

Energy Division

CREATING SUSTAINABLE,
PROGRESSIVE ENERGY
INVESTMENTS FOR
YOUR BUSINESS

A large, rectangular solar panel is mounted on a tree trunk. The panel is tilted upwards and displays a green-tinted world map. The background is a clear blue sky with a bright sun in the upper right corner, casting rays of light. The tree trunk is dark brown and textured, and a small green plant is growing from the base of the tree. The ground is a flat, green field.

SESCO Environmental Mission Statement

As the leading manufacturers' representative in the lighting industry, we will work diligently to awaken, inspire, motivate and educate our colleagues, peers and clients and invite all to join us in a meaningful and significant effort to renew our environment and sustain our planet.

SESCO

Lighting For A Greener Tomorrow®

With all the options for saving energy available today, it becomes a daunting task to educate yourself, evaluate the options and execute an energy savings strategy. With lighting representing up to 40% of your total energy expenditure, this is a critical candidate for cost saving benefits, but where does one begin? How do you evaluate the benefits and trade-offs of saving energy and resources while ensuring quality lighting, worker productivity and the visual architectural appeal of your space? You can start by consulting an expert.

This is where **SESCO Lighting's Energy Division** excels. With forty plus years exclusively in lighting, we are the experts. As the largest lighting sales organization in North America, SESCO has responded to the exploding need in the marketplace to educate, create awareness and supply quality energy-efficient investments for our clients.

Since launching **SESCO's Energy Division** in 2006, we have grown this business segment over 600%. Our company has done this by offering the expertise and knowledge to make this experience as stress-free and efficient as possible. We take the anxiety out of the process by gathering all of the required data and providing analytical tools and expertise to help you make the right long term investment decision—one that saves resources while improving the quality of your work environment and our global community at large. SESCO assists you through every step in this process, educating you on the options, comparing lighting solutions, detailing payback analysis and even offering finance/lease options. We will be there from the first interview to the final walk-through.

**Contact a SESCO sales representative today
to schedule an energy savings evaluation.**

www.sescogreenlighting.com

www.sescolighting.com



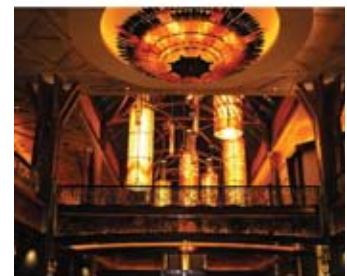
According to the Energy Cost Savings Council, energy-efficient lighting projects generate an average 45% return on investment; however, to date, only 20% of existing commercial buildings feature some degree of upgraded lighting technology.

Due to current energy codes and their economic incentives, this makes lighting the easiest, most profitable investment in energy-saving building systems today. These advantages cut across all commercial facilities, providing potentially better quality lighting and significant energy savings. If your business performs multiple tasks in the same space or runs the lighting system for multiple consecutive hours in a day, your facility is a natural candidate for renovation. In addition, with the support of EPC Act tax benefits, these upgrades have never been more economically feasible.

Consider a renovation for your lighting system in these markets:

- **Industrial** — warehouses, storage, shipping, assembly
- **Municipal** — courtrooms, airports, transportation facilities, penitentiaries, roadways
- **Commercial** — office spaces, parking structures and lots, break rooms and conference facilities
- **Hospitality** — hotels, conference and boardroom facilities, restaurants, convention centers, resorts, casinos, lounges
- **Healthcare** — corridors, patient rooms, lobbies, administrative areas
- **Schools** — classrooms, auditoriums, multi-purpose areas, corridors

Not only do these renovations make long-term sense for your business and your environmental community, but with significant monthly savings in energy and maintenance costs, along with tax deductions for the initial cost, they represent a significant return on your investment.





Building an Energy Savings Strategy

How it works:

Our Energy Specialists are the most knowledgeable, the most experienced and the most committed to providing you with the optimal energy savings solution for your business. We will work to ensure a thorough evaluation without shortcuts.

