Building Name

Sample Building

Proposal Name

Economic Analysis of LED Conversion

A Proposal For

Client

Owner

Sample Drive

Thursday, May 15, 2014

400 North Loop 1604 East
San Antonio, Texas 78232
http://asgenergyllc.com/

Thursday, May 15, 2014

Client
Owner
Sample Drive

San Antonio Texas

ASG Energy, LLC (ASG), a full service provider of energy solutions and services, is pleased to provide this LED savings and benefits analysis proposal to your organization. The enclosed economic analysis addresses the costs, savings, and benefits of our custom configured LED lighting plan for your facility.

LED technologies are being implemented throughout multiple commercial, public, private, and government environments including: government facilities, school environments, commercial and retail environments, manufacturing and industrial environments, and exterior lighting such as streets and safety lighting. New, modern, and sustainable facilities are often configured to provide lighting that is clear, diffuses light evenly, and is of the appropriate temperature for the specific environment. Many studies have found that high quality light aids in facial modeling which improves our human interaction with each other, and promotes good person to person and group communications. High quality lighting also provides a uniform light to improve your business environment.

We believe the following analysis gives your organization the most comprehensive financial picture of the benefits of a lighting conversion to LED technologies. The information and assumptions provided herein were gathered from our hands on energy assessment as well as information provided by your internal staff and your local utility provider. This information includes existing lighting, maintenance and utility costs as well as available utility incentives and credits. This information was used to select the most effective LED solution, evaluating product quality, product cost, energy consumption and HVAC and control factors.

Using this custom approach the enclosed ASG Energy lighting solution delivers the most reliable energy efficiency, custom design expertise, high returns, energy savings, and low out of pocket costs.

Thank You for the Opportunity
Sincerely,
ASG Energy LLC

Michael Repper
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Executive Summary

ASG Energy, LLC (ASG) is pleased to provide this lighting retrofit proposal to your organization. ASG has performed an audit and analysis of your facility and has developed a custom solution to deliver optimized lighting, cost savings, elimination of maintenance, and a reduced environmental impact from your organization.

ASG uses its unique project customization model to provide the best overall return for your investment. We utilize "Just In Time Manufacturing" (JIT) and partner relationships with some of the largest brands in LED lighting and Energy Solutions. ASG energy then hand selects your products, enabling us to look at the best quality and best price for your solution without requiring us to sell a specific product line. This JIT model, coupled with rebate management, product logistics, delivery, and warranty and maintenance management allows us to offer a turn-key solution that supports your organization before, during, and after project implementation ensuring you get your rebate and your return.

Technologies are selected based on several factors including but not limited to; 1. Quality and Testing (all suggested equipment including UL/DLC/CE/ROHS or the equivalent, have CRI above .75, lumen efficiency of greater than 85%, LM 79 and LM80 reports), 2. Price (best economic value in the market) 3. On-going maintenance reduction (we look at cost related to replacing after the warranty life). 5. Warranty Period. ASG's goal is to be your partner in lighting management and energy solutions, walking you through the latest changes in technology and equipping your organization with a resource you can utilize as you move your company towards greater savings and energy efficiency.

The following summary provides a project financial overview inclusive of costs, incentives, energy and maintenance savings, and long term savings. Leveraging this data, our team of financial experts has prepared a specific financial summary based upon the technical configuration, energy costs associated with your facility, estimated maintenance costs and cost of capital. This data has been presented to illustrate a short and long term financial picture of our proposed solution.

