**BUXOM TV CHARACTER INSPIRES ANTI-LANDING DEVICE
FPL TAKES ON POWER-ZAPPING BIRDS**

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**DATE:**January 2, 2001
**PUBLICATION:**The Palm Beach Post
**EDITION:**FINAL
**SECTION:**BUSINESS
**PAGE:**5B

Florida Power & Light Co. knows that when it's time for an all-out assault on the enemy, you can't have anyone better in your corner than Xena, the legendary warrior princess.

That's not to say that anytime soon you're going to see TV star Lucy Lawless prowling the yards of South Florida, reading meters and looking for juice cheats. But the engineers at the utility have drawn inspiration from the TV character in going after a persistent problem that contributes to at least 20 to 30 percent of **FPL**'s power interruptions statewide. That problem is what the folks at **FPL** delicately call "streamers," which our avian friends deposit as they roost by the dozens on power poles. The droppings pass through the electrical current around the lines on the company's transmission poles and short-circuit it.

The failures are most common in the late evening hours and early mornings, and the problem is most persistent near landfills, the sugar cane fields of western Palm Beach County and in southern Brevard County. Bird excrement ranks with lightning strikes as the chief power-zapping culprit on the company's higher-voltage transmission poles, which are usually 65 to 95 feet tall and located along major highways.

"The more we looked into why outages were occurring, the more evidence we found that a greater percentage were caused by bird streamers," said Grace Couret, an **FPL** reliability engineer.

To tackle the issue, **FPL** formed a "bird team" in July 1999, made up of seven field supervisors and investigators from the company's transmission department, including three from Palm Beach County. The team started working with the Falcon Batchelor Bird of Prey Center at the Miami Museum of Science in August 1999, designing and testing "bird discouragers," devices intended to keep larger birds such as red-tailed hawks, bald eagles and osprey from certain parts of the pole.

That's where the Xena bit comes in.

The newest discourager in the **FPL** arsenal is a row of paired black polyethylene cones that make for a slippery landing surface. The cones are puckishly named "Xena brackets," in tribute to the TV heroine's bust-emphasizing costume. In March, **FPL** will spend about $72,000 - $800 a pole - to adorn 90 transmission poles in southern Brevard County with the brackets.

If the effort is successful over the following three to six months, **FPL**, a division of Juno Beach-based **FPL** Group, will order thousands more.

Tests are done on real birds to see whether the device works. On a recent day at the museum, visitors and members of the **FPL** team watched through a glass window as an osprey - injured in the wild and being rehabilitated at the museum - encountered one of the Xena cones. The bird flew over the cone, flapping and stretching its wings, but decided not to land, choosing a coneless pole nearby instead.

Brian Mealey, the museum's director of environmental services, said ospreys and other birds look for the highest structure when looking for a place to land.

**FPL** has paid the museum about $20,000 so far for its help with the project.

"The most important thing is to make sure we are not doing any harm to the species," Couret said. "You don't want to put something up there that can entrap the bird's wing where they couldn't get out."

Mealy agrees: "This partnership allows the environment or birds to be safe and the customers to get service."

Three months ago, **FPL** placed 1,000 single cones on tops of poles throughout the state, including about 20 on U.S. 1 in Juno Beach north of Donald Ross Road. All new poles in **FPL**'s service territory are being built with the single cone, Couret said.

The bird team, which does not yet have statistics on whether the devices are reducing short-circuits, continues to study other ideas that could be less expensive.

Jack Fountain, a bird team member and **FPL** lineman for the area from Jupiter to Vero Beach, spends nights studying birds with binoculars to see how they react to the Xena-coned poles. Fountain came up with a "roller" system that involves installing small pieces of PVC pipe on pole arms. Birds that try to land should find the rollers, like the cones, too slippery for staying put.

The rollers are still in the testing stage at the museum, but might not make it into the field. At least one bird has continued to sit on the pieces of pipe without rolling.

"To my amazement he sat right down on it. I was shocked. They really adapt to things and are pretty stubborn," said Fountain, a 20-year **FPL** veteran.

"But it's interesting work. It's more like being a detective trying to get all these clues to determine what is causing the outages. I don't think the common person realizes what it takes to keep their lights on."

Another design used by **FPL** is the "feather duster," which is a cluster of soft wires placed on certain parts of the poles. The feather dusters are being used on poles in the cane fields west of Lion Country Safari off Old State Road 80.

"We're constantly trying to find something that works better," Couret said. "We don't care if the birds stay on the poles all day long. We just don't want them on the areas over the wires."

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**Illustration:** PHOTO (B&W)

ED COX/The Associated Press

At the Miami Museum of Science, **FPL**'s Jack Fountain holds a great horned owl above a deterrent called 'Xena brackets.'