Our process includes:

Interview

Our energy specialist will initiate the process by scheduling a meeting with the decision makers. It is critical to the process that we understand our client's priorities, needs and expectations. Identifying these needs up front allows us to develop a custom solution that responds to these priorities. By working directly with our clients and listening to their needs and goals, we are able to create an optimal balance of quality, aesthetics, functionality and efficiency.

Investigate

This is the nuts and bolts part of the process where we analyze your existing system; we study the application, the occupants, design limitations, and energy savings opportunities. Our people literally walk your job counting fixtures, taking digital images, footcandle and dimension readings. Armed with this information we can recreate a realistic model of your existing facility. This becomes the base model comparison for all other system evaluations.

Analyze

With this base model in place, we begin the analysis of the data. We establish efficiency ratings, maintenance and energy costs for the existing system. Then we create alternative solutions, developing parallel systems with their quantified benefits and costs. Finally, we consider any other design parameters, tax benefits or design constraints and their potential impact on the options developed for consideration.

Evaluate

Our energy specialist will utilize the analysis and calculate the benefits, the costs and the return on investment for each proposed system. Then we compare the alternatives, defining both the quantitative and qualitative benefits. Our results provide clear tangible costs and benefits that make the evaluation process easy and stress-free.

Executive summary	Material cost	Budget labor cost	EPACT Tax deduction	State and or local rebate	Investment cost	Annual savings compared to Base Lighting System	Simple payback in years	Return on investment	Total increase in net income after 10 years
Base Lighting System	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A	N/A	N/A
LED Option	\$252,000.00	\$25,000.00	\$9,450.00	\$0.00	\$267,550.00	\$40,349.55	6.6	15%	\$135,945.46
TSHO Option	\$29,904.00	\$25,000.00	\$0.00	\$0.00	\$54,904.00	\$37,784.30	1.5	69%	\$322,939.02

Educate

We provide a full report to our client detailing the information we have collected. Where possible, we schedule a follow up meeting to discuss the options, benefits, costs and return on investment. We do our homework and prepare the information to educate the client on the benefits and costs associated with each lighting solution. Our objective is to create an informed client who can wisely evaluate the viable options for consideration, then together, we can fine tune these options to determine the best custom lighting solution for your facility. This takes the guess work out of the equation, making the decision process clear and straight forward.



Advocate

Our energy specialist recommends to the client the best option based on the client's needs and long term objectives. We work together with our client to determine the optimal solution. Once a lighting solution is selected, the next phase of the program begins. During the implementation phase, we bring in additional resources including local SESCO personnel, distributors and electrical contractors as is deemed appropriate. We offer financial alternatives for your consideration as well. Throughout the process, we strive to provide everything necessary to ensure the best possible outcome and experience for our client.



Analyzing the Numbers

Below is a typical SESCO summary page of the software calculations for a proposed facility. Custom designed SESCO software incorporates all of the information from the spreadsheets we gather to create the base model system and energy efficient alternatives. Furthermore, the calculations provide results for the impact of variables such as lighting energy usage, controls, air conditioning loads, maintenance costs and energy efficiency ratings. In the executive summary, the report spells out the total investment costs, the annual savings for each option, the payback and the increase in net income with each option. With these SESCO software derived analytics, you can even quantify your cost of doing nothing.