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Project Overview

Total Material Cost and Labor ($)	18,028
Less Rebates and Incentives ($)	4,621
Net Cost of Project ($)	**13,408**
Annual Operating Savings	
Energy Savings ($)[1, 2]	1,880
Maintenance Savings ($)[3]	2,370
Total Annual Operating Savings ($)	**4,250**
Operating Savings Over 10 Years	
Energy Savings ($)[1, 2]	18,800
Maintenance Savings ($)	23,700
Total Operating Savings Over 10 Years ($)	**42,500**
Payback Period (yrs)	3.3
Net Present Value ($)[4]	18,589
Internal Rate of Return (%)	33.72

1. *Energy cost ($) = 0.1000/kWh; Annual energy cost escalation (%) = 2.00*
2. *Energy savings are averaged over 10 year analysis period*
3. *Maintenance costs are averaged over 10 year analysis period*
4. *Assumed cost of capital (%) = 6*
5. *Product Tax Rate (%) = 0.00*
6. *Service Tax Rate (%) = 0.00*

Financial Summary

Total Project Cost ($)	Net Project Cost ($)	10 Yr Operating Savings ($)[1, 2]	Payback Period (yrs)	NPV ($)[3]	IRR (%)
18,028	13,408	42,500	3.3	18,589	33.72

1. *Energy cost ($) = 0.1000/kWh; Annual energy cost escalation (%) = 2.00*
2. *Operating Savings equals the energy cost savings plus the maintenance savings averaged over the analysis period*
3. *Assumed Cost of capital (%) = 6*
4. *Product Tax Rate (%) = 0.00*
5. *Service Tax Rate (%) = 0.00*

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Upgrade Summary

Total Cost ($)	Total Incentives ($)	Net Cost ($)	Total Energy Savings ($) [1, 2]	Maintenance Savings ($)	10 Yr NPV ($)[3]	Payback Period (yrs)
18,028	4,621	13,408	18,800	23,700	18,589	3.3

1. *Energy cost ($) = 0.1000/kWh; Annual energy cost escalation (%) = 2.00*
2. *Energy savings are for the 10-year analysis period*
3. *Assumed Cost of capital (%) = 6*
4. *Product Tax Rate (%) = 0.00*
5. *Service Tax Rate (%) = 0.00*

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Cash Flow Analysis

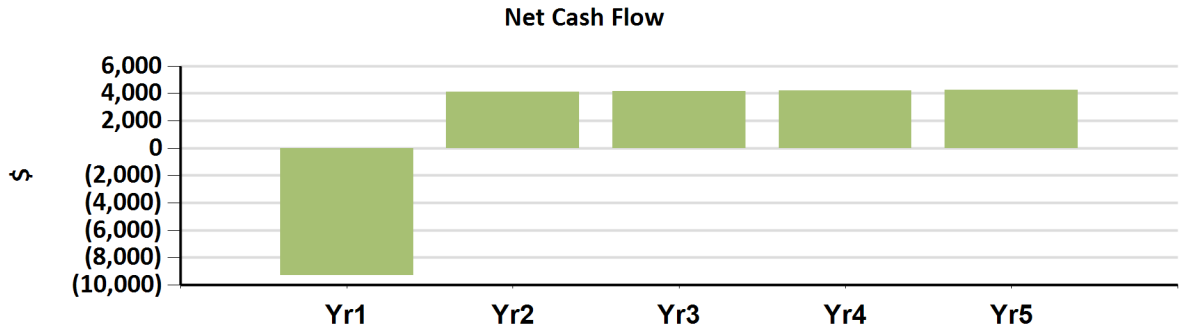
ASG Energy, LLC understands that the lifeblood of an organization is cash flow. We also understand that when your organization invests in maintenance activities it takes away from cash needed for essential business growth activities, therefore this project is designed to return your cash fast and provide a return that meets your capital investment goals. To ensure our proposals provide the most accurate financial assessment, ASG utilizes financial experts in conjunction with our lighting engineers to develop a specific investment strategy for your organization. This enables your organization to capture back sunk costs associated with lighting energy consumption, maintenance costs, and HVAC costs as applicable.

This approach leverages investment amount, timing of cash flows and available incentives to maximize savings for this project. By utilizing a custom solution your organization is able to achieve maximum cash flow, reduced payback period and market leading project financial returns. The expert ASG team is there with you every step of the way, ensuring you capture and leverage local and federal incentives associated with this proposal.

