

Instructions for Using the EAct/Energy Estimator

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Introductory Comments

This spreadsheet will assist you in estimating the following items (depending on the operating mode used) with regards to either new construction or lighting renovations:

- Energy costs/savings
- Tax benefits from:
 - EAct 2005, currently set to expire on December 31, 2008
 - Georgia Tax Credits set to expire on December 31, 2012
- Relamping costs
- Savings from lighting controls
- Environmental benefits from energy savings

There are three basic modes of operating this spreadsheet:

- There is a [one page worksheet](#) used to quickly estimate energy savings when there is just a single luminaire type in a single space. It will also present a simple cash flow diagram and estimate environmental impact benefits.
- There is a [QuickCalc](#) mode which allows the user to enter all data and see all output on a single screen. This mode is meant for introductory or simple situations. QuickCalc mode includes the following functionality:
 - Accounts for the client's federal tax rate.
 - Allows for a single cost of electricity
 - Allows for up to 5 spaces within the project (one luminaire type per space)
 - Optionally accounts for EAct tax benefits only.
 - Simple payback only

- The [Full Estimator](#) has the following additional functionality:
 - A Cover Sheet is available for printout giving a one-page summary of the analysis.
 - Accounts for clients Cost of Money (the time value of money).
 - Allows user to specify two electric rates (peak and non-peak) and corresponding number of annual operating hours.
 - Allows the user to specify an annual escalation rate for electricity costs.
 - Allows for up to 50 spaces within a project.
 - Adds Georgia tax credits to the analysis if desired.
 - Allows the user to specify multiple luminaire types within a space.
 - Provides a summary of the EAct 2005 tax benefits.
 - Provides a summary of the payback computations including cash flow. User may specify either a 39 year or a 15 year straight life depreciation schedule.
 - Provides a summary of the environmental benefits of the energy savings both using US average data and by state.
 - Includes blank certification paperwork.

When the spreadsheet is first opened, the following screen should appear allowing the user to select the desired operating mode:

RELIGHT **EAct Energy Estimator** **AcuityBrands**
Lighting


This spreadsheet is intended to provide estimates of energy savings and the financial impacts of those savings and of any tax deductions available based on EAct 2005. Select one of the three operating modes shown here to get started.

Single System	This is a one-page estimator intended to be used for simple relight projects involving a single luminaire system.
QuickCalc	QuickCalc is also a simple tool but may include multiple luminaire types within a single space.
Full Estimator	The full estimator allows for multiple luminaire types in multiple spaces, discounted paybacks and other more detailed types of analysis.

The worksheet tabs near the bottom of the screen are color coded to match these operating modes and are the best way to navigate around the spreadsheet.


Single System Estimator

The single system estimator looks like this:



Energy Savings Calculator

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Date:

Project Name:

Company:

Designer:

Cost of Electricity (\$/kWh):

Net Initial Investment (\$):

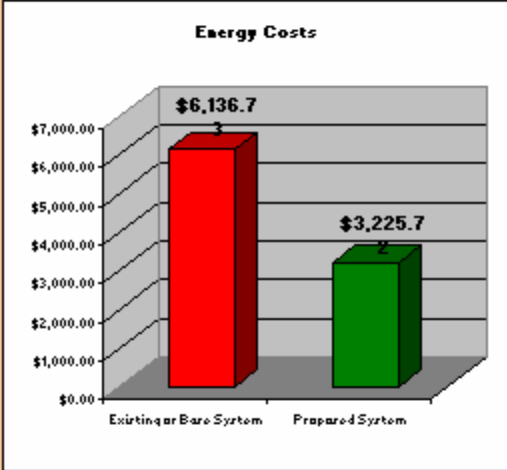
Existing or Base System		Proposed System
# of Fixtures:	100	100
Catalog #:	2-lamp FT5 parabolic F40BX	2ESR 217 BIHP
Input Watts:	78.0	41.0

Daily Operating Hours	
Sunday	0
Monday	16
Tuesday	16
Wednesday	16
Thursday	16
Friday	16
Saturday	9
Annual Operating Hours	4628

Annual Cost of Energy	
Existing or Base System	\$6,136.73
Proposed System	\$3,225.72

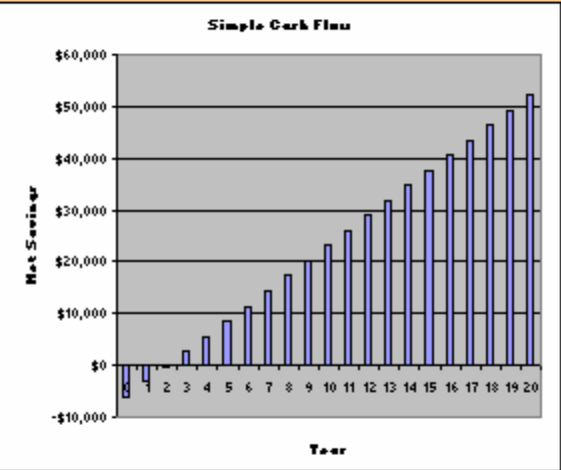
Annual Energy Savings	
Energy Saved (kWh)	17,123.6
Annual Energy Savings (\$)	\$2,911.01
Simple Payback (Years)	2.1

OUTPUTS



Energy Costs

Existing or Base System	\$6,136.7
Proposed System	\$3,225.7



Simple Cash Flow

Net Savings over 20 years, showing a steady increase from Year 1 to Year 20.