System summary	Annual kWh used for lighting	Annual kWh saved by using controls	Annual HVAC kWh used to cool lighting	Total annual kWh used for lighting system	Annual lighting kWh cost per blended rate	Lighting system average lamp life in years	Annual amortized lighting maintenance cost	Annual lighting operating cost	Reducing annual operating cost for lighting will provide a sustainable income to the facility's bottom line
Base Lighting System	499,183	0	147,835	647,018	\$57,584.64	4.7	\$1,775.38	\$59,360.02	
LED Option	235,423	70,627	48,805	213,601	\$19,010.48	23.7	\$0.00	\$19,010.48	
T5HO Option	259,401	77,820	53,776	235,356	\$20,946.73	8.3	\$628.99	\$21,575.72	

Total annual kWh used for lighting system

Annual lighting kWh cost per blended rate

Annual lighting operating cost

System efficiency	Overall system mean lumens	Overall system efficiency rating	Overall delivered mean lumens	Cost per 1000 delivered lumens
Base Lighting System	3,290,000	70.00%	2,303,000	\$25.00
LED Option	2,450,000	95.00%	2,327,500	\$8.17
T5HO Option	2,604,000	90.00%	2,343,600	\$8.94

Overall system efficiency rating

Overall delivered mean lumens

Cost per 1000 delivered lumens

Executive summary	Material cost	Budget labor cost	EPACT Tax deduction	State and or local rebate	Investment cost	Annual savings compared to Base Lighting System	Simple payback in years	Return on investment	Total increase in net income after 10 years
Base Lighting System	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A	N/A	N/A
LED Option	\$252,000.00	\$25,000.00	\$9,450.00	\$0.00	\$267,550.00	\$40,349.55	6.6	15%	\$135,945.46
T5HO Option	\$29,904.00	\$25,000.00	\$0.00	\$0.00	\$54,904.00	\$37,784.30	1.5	69%	\$322,939.02

Cost of Doing Nothing

The cost of waiting	For each month that goes by with NOTHING done....the below loss in net income is the reality					
	Months of waiting					
	1	2	3	4	5	6
LED Option	\$3,362.46	\$6,724.92	\$10,087.39	\$13,449.85	\$16,812.31	\$20,174.77
Percentage of project investment	1%	3%	4%	5%	6%	8%
T5HO Option	\$3,148.69	\$6,297.38	\$9,446.08	\$12,594.77	\$15,743.46	\$18,892.15
Percentage of project investment	6%	11%	17%	23%	29%	34%

Environmental impact	
Annual lbs of carbon emissions produced	
Base Lighting System	668,906
LED Option	220,827
TSHO Option	243,318
Carbon emissions in lbs saved from our environment by using more efficient lighting	
LED Option	448,079
TSHO Option	425,588
The energy savings from this proposal will reduce the barrels of oil listed below annually from being wasted to produce energy for this facility	
LED Option	474
TSHO Option	450
The reduction of carbon emissions is equal to removing the quantity of cars listed below from our highways annually	
LED Option	37
TSHO Option	35



EPAct Energy Policy Act of 2005

(extended and currently scheduled to expire 12-31-2013)



U.S. DEPARTMENT OF
ENERGY

Spotlight on Lighting :

“The Treasury Department sets out specific tax regulations for lighting efficiency. Because lighting systems are easy to upgrade and the precise energy savings gained by upgrades are already known, building owners and lessees are encouraged to focus on lighting improvements first.

Lighting systems that reduce lighting power density by 40 percent [expressed as lumens per watt] and employ dual switching — the ability to switch roughly half the lights off and still have fairly uniform light distribution — qualify owners for a full tax deduction of 60 cents per square foot off the cost of purchase. The IRS also outlines a prorated incentive schedule in which systems that reduce lighting power density by 25 to 40 percent may earn a partial deduction of 30 to 60 cents per square foot. The guidelines require that lighting level and lighting control standards be met in order for owners to qualify for the tax deductions.”

