



**FLORIDA PARK SERVICE
Lake Louisa State Park
CASE STUDY**



LOCATION: Clermont, Florida Keys USA

SYSTEM CONFIGURATION: SWH System – 20 Cabins
ProgressivTube® (PT–50) ICS Unit
40 Gal. Electric backup storage tank

System Performance:	574,000 Btu/deg [168 KWH/Day]
Total Domestic Hot Water Heating Loads:	Av/Day: 2000 Gal/Day
Water Heating Requirements:	Input Level: 75 deg F Max Temp Req: 140 deg F
Solar Provision (%) of Daily Load:	100% Daily Average Load 70% of Daily Maximum Load

Savings and Return on Investment

Energy (DHW) costs without Solar:	\$12,000	Annual Energy Savings:	\$10,200
DHW costs with Solar:	\$1,800	Payback Period:	5.1 Years
SWH System Costs:	\$52,000		

Project Background

Part of the Green Swamp Conservation Area, Lake Louisa State Park covers more than 4,000 acres and hosts one of 13 lakes in a chain connected by the Palatlakaha River. Overlooking Lake Dixie on a ridge, its 20 newly built cabins offer modern lodging facilities – including state-of-the-art solar water heating systems.

The Lake Louisa State Park Project is but one of many solar initiatives funded by Florida’s Department of Environmental Protection (DEP) under Governor Jeb Bush. DEP’s well-known conservation programs include Front Porch Sunshine, Sunshine Schools and Sunbuilt.

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These programs promote solar adoption by those who can best benefit from its superb economics (e.g. low-income families) as well as solar's inclusion in future Florida infrastructure (namely, home-building and schools).

Following this line of public education, in June 2003, the Energy Office within DEP provided funding to the Florida Park Service to use solar technology. The Park Service selected the park sites based on solar access and high visitor traffic. Lake Louisa State Park's 20 cabins were fitted with SWH units and opened for rental in July 2005.

Serving its mission to both protect the environment and educate the public on the role of solar power in energy conservation, the Florida DEP invested in Lake Louisa State Park (as well as other parks) to "bring solar before the mainstream". park visitors who rent the cabins can learn through first-hand experience that solar water heating is not only working technology but is completely transparent for their domestic water applications.

From the Park Service side, SWH allows lower park operating expenses associated with solar energy use supplanting fossil-fuel based electricity. This combined with ProgressivTube's 30-year product life expectancy and near zero maintenance costs, made ProgressivTube the truly "Natural" choice.