Environmental Impact Benefits

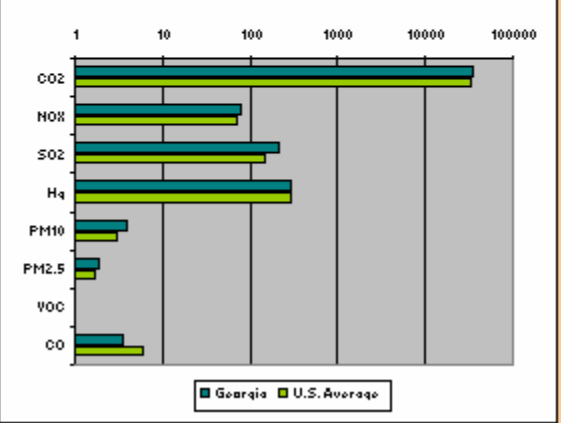
Select a state:

Estimated Reductions in:

- Carbon Dioxide (CO₂): **35,240** lbs
- Nitrogen Oxide (NO_x): **77** lbs
- Sulfur Dioxide (SO₂): **212** lbs
- Mercury (Hg): **288** mg
- Particulate Matter (PM10): **4** lbs
- Particulate Matter (PM2.5): **2** lbs
- Organic Compounds (VOC): **0** lbs
- Carbon Monoxide (CO): **4** lbs

Resulting in the equivalent of:

- # of cars taken off the road: **3**
- or -
- # of trees planted: **53**



Bar chart comparing Georgia (blue) and U.S. Average (green) for various pollutants. The x-axis is logarithmic (1, 10, 100, 1000, 10000, 100000).


Pollutant	Georgia	U.S. Average
CO ₂	~35,000	~35,000
NO _x	~77	~77
SO ₂	~212	~212
Hg	~288	~288
PM10	~4	~4
PM2.5	~2	~2
VOC	0	0
CO	~4	~4


Instructions for using single system estimator:

1. Fill in the blank fields near the top with:
 - a. The date (this will default to today's date)
 - b. The name of the project
 - c. The name of the client
 - d. The name of the lighting designer
 - e. The cost of electricity in \$/kWh.
 - f. The net initial investment for this project.
2. For the existing system, fill in:
 - a. The number of fixtures and,
 - b. From the drop down menu, which generic luminaire type is being replaced
3. For the proposed system, fill in:
 - a. The number of new fixtures and
 - b. Which luminaire is being proposed
4. To the right, then fill in the operating hours of the lighting by day.
5. Finally, select the state in which the project will reside.

QuickCalc Mode

The QuickCalc screen looks like the following:





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QuickCalc
 An approximation based on simple assumptions;
 please use the full calculator for a complete analysis.

Federal Tax Rate:

Cost of Electricity (\$/kWh):

Include EPart Deductions in Analysis

Proposed System										
Select one or more space types using the drop down menus (1xx=Space-by-Space, 2xx=Whole Building) The LPD requirement for common space types in specific building types may vary from the value shown here, click link at bottom for full listing.	LPD per 90.1 - 2001 (w/sq.ft)*	Area (sq.ft)	# Fixtures	Input Watts Per Fixture	Annual Burning Hours	Capitalized Cost Per Luminaire	Extended Costs	LPD Achieved (w/sq.ft)	% Below 90.1-2001	Estimated Deduction Per Interim Rules
125 - Storage / Medium-to-Bulky Items / Active#	1.1	100,000	220	246	4000	\$215.00	\$47,300	0.541	50.80%	\$47,300
121 - Select Space Type	0									\$0
121 - Select Space Type	0									\$0
121 - Select Space Type	0									\$0
Fill in your own										
Totals:		100,000	220	54.12 kW	216480 kWh		\$47,300			\$47,300

Base or Existing System										
Select one or more space types using the drop down menus (1xx=Space-by-Space, 2xx=Whole Building) The LPD requirement for common space types in specific building types may vary from the value shown here, click link at bottom for full listing.	LPD per 90.1 - 2001 (w/sq.ft)*	Area (sq.ft)	# Fixtures	Input Watts Per Fixture	Annual Burning Hours	Capitalized Cost Per Luminaire	Extended Costs	LPD Achieved (w/sq.ft)	% Below 90.1-2001	Estimated Deduction Per Interim Rules
125 - Storage / Medium-to-Bulky Items / Active#	1.1	100,000	220	458	4000	\$0.00	\$0	1.008	8.40%	\$0
121 - Select Space Type	0									\$0
121 - Select Space Type	0									\$0
121 - Select Space Type	0									\$0
Fill in your own										
Totals:		100,000	220	100.76 kW	403040 kWh		\$0			\$0

OUTPUTS:

	<u>Proposed</u>	<u>Existing</u>	<u>Annual Energy Savings</u>	<u>First Year Tax Benefit</u>	<u>Simple Payback</u>
Annual Energy Costs:	\$20,327	\$37,845	\$17,518	\$16,555	1.76 Years

This spreadsheet is meant to provide a generic estimation of the interim tax provisions of the Energy Policy Act of 2005. Please contact your tax advisor to determine the specific tax treatment appropriate for your company.