(Excerpt from US DOE—Building Technologies Program Bulletin)

Above references tax deductions. Some tax credits may also apply. For more information or specifics for your application, please visit:

http://apps1.eere.energy.gov/buildings/publications/pdfs/corporate/bt_comm_tax_credit.pdf



Palm Beach International Airport, West Palm Beach, FL



All images used by permission of BetaLED

BetaLED's, the Edge Series canopy and wall mount security

- Improves visibility
- Lowers energy usage
- Decreases maintenance costs
- 20% ROI

The Palm Beach International Airport

The Palm Beach International Airport initiated an overall energy audit conducted by Hillers Engineering. Multiple areas were outlined for potential renovation but the arrival and departure roadway was identified with the greatest need. Visibility was poor and energy costs were high. After an extensive evaluation, the airport elected to replace the existing 100 watt Metal Halide fixtures with 79 watt LED luminaire replacements. The effect was dramatic. The quality of the illumination was significantly better with higher footcandle levels and better uniformity. Travelers and sheriff deputies alike have commented on the improved visibility and safety.

In addition, the airport is enjoying significant economic benefits, with reductions in both energy costs as well as maintenance expenses. Utilizing the BetaLED Edge series luminaire, the airport is realizing an approximate 429,388 kWh of energy savings per year. This translates into approximately \$34,000 in revenue per year. Lower maintenance costs is another powerful attribute of LED technology. With longer lamp life and lower overall maintenance expenses, the new system creates \$27,000 maintenance expense savings per year as well. The sustainable technology has improved visibility, lowered energy usage and decreased maintenance costs, all with a 100% return on investment within five years. Tom Galassi, Maintenance Supervisor of the Palm Beach International Airport summarizes it this way: "I'm very pleased with the project, and the anticipated energy and maintenance savings from the BetaLED lighting installation."

