

RELAY

FLORIDA'S ENERGY & ELECTRIC UTILITY MAGAZINE

Volume 53 • Issue 1 • Fall 2020

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by OUC Communications

OUC journeymen (from left: Scott Goebel, Warren Bumgarner, Sean Carroll, Tim Best, Robert Shackelford and Jason May) worked on the SEC-Taft transmission corridor upgrade. *Not pictured: Line Supervisor Chuck Taylor.*

OUC – The *Reliable* One recently completed work on the Stanton Energy Center-to-Taft transmission corridor to improve grid reliability and its load capacity. Launched in October 2017, in response to growth in south Orlando, the project ended in May 2020, a month ahead of schedule.

Key upgrades to the 22-mile corridor include replacing an estimated 100 transmission poles with new galvanized steel cylindrical structures, reinforcing aging lattice transmission towers with steel and installing new 69-kV and 230-kV transmission lines. Substations along the corridor transform higher-voltage electricity to lower voltages that are distributed for residential and commercial use.

To improve load capacity and efficiency while reducing “line sag,” OUC used a relatively new transmission technology called Aluminum Conductor Composite Core (ACCC). Strung from poles and towers spread 800-1,100 feet apart and up to 150 feet tall, ACCC lines can carry higher loads more efficiently than the steel-core conductors they replaced. With higher loads, the older conductors’ steel-cores would heat up and expand, causing the lines to sag dozens of feet. The composite core material within the ACCC conductor is affected less by the heat caused by higher loads, and thus only sags several feet.

OUC also replaced some of the older transmission lines in this corridor with a bundled pair of high-strength, steel-core conductors that also resists sagging.

“With the upgrades complete, we can now flow more power through this corridor,” said Chuck Easterling, director of transmission engineering, construction and maintenance. “Due to growth in the Taft area west of the airport, we saw the need to make the corridor more resilient and enhance its reliability for delivering affordable power.”

Overseeing the project in the field, Chuck Taylor, line supervisor, led a six-member team of OUC line workers, all journeymen, and a crew with contractor Southeast Power. The crews made upgrades during spring and fall months when the lines could be de-energized. Meanwhile, other transmission lines kept power flowing to substations, so customers never lost electric service during the project.

Using bucket trucks with aerial lifts extending 125-150 feet, techs took down old transmission poles and erected new ones, strengthened aging lattice-style towers with steel supports to increase their life spans and pulled more than 500,000 feet of conductor and more than 100,000 feet of fiber communication wire.

“This was a big job and it was done successfully because of teamwork on many levels,” said Taylor. “Southeast Power’s crew deserves recognition for their contribution to this project. They worked hand-in-hand with us in the field.”

Added Tim Best, lead line technician: “Some sections we worked on took months to complete, and we could, on occasion, work three to six weeks straight without a day off. It was an intense project that required a lot of planning and coordination among engineers, our electric distribution teams and field crews.”

Duke Energy and Kissimmee Utility Authority tie into separate OUC substations on the SEC-Taft transmission corridor. ■