The Cash Flow analysis presented below has been reviewed by our on staff of CPA's, CMA's and financial experts who are available to answer any questions you may have after your review. The assumptions included are based on existing market data, information provided by your staff or your local utility company. The analysis below describes the project anticipated cash flow over the upcoming years.

5 Year Cash Flow Analysis ($)

	Yr1	Yr2	Yr3	Yr4	Yr5	Total
Product Costs	15,154	-	-	-	-	**15,154**
Installation Services	2,875	-	-	-	-	**2,875**
Incentives	4,621	-	-	-	-	**4,621**
Energy Savings	1,717	1,751	1,786	1,822	1,858	**8,935**
Maintenance Savings	2,370	2,370	2,370	2,370	2,370	**11,850**
Net Cash Flow	**(9,321)**	**4,121**	**4,156**	**4,192**	**4,228**	**7,377**
Cumulative Cash Flow	**(9,321)**	**(5,199)**	**(1,043)**	**3,149**	**7,377**	**7,377**



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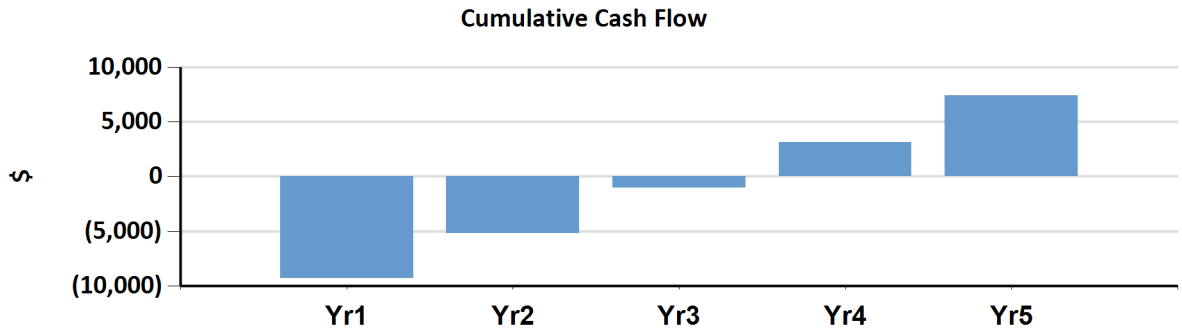

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Cost of Waiting

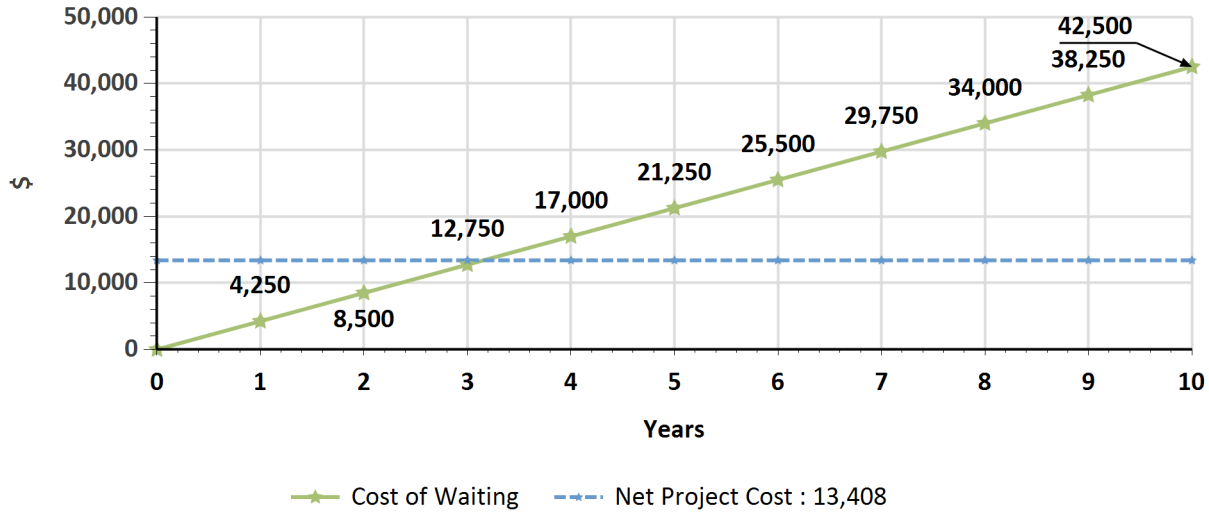
Cost of waiting are the costs associated with waiting to complete this project. Many clients believe the cost of LED's and lighting technology will be cheaper in the future and therefore defer their lighting upgrades and enhancements in anticipation of this price drop. This waiting time also has a cost associated with it, an opportunity cost of not completing the project now.

