TREE ORDINANCES CAN HELP LOWER ELECTRIC BILLS
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Municipal ordinances are a good way to preserve urban tree canopies and lower city residents' summer electricity bills, a University of Florida (UF) study suggests. The study by UF geography researchers used a new method to compare the tree canopy in Gainesville, which has a strict tree ordinance, with nearby Ocala, which has a looser law.

It concluded Gainesville's canopy is more than twice as thick as Ocala's - and that the canopy's added shade is the likely reason that Gainesville residents spend an average of $126 less than their Ocala counterparts for power bills each year. "This study justifies in economic terms the existence of a tree ordinance," said Michael Binford, a UF associate professor of geography. The study compared the tree canopies in both cities through satellite and land based observations combined with computer analysis. Where past studies tended to measure just the top surface of the canopy, the UF method measured the top leaf coverage as well as leaves beneath.

To do that, researchers combined images of the cities' tree canopies from a satellite with ground based light measurements and analyzed the data with an "artificial neural network," an analytical computing technique that mimics the action of biological nerve systems. The analysis generated a number for the leaf area index, or square meters of leaves per square meter of ground, for each city. Gainesville's index was 4.61, while Ocala's was 2.13, meaning Gainesville has more than twice the leaf coverage of Ocala. Ryan Jensen, who did the study for his doctoral research, said a prominent reason for the difference is that Gainesville has far stricter rules than Ocala regarding tree removal.