Inputs

- Federal Tax Rate: what tax rate does the client pay on federal income? Defaults to 35%; can be significantly different.
- Cost of Electricity: How much does the client pay for electricity in \$/kWh? This spreadsheet does not allow for peak vs. non-peak rates or demand charges. This value defaults to the latest national average of \$0.0939/kWh per ASHRAE.
- Drop down menu for including EPart tax benefits (or not) in the analysis.
- There are then two tables. The upper table is used to specify the proposed system while the lower table is used to specify the existing lighting system (for renovations) or some base or alternative system for new construction. Inputs within these two tables are:
 - Space Type – what kind of space type, per ASHRAE 90.1 classification, is the lighting system going into. This field is a drop down menu. The user

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may select from any of the options that start with 1xx to use the ASHRAE 90.1 Space-by-Space method or an option that begins with 2xx for using the Whole Building Method. Most projects will probably use the Space-by-Space method. When an option is selected, the program will automatically fill in the LPD allowance per 90.1-2001 in the next column.

- Area – fill in the area of the subject space in sq.ft.
- # Fixtures – fill in the number of fixtures to be used (please note that if you wish to claim the EAct tax credit, all lighting must be included in the analysis, not just the lighting that was replaced.)
- Input Watts – what is the input watts per fixture; this should include ballast losses.
- Annual Burning Hours – How many hours per year does the lighting in this space get used. Here is where reduction in burning hours due to the use of controls would be accounted for.
- Capitalized Cost/Luminaire: If this is a non tax run, include all costs here you wish to include in the analysis (luminaires, lamps, installation, disposal, etc.). If you have specified that you want tax benefits included, then include only capitalized costs here. QuickCalc does not allow the user to include non-capitalized costs in an EAct run.

Outputs

- Within the two tables, the following outputs are displayed:
 - Extended Costs – Number of luminaires times the cost per luminaire.
 - LPD achieved – Watts per square foot used
 - % below 90.1-2001 – how does this achieved LPD compare against what the 90.1-2001 standard specifies for this space type.
 - Estimated Deduction – if the achieved LPD is sufficiently below the ASHRAE allowance, the program will compute the allowed tax deduction. Some notes on that:
 - This deduction is capped by the expenditure so while the EAct deduction calculation may be larger than what is shown here; this field is capped by the contents of the Extended Costs column.
 - The number shown in this column is a tax deduction, not a tax credit. The tax deduction is multiplied by the federal tax rate to determine the actual tax benefit.
- Near the bottom of the page the following outputs are displayed:
 - Estimated total energy costs for the base or existing systems
 - Estimated total energy costs for the proposed systems
 - The difference between these last two numbers
 - First year tax benefits if any
 - Simple payback period in years

The QuickCalc estimator has a cover sheet (on the worksheet labeled Cover Sheet-Quick) to alternatively use for presenting results. It will look like:



EPAct/Energy QuickCalc Estimator



Lighting Proposal For:
 Client Name:
 Building Name:
 Street Address:
 City, State ZIP:
 Project Name:
 Proposed System:
 Base or Existing System:
 Prepared By:
 Date: Tuesday, August 26, 2008

Proposed Scope of Work:

Total Fixture Count: 220
 Project Area (sq.ft): 100,000
 Proposed Lighting Load (kW): 54.12

Assumptions:

Cost of Electricity (\$/kWh): \$0.0939
 Federal Tax Rate: 35.00%

Energy Savings:

Reduction to Connected Load (kW): 46.64
 Reduction to Connected Load (%): 46.3%
 Reduction in Annual Energy Costs: \$17,517.98
 Reduction in Lighting Energy Use (%): 46.3%

Project Investment:

Total Capitalized Expenses: \$47,300.00
 Other Noncapitalized Initial Expenses: _____
TOTAL: \$47,300.00

Economic Analysis:

Simple Payback (years): 1.76
 ROI: 57.0%

EPAct Summary:

Estimated EPAct Tax Deduction*: \$47,300.00

Environmental Impact Benefits

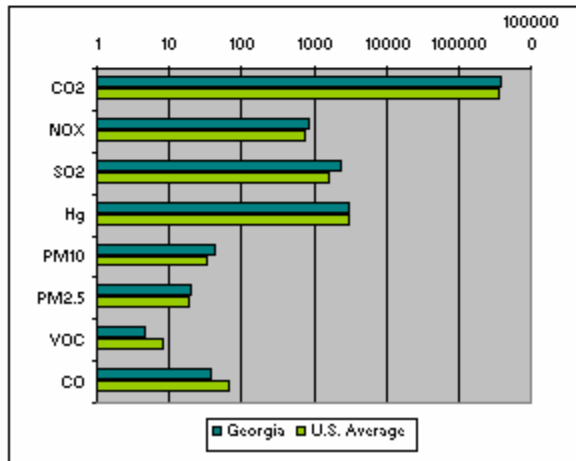
Select a state: Georgia

Estimated Reductions in:

Carbon Dioxide (CO₂): **383,940** lbs
 Nitrogen Oxide (NO_x): **837** lbs
 Sulfur Dioxide (SO₂): **2,308** lbs
 Mercury (Hg): **3,134** mg
 Particulate Matter (PM10): **42** lbs
 Particulate Matter (PM2.5): **20** lbs
 Volatile Organic Compounds (VOC): **5** lbs
 Carbon Monoxide (CO): **39** lbs