As we wait for prices to decline we continue to incur escalated utility costs, replacement bulb costs and maintenance associated with legacy technology. In addition, rebates from Utility companies decrease in a rate disproportionate to the price decline and the rebate is a significant reason why the ROI is so good. Therefore the net out of pocket cost today maybe actually lower than future costs as the purchase price declines but the rebate drops from 50% to 30% to zero at some point.

All of these events contribute to the cost of waiting. What this graph represents is your savings from utilities, maintenance, and associated costs at a growth rate year over year. Having that cash in your pocket creates money you can use towards your primary operating activities, reducing amounts you may have to borrow or interest you may pay on borrowed money. This gives a depiction of the impact of not making a decision to convert your lighting and what it means to your cash flow over time.

Cost of Waiting

Monthly ($)	Yearly ($)	10 Years ($)
354	4,250	42,500



1. Cost of waiting includes energy savings and maintenance savings applied as an average annual amount over a 10 year analysis period

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Energy Usages and Costs

On average energy expenditures across the United States are increasing by 4 – 15% annually while inflation is only 1 -3%. This disproportionate growth in energy costs impacts budgets and the bottom line. Our proposed lighting solution has been carefully developed to help mitigate this growing cost center by reducing energy consumption requirements. Our proposed solution provides a dramatic reduction in energy consumption in comparison with existing configurations for your facility.

The attached figures compare energy consumption between the current and proposed configuration over a year in Kilowatt Hours (kWh), the proposed solution requires far less electricity throughout the year thus allowing for dramatic cost savings. These projections are derived by calculating the energy consumed by each fixture throughout the year based upon the hours they are reported to operate in a given year. This analysis is performed with both existing and proposed technologies to yield a comparable energy consumption requirement. These consumption requirements are then applied to your electricity experience rate for the current year and your utility company's projected annual increase is applied to future years to present a long term anticipated energy cost.

Annual Energy Usage

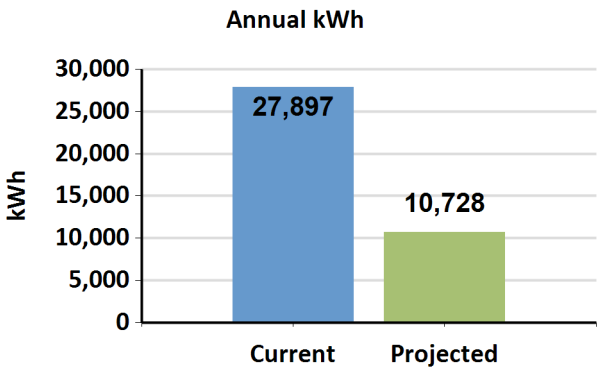
Current Usage (kWh)	Projected Usage (kWh)	Reduction (%)	Current Cost ($)[1, 2]	Projected Cost ($) [1, 2]	Savings ($)	Cost Savings (%)
27,897	10,728	62	3,054	1,174	1,880	62

