



INDIANA ENVIRONMENTAL STEWARDSHIP PROGRAM ANNUAL PERFORMANCE REPORT

State Form 53475 (R5 / 2-17)
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
ENVIRONMENTAL STEWARDSHIP PROGRAM

Indiana Department of Environmental Management
Office of Program Support
MC 64-00, Room IGCN 1316
100 North Senate Avenue
Indianapolis, IN 46204-2251
Telephone: (800) 988-7901
FAX: (317) 233-5627
E-mail: esp@idem.IN.gov

Please use this form if you are a member of the Indiana Environmental Stewardship Program (ESP) to report on progress toward objectives and targets AND certify ESP requirements continue to be achieved. Indiana ESP facilities must submit an Annual Performance Report (APR) by April 1st of every year, for each calendar year in which the entity has been a member for at least three (3) full months. Membership terms are renewed every four (4) years through submitting your APR. Your APR should be reviewed and signed by a senior manager at your facility prior to submittal. Once signed, e-mail the APR to IDEM at esp@idem.IN.gov. Please do not include any confidential business information in your annual performance report. **Public access laws require IDEM to make the APR publicly available**, which may include posting all portions of your report on the Indiana ESP Web site. If you have any questions, please contact IDEM at esp@idem.IN.gov or (800) 988-7901.

SECTION A		FACILITY INFORMATION	
Name of facility AstraZeneca Pharmaceutical			
Name of parent company (if applicable) AstraZeneca Pharmaceutical LP			
Street address (number and street) 4601 Highway 62 East			
City / State / ZIP code Mount Vernon			
Website of facility / company https://www.astrazeneca.com/sustainability/environmental-sustainability.html			
CONTACT INFORMATION			
Name of Contact (Mr. / Mrs. / Ms. / Dr.) Mr. Bryan L. Williams		Title Senior SHE SPecialist	
Telephone number (812) 307-3018	FAX number ()	E-mail address bryan.williams@astrazeneca.com	
Mailing address (if different from facility address)			
City / State / ZIP Code			
REPORTING PERIOD			
Reporting period dates (mm/dd/yyyy – mm/dd/yyyy) 01/01/2016 - 12/31/2016			
1a. Is this the fourth Annual Performance Report of your membership term? <input checked="" type="checkbox"/> Yes—If yes, answer question 1b. <input type="checkbox"/> No—If no, skip to the "Change in Information" section of this report.			
1b. Do you wish to renew your Indiana Environmental Stewardship Program membership? <input checked="" type="checkbox"/> Yes—If yes, please complete all sections of this annual report. <input type="checkbox"/> No—If no, please complete all sections of this annual report except for Section F.			
CHANGE IN INFORMATION			
In your ESP application and, perhaps, in previous annual performance reports, you described what your facility does or makes. Have there been any changes or additions to your facility's list of products or activities? <input type="checkbox"/> Yes—If yes, please describe them: _____ <input checked="" type="checkbox"/> No			

SECTION B		PUBLIC OUTREACH AND PERFORMANCE REPORTING	
Why do we need this information? IDEM needs to know how environmental information was shared with the public.		What do you need to do? Describe how the facility has shared and plans to share environmental information.	
Please briefly describe the activities that your facility conducted during this reporting period to interact with the community on environmental issues and to report publicly on its environmental performance.			
Please indicate which of the following methods your facility plans to use to make its ESP Annual Performance Report available to the public. Please check as many as appropriate. <input type="checkbox"/> Web site (http://www. (see Section A above)) <input type="checkbox"/> Open house <input type="checkbox"/> Meetings <input type="checkbox"/> Press releases <input type="checkbox"/> Other _____			

SECTION C

ENVIRONMENTAL MANAGEMENT SYSTEM ASSESSMENT

Why do we need this information?

Facilities need to have implemented an EMS that meets certain criteria and use an ISO 14001 EMS Lead Auditor at least every thirty-six (36) months to assess the EMS.

What do you need to do?

Answer the following questions about your EMS.

1. What is the most recent date that an ISO 14001 EMS Lead Auditor performed an EMS assessment at your facility? October 2013

2. Name, title, and organization of ISO 14001 EMS Lead Auditor who conducted the most recent EMS assessment: Kristen Gobbi-Belcredi, P.E.; Sr. Vice President, Engineering Services; Keramida

3. Is the date of the most recent EMS assessment performed by an ISO 14001 EMS Lead Auditor within the past thirty-six (36) months?