Resulting in the equivalent of:

of cars taken off the road: **33**
 - or -
 # of trees planted: **576**



Full Estimator Mode

The standard sequence for using the Full Estimator is to:

1. Fill in the project wide data in the 'Project Parameters' tab.
2. Fill in the specific space data in the 'Space Parameters' tab, using the GO links found there to enter the data for spaces with more than one luminaire type.
3. On the 'Payback' tab:
 - a. Fill in any additional initial and/or annual costs which will not be capitalized
 - b. If you wish to include lamp replacement costs then click on the 'Calculate' links provided
4. On the 'Cover Sheet-Full' tab:
 - a. Insert any graphics you wish to display
 - b. Fill in any project highlights at the bottom of the worksheet you wish to include

The remaining description of this mode will be presented worksheet-by-worksheet.

Cover Sheet

This worksheet serves as a summary of key items from other screens. As this is the only worksheet that is not password protected, the user may make the following changes to it:

- The user can add one or more graphics to the upper right section of the sheet to provide visual interest to the page.
- There are four lines at the bottom of the page that can be used to describe key features of the proposal not already included.

v3

RELIGHT

EPAct/Energy Estimator



Lighting Proposal For:
 Client Name: Company ABC
 Building Name:
 Street Address:
 City: Congers
 State/Province: GA
 Postal Code:
 Country:
 Project Name: Lighting Renovation
 Additional Description: Open Offices
 Proposed System: 2RT5R + Existing Wallwashers
 Base or Existing System: 4 Lamp, T12 Parabolic
 Prepared By: R. V. Heinisch
 Date: Wednesday, August 06, 2008

Proposed Scope of Work:

Fixture Count: 1350
 Area (sq.ft): 90,000
 Proposed Lighting Load (kW): 72.45

Assumptions:

Initial Cost of Electricity Peak/Nonpeak (\$/kWh): \$0.1400 \$0.1400
 Cost of Money: 10.00%
 Federal Tax Rate: 35.00%
 Depreciation Method: 39 Year Straight Life

Energy Savings:

Reduction to Connected Load (kW): 96.75
 Reduction to Connected Load (%): 57.2%
 Reduction in Annual Energy Costs: \$70,562.68
 Reduction in Lighting Energy Use (%): 57.2%

Project Investment:

Total Capitalized Expenses: \$140,625.00
 Other Noncapitalized Initial Expenses: \$0.00
TOTAL: \$140,625.00

Economic Analysis:


Simple Payback (years): 2.17
 ROI: 46.2%
 Discounted Payback (years): 2.42


EPAct Summary:

Estimated EPAct Tax Deduction*: \$50,538.46
 Estimated GA Tax Credit*: \$0.00
 Estimated Tax Benefits (first year)*: \$18,092.70
 Increase in first year cash flow due to EPAct*: \$17,461.69
 Increased value of full depreciation due to EPAct*: \$11,856.30

Project Highlights:

Project Parameters





EPAct/Energy Estimator

Date:

Client Name:	Company ABC
Building Name:	
Street Address:	
City:	Conyers
State/Province:	GA
Postal Code:	
Country:	
Project Name:	Lighting Renovation
Additional Description:	Open Offices
Description of Proposed System:	2RT5R + Existing Wallwashers
Description of Base or Existing System (if any):	4 Lamp, T12 Parabolic
Prepared By:	R. V. Heinisch

[Disclaimer](#)
[Field Audit](#)
[Project Parameters](#)

Cost of Money:	<input type="text" value="10.00%"/>	
Federal Tax Rate:	<input type="text" value="35.00%"/>	
Peak Rate Cost of Electricity (\$/kWh):	<input type="text" value="\$0.1400"/>	Escalated <input type="text" value="\$0.213"/>
Non Peak Rate:	<input type="text" value="\$0.1400"/>	<input type="text" value="\$0.213"/>
Inflation Rate for Electricity:	<input type="text" value="3.70%"/>	<input type="text" value=""/>
Type of Project:	<input type="text" value="Renovation"/>	
Method of Depreciation:	<input type="text" value="39 Year Straight Life"/>	

For more information on EPAct 2005 tax incentives: www.lithonia.com/taxdeduction
 For a summary of EPAct lighting provisions: [EPAct-Lighting](#)
 To fill out and print Certificate of Compliance: [Certificate](#)


This spreadsheet is meant to provide a generic estimation of the interim tax provisions of the Energy Policy Act 2005.
 Please contact your tax advisor to determine the specific tax treatment appropriate for your company.
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This sheet is used to specify project wide parameters including:

- Project descriptive information at the top
- Cost of Money – what discount rate does the client want to apply to net initial investment costs?
- Federal Tax Rate: what tax rate does the client pay on federal income? Defaults to 35%; can be significantly different.
- Cost of Electricity: How much does the client pay for electricity in \$/kWh? This spreadsheet does allow for peak vs. non-peak rates but not for demand charges.
- Inflation rate for Electricity Costs – what escalation rate is to be applied to electricity in the payback analysis? The figures to the right of the user entered kWh costs are the average cost of electricity at the specified escalation rate over the full depreciation life of the system.
- There is then a drop down menu to specify if the is New Construction or a Renovation.
- Next there is a drop down menu to specify a 39 year or a 15 year depreciation schedule.