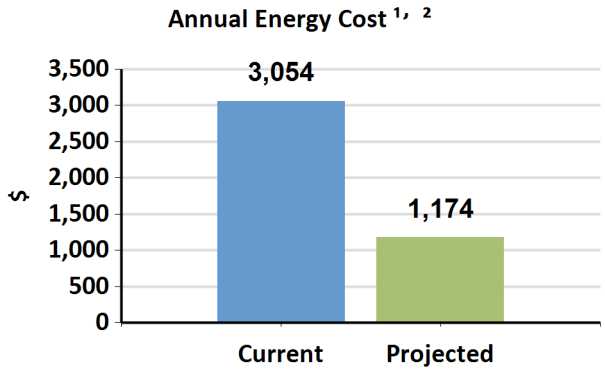
1. Energy cost ($) = 0.1000/kWh; Annual energy cost escalation (%) = 2.00
2. Energy costs are averaged over10-year analysis period

Annual Energy Usage Reduction

Current Usage (kWh)	Projected Usage (kWh)	Reduction (kWh)	Reduction (%)
27,897	10,728	17,169	62

Energy Comparison





1. Energy Cost ($) = 0.1000/kWh; Annual energy cost escalation (%) = 2.00
2. Energy costs are averaged over10-year analysis period

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Fixture Replacement Wattage Comparison

Area :

Space	Existing Fixture	Qty	Watts	**Total Watts**	Proposed Fixture	Qty	Watts	**Total Watts**
Exterior :								
Exterior	High Pressure Sodium 250W Wall Pack (302W)	10	302	3,020	WALLPACK CUTOFF 60W	10	60	600
Total(s)			**302**	**3,020**			**60**	**600**

HVAC Savings Analysis

	Savings from Lighting	Cooling Load Impact[1]	Heating Load Impact[2]	**Total Savings**
Kwh	171,696	0	0	**171,696**
($)	18,800	0	0	**18,800**

1. *Cooling savings factor = 0.00; Cooling months = 0*
2. *Heating cost factor = 0.00; Heating months = 0*
3. *Energy cost ($) = 0.1000/kWh; Annual energy cost escalation (%) = 2.00*

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Operational Overview

The ASG team of experts has developed this proposal to optimize both energy consumption and maintenance requirements. Our technologies are developed to deliver a warrantied life of 5 years and a practically zero dollar maintenance over this warranty period. This means that once installed and tested minimal failure is expected throughout the warranty period. This eliminates significant maintenance cost for your facility realized both through recapture of man hours or elimination of professional services, and elimination of maintenance and replacement lighting stock items.

Operational Savings Summary

Operational Area	Current Annual ($)	Projected Annual ($)	Reduction (%)	Current 10-Year ($)	Projected 10-Year ($)	Reduction (%)
Energy [1, 2]	3,054	1,174	62	30,547	11,746	62
Maintenance [3]	2,370	0	100	23,700	0	100
Total	**5,424**	**1,174**	**78**	**54,247**	**11,746**	**78**

1. *Energy cost ($) = 0.1000/kWh; Annual energy cost escalation (%) = 2.00*
2. *Energy costs are averaged over10-year analysis period*
3. *Maintenance costs are averaged over10-year analysis period*

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Environmental Impact

We know that long term environmental preservation is important to your organization, your employees, your community, and the country. While developing product configuration recommendations ASG engineers and analysts strive to design the most efficient and environmentally sound solution possible. Key factors of sustainable manufacturing methods, types of materials used, and greenhouse gas emissions from energy consumption in operation were key factors in the development of this proposal.

Some of the overt safety and environmental aspects of LED technologies relevant to your facility include:

1. Instant on technology, eliminates slow start exterior and interior lighting
2. Elimination of mercury and lead from lighting
3. Interior bulbs are not glass, and are difficult to damage, thus eliminating risk of injury and damage
4. A higher kelvin value can be achieved providing a “whiter” light which improves cortisol levels
5. Much less heat is produced by LED lighting when compared with existing lighting
6. The expected life span of technologies

The following Chart shows the impact of your decision to retrofit on the environment. This illustrated the amount of pollution and toxic materials your decision is helping remove from the environment and how your company is better improving the community around it.

