

# Case Study

## Miami International Airport has a clear approach to guaranteed energy efficiency

In 2008, FPL Services, LLC (FPLS) partnered with the Miami-Dade County Aviation Department to complete multi-phase initiatives to improve Miami International Airport's (MIA) energy efficiency and lighting, while reducing greenhouse gas emissions and costs. When all phases are completed the improvements are estimated to save the MIA more than \$39 million over the 13-year contract period.

### Project Scope

Complete an energy conservation analysis for millions of square feet of infrastructure (office, aircraft hangar, shop building and parking garages) and provide a comprehensive feasibility study of the existing equipment. Due to age, some systems had been augmented with temporary equipment which addressed the problem on a short-term basis, but added to the overall operating expense. Despite the need for improvements, capital budgets were limited and no funds were available to replace the aging equipment.

### Solutions

Provided an energy conservation analysis which included:

- » High efficiency lighting retrofits
- » Occupancy sensors
- » HVAC upgrades
- » Chiller upgrades
- » Water conservation measures
- » Irrigation controls



### Results

Miami-Dade County Aviation Department was able to make more than \$39 million worth of improvements with no up-front capital expense through performance contracting. FPLS' energy conservation measures saved energy, as well as improved passenger and employee safety and comfort, while reducing MIA's carbon footprint.

- » 38,194,000 kWh savings per year
- » 54 million pounds of greenhouse gas emissions reduced per year

## Benefits

### Saving Scarce Resources

Every kWh the Miami-Dade Aviation Department saves reduces carbon emissions and helps protect the environment. In addition to the kWh savings, the new 1.6 gallon-per-flush water closets installed use as much as 50 percent less water than the original equipment.

### No Up-Front Costs

The Miami-Dade Aviation Department partnered with FPLS to implement turn-key energy and water conservation upgrades for their facilities. Through a performance contract, the Miami-Dade Aviation Department was able to fully finance all upgrades for energy-efficient equipment and FPLS guarantees the savings over 10 years.

As an industry leading Energy Services Company (ESCO), FPLS offers performance based guarantees to help maintain or reduce O&M budgets, while upgrading facilities. For more than 20 years, FPLS has never missed a savings guarantee.

### Safety and Security

For airports, security is a top priority. From the audit stage to the final installations, FPLS accommodated each facility's specific needs to maintain safety precautions within the airport. FPLS team members were prescreened and worked fewer and longer shifts to limit disturbances and downtime in critical areas.



FPLS retrofitted 40,000 light fixtures throughout the facility



The airport's new 4,000-ton chiller

“Energy efficiency and environmental stewardship have been among MIA’s top priorities for quite some time. Without a doubt, our long-term partnership with FPL Services enables us to aggressively reduce our energy footprint, conserve valuable resources and manage the costs of running a major international airport more effectively.”

– José Abreu  
Aviation Director  
Miami-Dade Aviation Department

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