Space Parameters

This worksheet is used to specify the particulars of the lighting systems.



Space/System Parameters


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 2-E Only Include EPAct tax deduction only

Proposed System																			
Space ID	Select one or more space types using the drop down menu: (1xx=Space-by-Space, 2xxx=Whole Building) The LPD requirement for common space types in specific building types may vary from the value shown here, click link at bottom for full listing.	Description of Luminaire Type(s) / Source Type(s) (Include description of proposed controls, etc.)	For EPAct LPD per 90.1-2001 (w/sq.ft)	For GA Tax Credit LPD per 90.1-2004 (w/sq.ft)	Area (sq.ft)	Go To Multi-Type Calculator	# Fixtures	Input Watts Per Fixture	Projected Illum.	Annual Burning Hours at Peak Rate	Annual Burning Hours at Non Peak	Capitalized Cost Per Luminaire	Extended Costs	LPD Achieved (w/sq.ft)	% Below 90.1-2001	% Below 90.1-2004	Estimated EPAct Deduction Per Interim Rates	Estimated GA Tax Credit per GA HB 670 2008	
00	116 - Offices - Open Plan	2RTSR-Existing Wallwashers	1.3	1.1	90,000	GO	1350	53.66667		0	3432	\$104.17	\$140,625	0.005	38.08%	26.82%	\$50,538	\$0	
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
Fill in your own						GO													
TOTALS:					90,000		1350	72.5 KW				248648 kwh	\$140,625				\$50,538	\$0	

Base or Existing System																			
Space ID	Select one or more space types using the drop down menu: (1xx=Space-by-Space, 2xxx=Whole Building) The LPD requirement for common space types in specific building types may vary from the value shown here, click link at bottom for full listing.	Description of Luminaire Type(s) / Source Type(s) (Include description of existing controls, etc.)	For EPAct LPD per 90.1-2001 (w/sq.ft)	For GA Tax Credit LPD per 90.1-2004 (w/sq.ft)	Area (sq.ft)	Go To Multi-Type Calculator	# Fixtures	Input Watts Per Fixture	Existing Illum.	Annual Burning Hours at Peak Rate	Annual Burning Hours at Non Peak	Capitalized Cost Per Luminaire	Extended Costs	LPD Achieved (w/sq.ft)	% Below 90.1-2001	% Below 90.1-2004	Estimated EPAct Deduction Per Interim Rates	Estimated GA Tax Credit per GA HB 670 2008	
00	116 - Offices - Open Plan	4 Lamp, T12 Parabolics	1.3	1.1	90,000	GO	1350	125.3333		0	3432	\$0.00	\$0	1.880	0.00%	0.00%	\$0	\$0	
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
121	Select Space Type		0	0		GO													
Fill in your own						GO													
TOTALS:					90,000		1350	163.2 KW				580634 kwh	\$0				\$0	\$0	

This spreadsheet is meant to provide a generic estimation of the interim tax provisions of the Energy Policy Act of 2005. Please contact your tax advisor to determine the specific tax treatment appropriate for your company.

* - See Tables 9.3.11 for Whole Building and Table 9.3.12 for Space-by-Space in ASHRAE/IESNA 90.1-2001 for space types not included here.

Other Possible Considerations for EPAct Tax Deduction

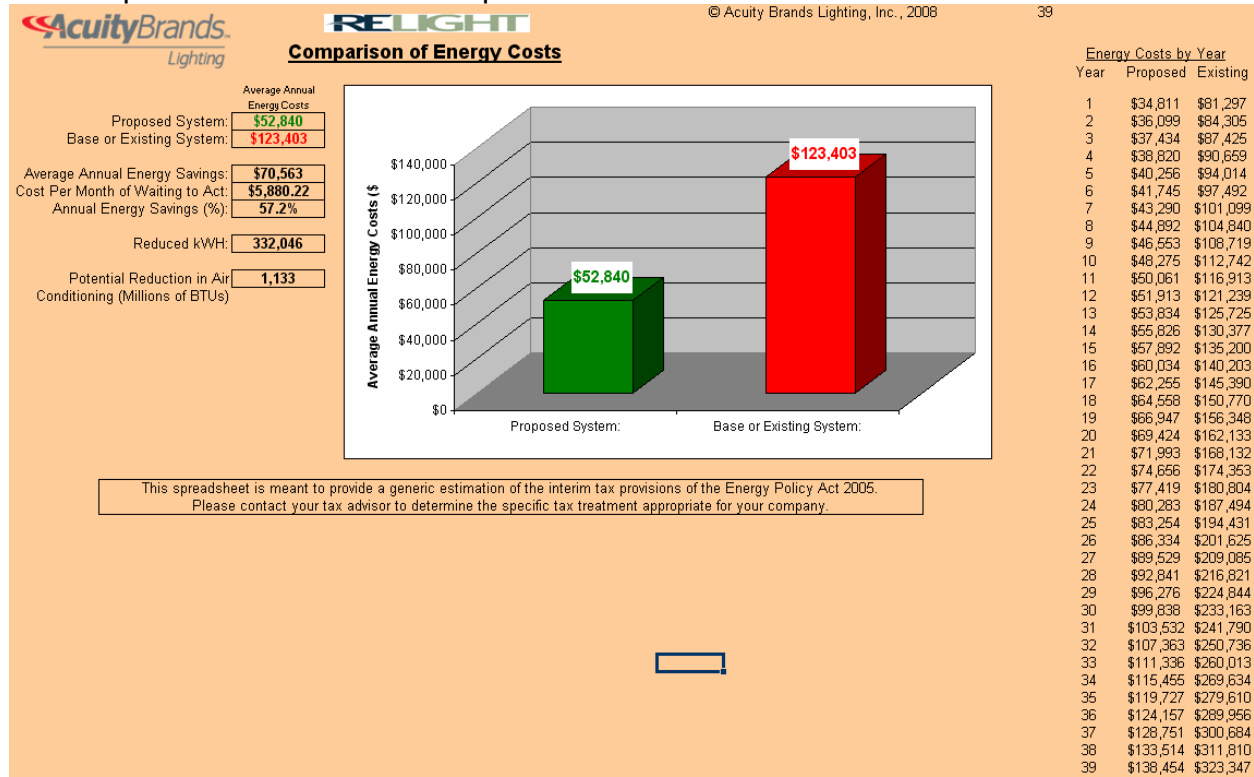
Automatic Shutoff Not Required
Space Controls Not Required
Bi-level Switching Installed?
IESNA Light Levels met?

