiest sources of energy in the world. Even after a run through onboard air filters, the fumes contain chemicals toxic to human health, as well as greenhouse gases that cause climate change. Miami's famous offshore breezes largely do away with human health risks, but the [carbon dioxide emissions](#) still linger in the atmosphere. They also add up.

While Miami-Dade does not single out the Port's emissions in its Climate Action Strategy, an EPA shore power calculator estimated it produces about the same carbon emissions as a city the size of Pinecrest, about 7,000 homes.

The county wants to slash PortMiami emissions 25% by 2030, and shore power could be the biggest step toward that goal. That same EPA calculator suggested that if all ships at PortMiami switched to shore power it could cut carbon dioxide emissions 35%.

Dan Hubbell, shipping emissions campaign manager for Ocean Conservancy, said cruise ships are uniquely suited for seeing the biggest

results from shore power since they spend so much time docked at port with their engines on. He said cruise ships use about half their fuel sitting at port, when they could be connected to a cleaner power grid instead.

"It's one of those things where there really is no good excuse not to be installing shore power anywhere and everywhere right now," Hubbell said. "It's a net good."

However, Hubbell cautioned that shore power alone wasn't the solution to the [shipping industry](#)'s giant carbon footprint. The industry has been exploring solutions like alternate fuels and more efficient designs to help slim down emissions.

"[Shore power]is not necessarily going to be 'oh whoa we fixed it', but in this sector... arguably we should have been looking at this a decade ago," he said. "If we could get a lot of ships plugging in the 2020s that sets us up nicely for the next step."

Port Everglades explores shore power

PortMiami's closest competitor, Port Everglades in Fort Lauderdale, also recently announced it will pay Florida Power & Light \$495,000 to explore adding shore power to their eight cruise ship berths and identify what kind of upgrades the port's electricity grid substation will need to support the extra energy. A 2017 EPA report suggested that switching to shore power could cut carbon emissions 20% at Port Everglades, by far the most effective strategy.

"One of the great topics today is how do we as an industry limit our carbon footprint and become more environmentally sensitive?," Jonathan Daniels, the port director at Port Everglades, said.

Daniels said the port didn't have a timeline for completion yet, but they hope to first get shore power hookups in three berths, one for each line they serve: Royal Caribbean, Carnival Corporation and Disney Cruise Line. He said that after they got a better idea of the cost of the project from the FPL study, they would apply for federal and state grants that are designated for building more sustainable ports.

"We're looking at the fact that not only are we a part of the environment, but that the environment is a part of what we do every day," he said, noting that when the port first began looking into shore power in 2008, ships were seldom equipped with shore power hookups.

"Guess what? The future is here," he said. "It's time for us, as well as other ports, to truly look at the strategy to implement shore power."

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