Gwinnett Arena Duluth, GA

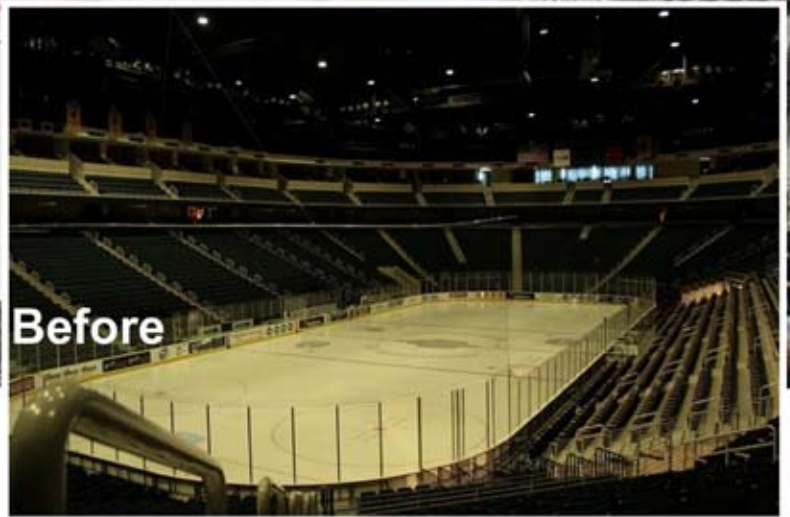
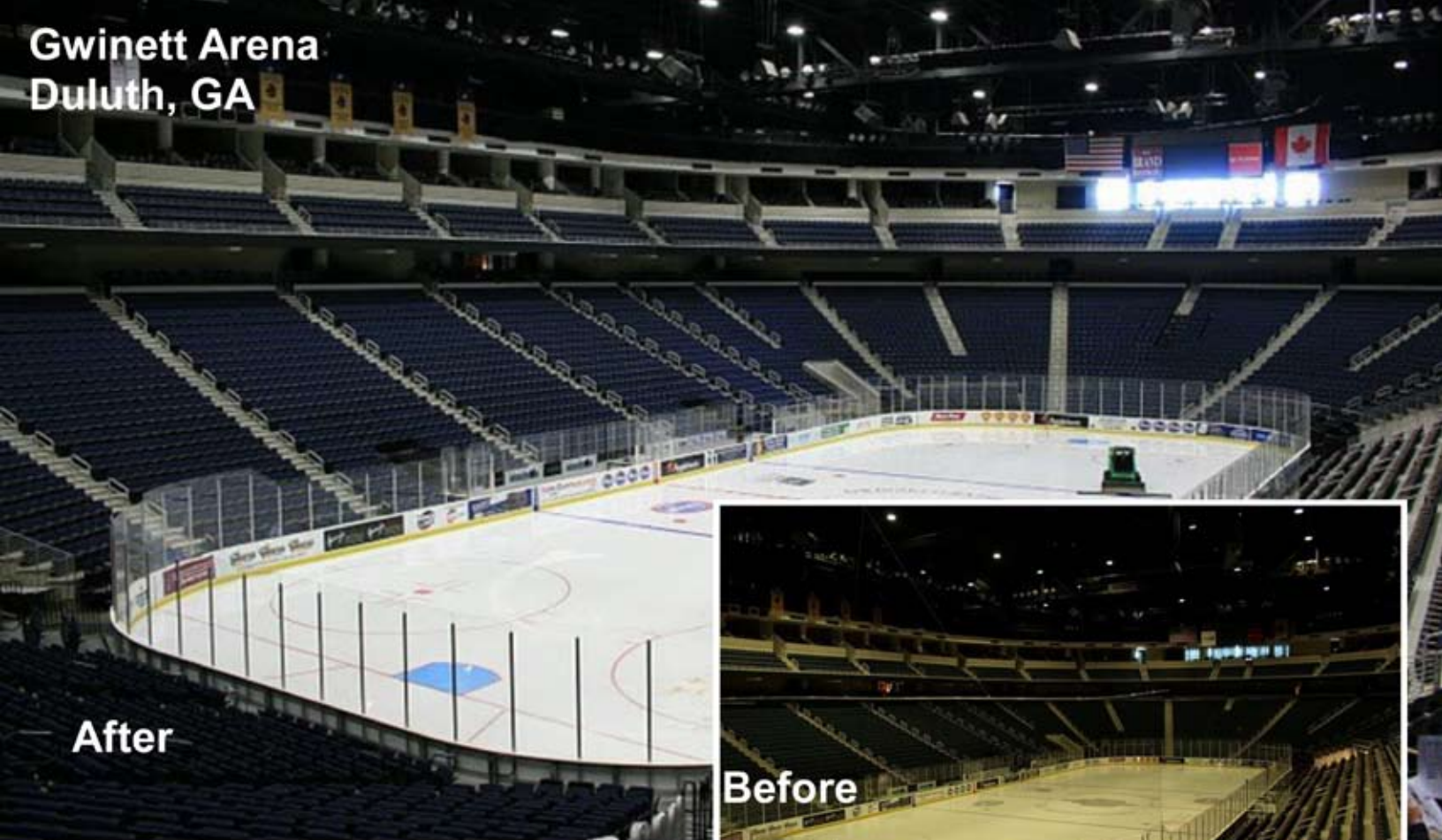


Photo Courtesy of H.E. Williams, Inc.

The Gwinnett Arena

The Gwinnett Arena had poor light levels and huge maintenance constraints with their existing house lighting system. Fixtures had to be mounted 72-75' above the arena floor, creating an expensive and difficult maintenance application. The moderate 16,000 hour lamp life of the 42 watt Compact Fluorescent lamp was compounded with frequent premature lamp/ ballast failures due to heat. Typical light levels on the floor were only 1.8-2.3 footcandles maintained due to lamp outage. To make repairs or conduct routine operations, the event sports lighting had to be used, driving up the energy costs. Neal Humphries, Director of Engineering for Gwinnett Arena, requested SESCO's assistance to analyze the application and offer alternative solutions. After extensive evaluation, Mr. Humphries selected the twin 150 watt lamp induction system custom designed by H.E. Williams, Inc. This system provides exceptionally long lamp life, minimal light loss over the life of the system and dual level switching.