Greenhouse Gas Analysis

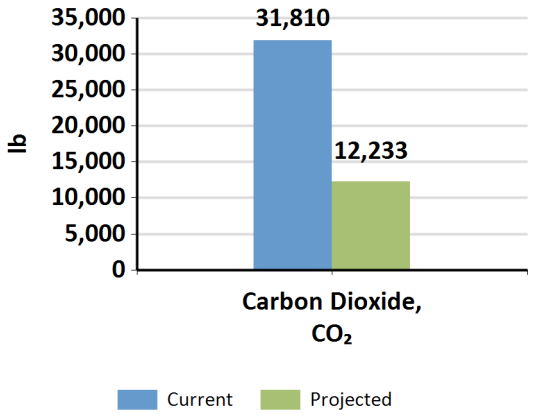
Current	Projected	Gases Avoided	Reduction (%)
31,810	12,233	19,577	62

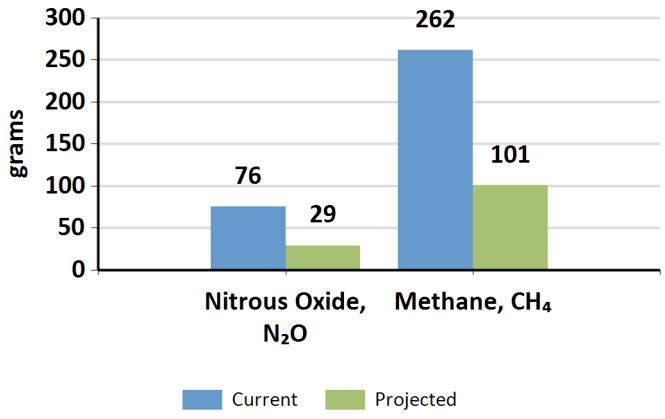
Greenhouse Gas Analysis

Greenhouse Gas Comparisons

Greenhouse Gas	Current[1]	Projected[1]	Avoided	Environmental Effect
Carbon Dioxide, CO_2	31,810	12,233	19,577	Greenhouse Gas, Global Warming
Nitrous Oxide, N_2O	76	29	46	Acid Rain, Global Warming
Methane, CH_4	262	101	161	Greenhouse Gas, Global Warming

1. Average emission rates per kWh are based on EPA estimates for TX





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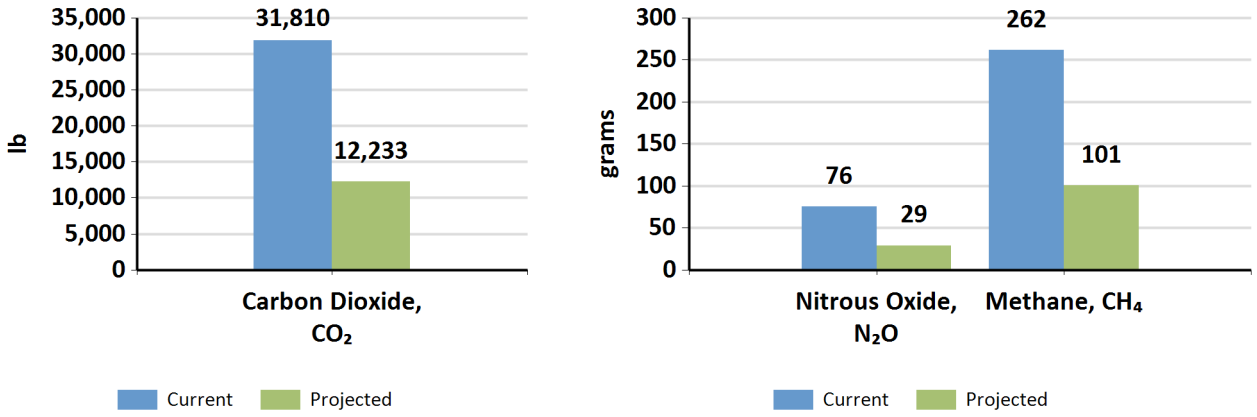
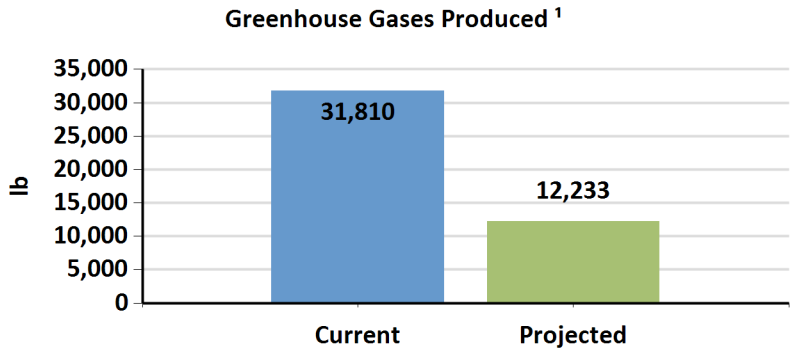
Greenhouse Gas Analysis

