



## ENVIRONMENTAL CATEGORY

2021 Annual Conference &amp; Trade Show

## FLORIDA POWER & LIGHT COMPANY

### FPL's Cocoa Beach to Patrick 138kV: Rising from the Depths of the Banana River

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With a service territory that encompasses many environmentally sensitive wetlands, fragile coastal ecosystems and protected wildlife species, Florida Power & Light Company (FPL) makes environmental protection a key component in the design and construction of all its projects. FPL's *Cocoa Beach to Patrick 138kV: Rising From the Depths of the Banana River* project highlights FPL's use of innovation and best practices to upgrade a key portion of the energy grid while protecting water quality and wildlife and reducing FPL's footprint in a sensitive ecological habitat.

Originally installed in 1965 to support Patrick Air Force Base on the eastern coast of Central Florida, FPL's Cocoa Beach to Patrick 138kV transmission line was showing signs of deterioration. After being pounded by Hurricane Irma and Tropical Storm Emily during the intense 2017 hurricane season, the circuit was beyond repair and needed to be replaced. The cable replacement required diligent planning because the project is located in the Banana River Aquatic Preserve, a designated Outstanding Florida Waterbody. Adding to the challenge, the transmission line had both overhead and underground components that needed to remain in service throughout construction to provide redundancy for essential functions on the base, including the airport.

To accomplish the rebuild in an environmentally responsible manner, and protect the Banana River Aquatic Preserve, FPL fulfilled the following project goals:

- **Reduce Facility Footprint** – Construction decreased reliability exposure and helped safeguard the river by minimizing the number of facilities within the preserve. This was accomplished by updating the overhead platforms to self-supporting structures and finding unconventional methods to minimize impacts to only previously disturbed areas while repairing the existing underground conduit.
- **Pollution Prevention:** Heavy equipment for in-water work meant pollutants such as oil and heavy metals could be released into the ecosystem. FPL used turbidity control devices, secondary containment, routine equipment inspections and other industry best management practices to prevent inadvertent releases.
- **Wildlife Protection:** The project's coastal location provides habitat for many protected species. The site is designated as a critical manatee habitat and the Air Force base has historic scrub-jay activity near the





project. Other protected species encountered during the underwater surveys included Atlantic bottlenose dolphins and sea turtles. The site is also home to a variety of avian species such as anhinga, double-crested cormorant and brown pelicans. FPL used extraordinary techniques to protect local wildlife.

The ability to reduce the facility footprint, prevent pollution and protect wildlife demonstrates FPL's ability to develop unconventional design and construction strategies to overcome many challenges and achieve environmental stewardship.