ICEILN Series H.E. Williams, Inc.
(2) 150 watt lamp induction system

- Minimizes maintenance & lamp replacement costs

The installation was completed in January of 2011. While cutting the energy consumption by approximately 20%, the lighting levels have increased five-fold to a constant 10.7—11.1 footcandles on the floor. The biggest savings are realized in maintenance cost reductions as the induction lamp system has a rated life of 100,000. Induction lighting provides the ideal lighting solution for the arena by providing quality illumination while minimizing maintenance costs.



Broward College Parking Garage, Davie, FL



All images used by permission of BetaLED

BetaLED's, the Edge for Parking Structures



BetaLED's SilverStreet Series

- Cuts energy usage by >30%
- Increases lighting quality and footcandle levels
- Lowers maintenance costs

Broward College Leads with LED

As the president of **Broward College**, a progressive educational institution, J. David Armstrong, Jr. has a mandate to conserve energy; "Mitigate the abuse and increase the use of efficient power consuming systems." In response to this objective, Broward College Electrical Engineer, Jack Morrison, investigated and pursued alternative lighting solutions to the traditional metal halide luminaire installation. With the desire to save energy and maintenance costs, Broward College evaluated and supervised the completion of the 100% LED installation for this parking structure, utilizing the BetaLED's Edge LED luminaire. Mockups were provided and there was an overwhelming preference for the LED luminaires. As Mr. Morrison commented: "The LED [technology] exhibited a dramatic and immediate difference, displaying better spread, color rendering and increased lighting levels. I was very pleased with the LED performance."

A thorough energy analysis was conducted as well comparing the metal halide proposed system with the LED. Not only did the LED system drastically cut the energy usage in the facility by more than 30%, they were also able to resize the generator and conduit size to save on the initial installation. This LED Parking Structure luminaire provided the ideal solution to meet the college's mandate for higher performance and energy efficiency.

Energy Division

Here is a partial listing of progressive companies who have taken advantage of our services and expertise:

- Palm Beach International Airport, West Palm Beach, FL
- Lockheed Martin, Orlando, FL
- Broward College, Davie, FL
- Gwinnett Arena, Duluth, GA
- Citibank, Miami, FL
- Blue Cross Blue Shield, Jacksonville, FL
- Polk State College, Lakeland Student Center, Lakeland, FL (LEED Gold Certification Pending)
- Bay Pines VA Hospital, Bay Pines, FL
- Atlanta Beltline Phase I, Metro-Atlanta, GA
- Orange County Convention Center, Orlando, FL
- Tampa Bay Trane Corporate Office, Tampa, FL
- Orange Street Parking Garage, Lakeland, FL
- E & W Office Building, Lakeland FL (Energy Star Rated)

To schedule an energy savings evaluation with one of our energy specialists, contact:
Mike Siner, **Energy Division Manager** Direct: 386-366-1002 or msiner@sescolighting.com

SESCO Lighting has been pioneering the way in energy efficiency, education and practice.

Our comprehensive energy program includes:

- A dedicated Energy Division with 5 full time specialists
- Eight LEED-AP Certified Professionals on staff
- A dedicated Controls Division with 10 full time professionals
- Two PE/LC educators on staff
- Green energy practices observed at all (12) SESCO offices
- US Green Building Council (USGBC) member
- International Dark Sky Association member
- Printing of all corporate promotional material on recycled paper (using soy-based ink whenever possible)



**SESCO Corporate Headquarters,
Winter Park, FL**



The world's energy system is at a crossroads . . . It is not an exaggeration to claim that the future of human prosperity depends on how successfully we tackle the two central energy challenges facing us today: Securing the supply of reliable and affordable energy . . . and effecting a rapid transformation to a low-carbon, efficient environmentally benign system of energy supply. What is needed is nothing short of an energy revolution.


International Energy Agency World, Energy Outlook 2008

Contact a SESCO sales representative today to schedule an energy savings evaluation and learn more about sustainable, progressive energy investments for your business.

SESCOLighting

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www.sescolighting.com
www.sescogreenlighting.com

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