- Near the top of the worksheet is a drop down menu with 4 options, depending on which (if any) tax benefits you wish to include in the analysis.
 - 1-None Do not include any tax benefits
 - 2-E Only Include only the tax benefits from EPAct
 - 3-G Only Include only the tax benefits from the Georgia tax credit
 - 4-Both Include both kinds of tax credits.
- There are then two tables on this worksheet. The upper table is used to specify the proposed system while the lower table is used to specify the existing lighting system (for renovations) or some base or alternative system for new construction. Inputs within these two tables are:
 - Space ID – used to apply a 1-3 digit code to each space for record keeping purposes but is not used in the calculation
 - Space Type – what kind of space type, per ASHRAE 90.1 classification, is the lighting system going into. This field is a drop down menu. The user may select from any of the options that start with 1xx for using the ASHRAE 90.1 Space-by-Space method or an option that begins with 2xx for using the Whole Building Method. Most projects will probably use the Space-by-Space method. When an option is selected, the program will automatically fill in the LPD allowances per 90.1-2001 and 90.1-2204 in the appropriate columns to the right.
 - Description – this column may be used to display additional details about each system but this data is not used anywhere.
 - Area – fill in the area of the subject space in sq.ft.

- GO Links – this link is used to specify the lighting in a space that has more than one luminaire type. This link will take the user to a worksheet where the user may specify the individual luminaire types. See Cost Screens below for details.
- # Fixtures – fill in the number of fixtures to be used (please note that if you wish to claim the EAct tax credit, all lighting must be included in the analysis, not just the lighting that was replaced.)
- Input Watts – what is the input watts per fixture; this should include ballast losses.
- Projected Illuminance – while not used in any calculation, this achieved light level may be entered for record keeping purposes.
- Annual Burning Hours – How many hours per year (peak and non-peak) does the lighting in this space get used. Here is where reduction in burning hours due to the use of controls would be accounted for.
- Capitalized Cost/Luminaire: If this is a non tax run, include all costs here you wish to include in the analysis (luminaires, lamps, installation, disposal, etc.). If you have specified that you want tax benefits included, then include only capitalized costs here. Non-capitalized costs are entered in the Payback worksheet.
- Within the two tables, the following outputs are displayed:
 - Extended Costs – Number of luminaires times the cost per luminaire.
 - LPD achieved – Watts per square foot used
 - % below 90.1-2001 and 90.1-2004 – how does this achieved LPD compare against what the 90.1 standards specified for this space type.
 - Estimated Deductions/GA Tax Credit – if the achieved LPD is sufficiently below the ASHRAE allowance, the program will compute the allowed tax deductions. Some notes on that:
 - The EAct deduction is capped by the expenditure so while the EAct deduction calculation may be larger then what is shown here; this field is capped by the contents of the Extended Costs column.
 - The number shown for the EAct deduction is a tax deduction, not a tax credit. The tax deduction is multiplied by the federal tax rate to determine the actual tax benefit.

Energy Savings

This output screen has no user input available.





This screen has three sections.

- To the left, the program displays the energy savings numerically; this includes:
 - The 'average' annual cost of electricity for the proposed system. By 'average' we mean the average cost of electricity was used, i.e. averaged over the depreciable life of the system, using the specified escalation rate.
 - Ditto for the base or existing system
 - The average annual energy savings
 - The average monthly energy savings
 - The % energy savings
 - The amount of kWh saved annually.
 - For conditioned buildings, an estimate of the reduction in air conditioning use based on the reduction in lighting energy. This figure is for information purposes only and is not used anywhere else.
- The middle section is a graphical representation of the average energy use figures from the previous sections.
- To the right, the program lists out the costs on a year-by-year basis.

Tax Benefits

The following screen demonstrates the tax benefits of the EAct tax deduction.