Greenhouse Gas Comparisons[1]



1. Average emission rates per kWh are based on EPA estimates for TX

Greenhouse Gas Comparables



Comparable Metrics

Trees Saved: 734

Acres of trees planted: 2

Fewer cars on the road: 2

1. Average emission rates per kWh are based on EPA estimates for TX

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Upgrade Analysis

ASG performed a visual review of your facility lighting and collected feedback from your designated facility representatives. Based upon our observation, feedback from your personnel, and lighting best practices, we have prepared our recommendations. ASG Energy often proposes the use of retrofit and new fixture LED technologies in any LED strategy. This approach allows for the reutilization of existing fixtures, thus allowing for lower costs, lower environmental impact, and sustained aesthetics. This approach also benefits from the inherent durability of the legacy light fixtures. The benefits retrofit solutions include a streamlined installation process, component based maintenance and operations system, and should any long term maintenance be required a simple repair process.

LED Retrofitting technologies not only benefit the facility lighting, but they puts money back into your enterprise creating positive cash flow once the retrofit project is complete. The reduction in energy use, reduced energy costs, reduced carbon emissions when coupled with the substantially increased lifespan (typically 50,000 hours or more) means significant savings to our customers.

ASG Energy also anticipates the use of new LED fixtures as appropriate. New fixtures will be recommended when existing fixtures are not serviceable, do not meet future aesthetic desires of your facility, or if lighting layouts are reconfigured to enhance lighting or energy consumption profiles.
The following upgrade analysis data provides information on any Fixture Replacements proposed that will enhance your lighting, aesthetics, or economic profile of your facility.

Fixture Replacement Summary

Existing Fixture	Qty	Proposed Fixture	Qty
High Pressure Sodium 250W Wall Pack (302W)	10	WALLPACK CUTOFF 60W	10
Total(s)	**10**		**10**

Component Upgrade Summary

Existing Fixture	Qty	Proposed Upgrade	Qty
2x4ft (600x1200mm), 2 Lamp, F32 T8/T26 Prismatic	50	Lamps: 2 4FT 18W T8 Ballasts: 0	100 0
4ft (1200mm), 2 Lamp, F32 T8/T26 Industrial	50	Lamps: 2 4FT 18W T8 Ballasts: 0	100 0
Total Fixtures:	**100**	**Total Lamps:** **Total Ballasts:**	**200** **0**

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Appendix

Incentives

Description	Amount ($)	Est. Receipt Date
ASG Credit	1,600.00	Immediate
CPS Rebate	2,000.72	Immediate
CPS Rebate	1,020.00	Immediate
Total(s)	**4,620.72**	

Disclaimer

This proposal includes proprietary data on every page that shall not be disclosed outside the direct recipient and shall not be duplicated, used, or disclosed—in whole or in part—for any purpose other than to evaluate this proposal. This proposal was created using the best available information at the time of the proposal and is subject to change in the event circumstances change or information is discovered that alters the nature or terms of this proposal. This proposal is offered from a non-intrusive visual inspection of the facility, if any infrastructure, wiring, compliance, or other issues are discovered during performance they will be disclosed to the customer and will be considered beyond the terms of this proposal.