



# National Flight Academy

## Lighting-as-a-Service (LaaS) LED Retrofit

The National Flight Academy in Pensacola, Florida, is an immersive interactive learning experience for seventh through twelfth grade students. Situated on Naval Air Station Pensacola, The National Flight Academy welcomes thousands of students a year on board its simulated aircraft carrier, the USS Ambition. In this highly detailed and realistic environment, students are challenged to work together to solve complex problems using Science, Technology, Engineering and Math (STEM).

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*As a non-profit organization, The National Flight Academy relies on corporate and private donors to financially support the day to day operations that in turn promote the long term educational goals of the program.*

As a part of a continual effort to be responsible stewards of the funds they receive, the National Flight Academy identified an opportunity for savings in how they light their facility. This savings could be captured by converting the site's traditional fluorescent, incandescent, and halogen lamps to more efficient LED lamps.

Although LED lamps can reduce operational costs, they traditionally come with a sizeable up front capital cost. This was a challenge for The National Flight Academy because putting large amounts of cash towards a lighting upgrade for a five-year-old facility would be hard to justify to stakeholders, even though the lower monthly operating and maintenance cost of the new lamps made for a fast project payback.

Redaptive's proven and innovative Energy Efficiency-as-a-Service offering was the answer needed in order to accelerate the LED lighting technology deployment without burdening the Flight Academy's capital budget. Furthermore, Redaptive's service was structured to allow The National Flight Academy to realize real monthly operational savings on day one.

With the numbers in place and the plan solidified, the focus then turned to product procurement and installation. For this part of the project Redaptive needed a partner that could work with and understand Redaptive's goals, while also balancing The National Flight Academy's local operating needs and challenges. FSG's procurement and distribution channels, along with their proven service and installation capabilities, made them the clear choice for Redaptive.

### The NFA Lighting Retrofit By the Numbers

**3,000** Total Lamps Replaced

**54%** Lighting System Wattage Reduction

**210,504** Annual kWh Reduction

**\$0** NFA capital outlay

**\$204,804** Net Savings to NFA over 10 years

*"I have to give the credit to FSG for being nimble and flexible. It was as if they just came in one day and suddenly the lights were just there! That's probably the best outcome you can have with a project like this."*

**JOHN RHOW**  
Co-CEO Redaptive Inc.



*FSG crews, based out of Tampa, Florida, traveled to Pensacola and began working with the local team at The National Flight Academy to seamlessly and almost invisibly remove and replace 3,000 lamps.*

FSG’s ability to adapt to the presence of students and on-site staff meant that The National Flight Academy didn’t have to cease operations while the lighting upgrade project was on-going.

In the end, The National Flight Academy projects a more than 50% reduction in lighting system wattage. This translates into more than 210,000 kWh reduced over the course of a year. To verify these lighting savings, utility-grade power meters were permanently installed on all electrical circuits that handle the facility’s lighting loads. To support the technology driven mission of the National Flight Academy, Redaptive even went one step further on this project and, at no cost to The National Flight Academy, included a full complement of meters to provide a complete granular view of the energy consumption of every electrical panel and most individual electrical circuits in the entire facility.

A key feature that made this program attractive to the National Flight Academy was that The National Flight Academy’s initial capital investment for this project was zero dollars, with the cost of the project being rolled into a portion of the operational energy spend savings over a three-year period. At the conclusion of that three year period the agreement with Redaptive terminates, at which time the National Flight Academy will be able to capture the entire operational energy spending savings.



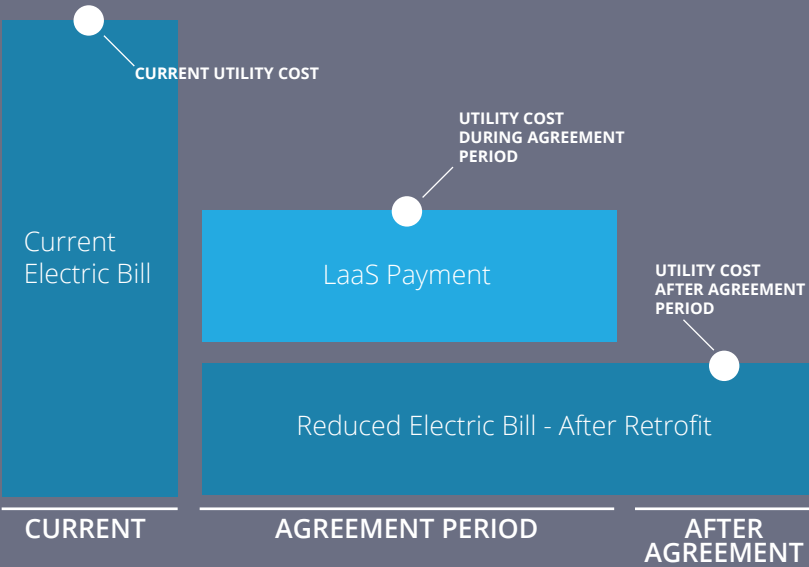
*“It was too good of a deal for us to pass up.”*

**JOHN O’HARA**  
Director of Education  
The National Flight Academy

# How Does Lighting-as-a-Service Work?

This model, known as Energy Efficiency-as-a-Service or, in this case, Lighting-as-a-Service (LaaSS), is proving to be a viable and sustainable solution for organizations that don’t have the technical expertise, the resources, or the capital expenditure budget for energy savings technology projects, or that just don’t want to spend capital budget dollars on such projects.

For The National Flight Academy, using this model proved to be the solution and helped them lower their operational spending dollars per student so they could in turn re-invest that money in the educational programs and overall mission of the organization.





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