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Tax Benefits / Proposed System

(39 Year Straight Line Depreciation)

Total Initial Investment: **\$140,625**

Deductions Under EAct 2005:	EAct	GA HB 670 (Credit)	Regular	Tax Deduction	Tax Rate	Tax Benefit
Year 1 (EAct + 50% of regular deduction)	\$50,538	\$0	\$1,155	\$51,693	35.00%	\$18,093
Years 2-39 (per year)			\$2,310	\$2,310	35.00%	\$808
Year 40 (at 50%)			\$1,155	\$1,155	35.00%	\$404
Totals:				\$140,625		\$49,219

Deductions Without EAct 2005:	EAct	GA HB 670 (Credit)	Regular	Tax Deduction	Tax Rate	Tax Benefit
Year 1 (50% of regular deduction)	\$0	\$0	\$1,803	\$1,803	35.00%	\$631
Years 2-39 (per year)			\$3,606	\$3,606	35.00%	\$1,262
Year 40 (at 50%)			\$1,803	\$1,803	35.00%	\$631
Totals:				\$140,625		\$49,219

With or without EAct 2005, you will eventually deduct all capitalized costs but the tax benefits of EAct 2005 are:

- (1) the quicker recovery of your depreciation deductions, thereby reducing the payback period
 In year 1 the customer receives, with EAct 2005, a cash flow benefit of: **\$17,462** <--- Reduces payback.

- (2) and the total value of the deductions in today's dollars, based on the specified cost of money
 The total value of the deductions in today's dollars with EAct is: **\$23,610**
 The total value of the deductions in today's dollars without EAct is: **\$11,754**
\$11,856 <--- Overall EAct 2005 Effect

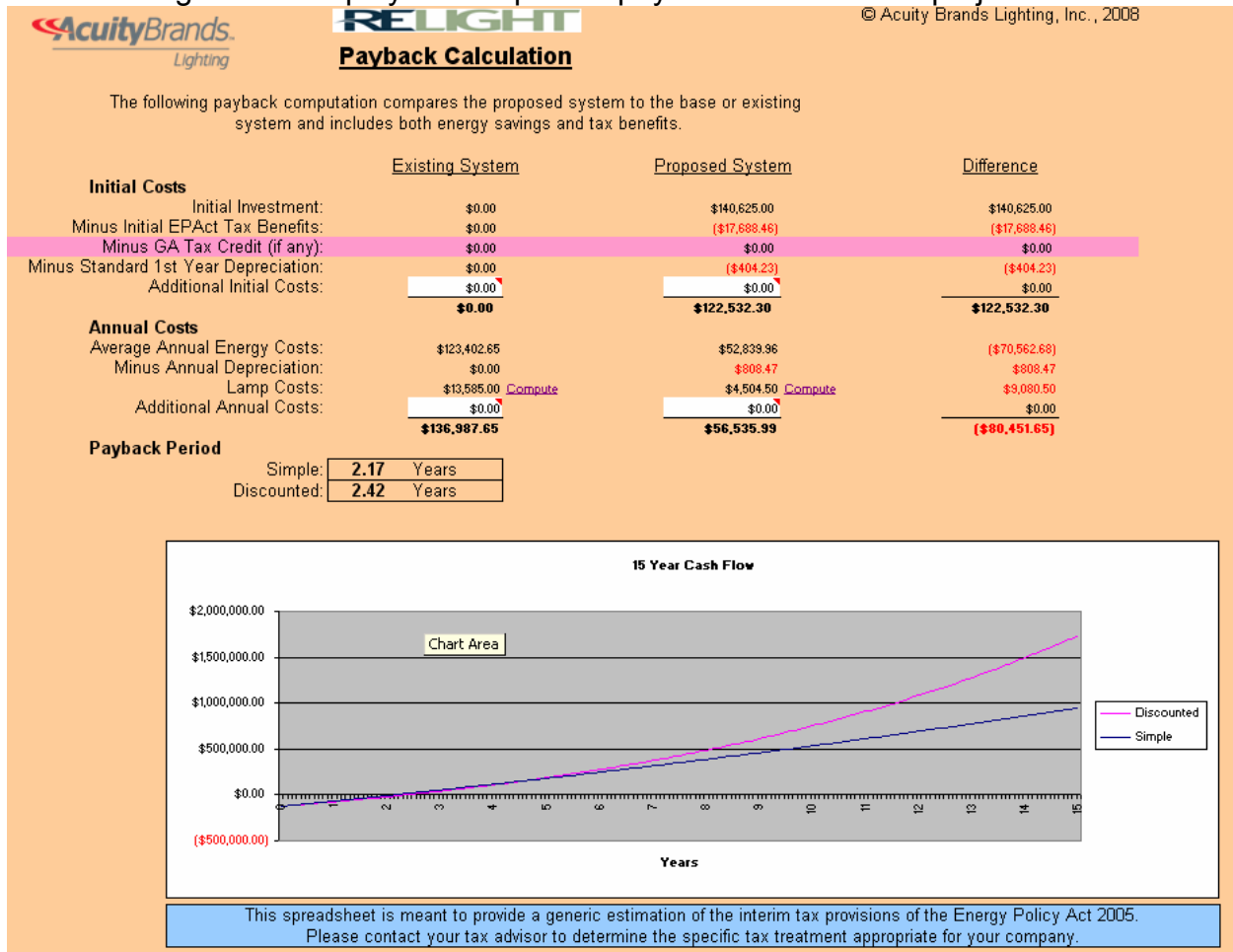
This spreadsheet is meant to provide a generic estimation of the interim tax provisions of the Energy Policy Act 2005. Please contact your tax advisor to determine the specific tax treatment appropriate for your company.

After displaying the total initial investment of this project, this screen has two sections:

- Near the upper, center the program displays the tax benefits, with and without EAct 2005. These are shown for Year #1, Years 2 thru 15/39 (per year) and the last year of the depreciable life / of the system. For both of these conditions, the program displays:
 - The amount of the EAct tax deduction
 - The amount of any GA tax credit (if applicable)
 - The standard annual depreciation
 - The sum of the tax deduction + depreciation.
 - The federal tax rate.
 - The actual tax benefit.
- Nearer the bottom of the screen, the program displays two numbers summarizing the financial benefits of the EAct tax deduction.
 - First it displays how much more tax benefit is realized the first year; this typically will directly reduce the payback time.
 - Next it shows the total actual value of the tax benefits in today's dollars, showing the difference to be realized from EAct.

Payback

The following screen displays the expected payback times for this project.



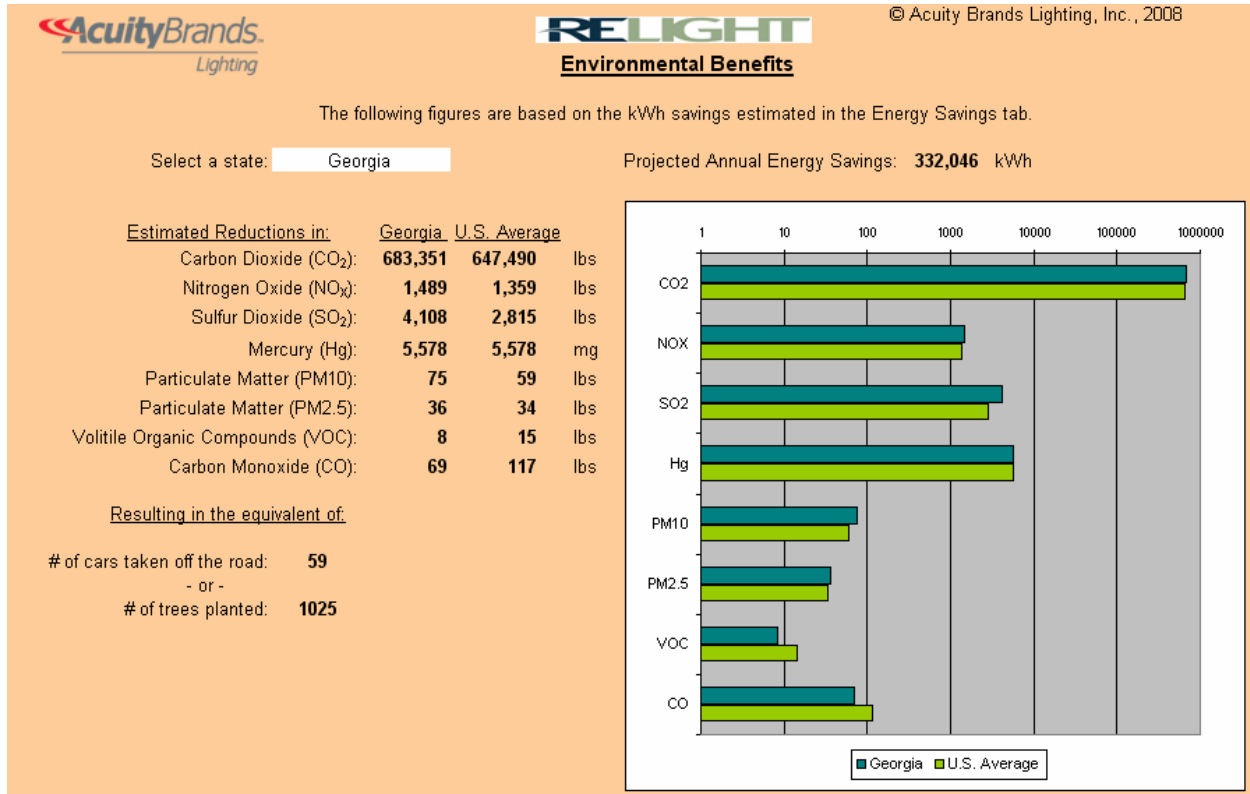
Please note:

- There are boxes that allow the user to add additional costs to the analysis; costs that are not covered elsewhere. These include:
 - Any additional initial costs that are not part of the capitalized costs on the Space Parameters screen.
 - Any additional annual costs.
- There are also links that will take the user to worksheets that will estimate the annual costs of lamp replacements. Click on the 'Compute' link to get there.

Environmental

This screen displays predicted environmental impacts (in terms of reduced emissions based on the mix of methods used to produce electricity) of this project using DOE data.

If incomplete data has been entered into the Full Estimator, the plot on this page will cause the program to produce an error message about log values. This message should go away once there is sufficient data.



Additional Worksheets

- Certification: A blank three page certificate of compliance that can be used to document the EAct tax deduction.
- Field_Audit: a blank form that can be used for field audits of existing systems.
- EACT 2005: a brief description of other lighting related components of EAct 2005 not related to the tax deduction.
- And, of course, the following disclaimer:

Full Disclaimer for EAct/Energy Estimator

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Please remember to include a copy of the worksheet your suggestion, bug or question is based on.