☐ Yes—If yes, skip to Question 4.

☒ No—If no, please have your ISO 14001 EMS Lead Auditor complete and sign the following checklist, indicating whether or not your EMS meets the listed criteria for ESP membership:

- | | | |
|------------------------------|-----------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Evidence of senior management support, commitment, and approval. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | A written environmental policy directed toward compliance, pollution prevention, and continuous improvement. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Identification of the environmental aspects at the entity. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Prioritization of the environmental aspects and a determination of those aspects deemed significant considering, at the minimum, environmental impacts and applicable laws and regulations. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Established priorities, and environmental objectives and targets for continuous improvement in environmental performance and for ensuring compliance with applicable environmental laws, regulations, and permit conditions. Objectives and targets must go beyond current legal requirements and specify the environmental media, types of pollution to be prevented or reduced, implementation activities, and projected time frames. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | An established community outreach mechanism that includes identifying and responding to community concerns; informing the community of important matters that affect the community; and reporting on the EMS, including reporting to the public on the environmental policy and significant aspects. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Incorporation of environmental and pollution prevention planning in the development of new products, processes, and services and modifications of existing processes. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Evidence of clear responsibility for implementation, training, monitoring, EMS maintenance, taking corrective action, and ensuring compliance with applicable environmental laws, regulations, and permit conditions. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Documentation of the implementation procedures and the results of implementation. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Appropriate written EMS procedures. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | An annual evaluation of the EMS with written results provided to senior management and affected employees. |

Signature of ISO 14001 EMS Lead Auditor

Date (month, day, year)

4. Were any deficiencies found during the most recent EMS assessment?

☐ Yes—If yes, describe any deficiencies found and the corrective action taken to address each deficiency: _____

☒ No

5. What type of protocol was used to perform the independent EMS assessment?

- ☐ ISO 14001:2015 Certified audit
☐ ISO 14001:2004 Certified audit
☒ ESP Independent Assessment Protocol
☐ Other (please specify): _____

6. Is the EMS certified to a recognized standard?

☐ Yes—If yes, what standard does the EMS follow (please provide a copy of the most recent certificate)?

- ☐ ISO 14001:2015
☐ ISO 14001:2004
☐ Responsible Care EMS
☐ Responsible Care 14001

☒ No

SECTION C	ENVIRONMENTAL MANAGEMENT SYSTEM ASSESSMENT CONTINUED
7. When was the last Senior Management review of your EMS completed? Month / Year: <u>October 2013</u> Who headed the review (name and title)? <u>Dan Charles, Site Director EHS</u>	
8. When did your facility last conduct an internal or corporate environmental compliance audit? Do not include inspections or site visits by regulatory organizations. Scope of the compliance audit: <small>RCRA, CAA, CWA, OPA, CERCLA/SARA/EPCRA, TSCA-PCBs, HAZCOM, FIFRA, DOT, N</small> Month(s) / Year(s): <u>July 2012 (BMS)</u> Who conducted the audit(s) (e.g., facility staff, corporate, third party)? <u>BMS Corporate EHS</u>	
9. Explain the emergencies experienced within the facility during the past year. Were the applicable emergency and contingency plans detailed in the EMS effective? What changes, if any, have been made to your facility's emergency or contingency plans? No environmental emergencies since last report. Only site emergencies were unexpected power outages from storms. No deficiencies.	
10. Has your facility corrected all instances of potential environmental non-compliance and EMS non-conformance identified during your audits and other assessments? <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Yes—If yes, briefly summarize corrective actions taken and other improvements made as a result of your EMS assessment(s) or compliance audit(s). <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> </div> <div style="width: 45%;"> <input type="checkbox"/> No—If no, please explain your plans to correct these instances. <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> </div> </div> <input checked="" type="checkbox"/> No such instances identified.	

SECTION D	ADDITIONAL INFORMATION
Why do we need this information? This information will help IDEM to effectively manage the Environmental Stewardship Program.	What do you need to do? Answer the questions as completely as possible.
1. In addition to ESP, please list environmental awards received or voluntary programs participated in during the past twelve (12) months. Received updated approval for VPP in September 2014. Joined IDEM Partners for Pollution Prevention in September 2016.	
2. Has your facility taken advantage of any ESP incentives? If so, please describe the implementation process and list additional benefits IDEM should consider. Yes, expedited air permits with the ability to have "flexible" language, reduced reporting frequency, the 24-hour notice of inspection. Have not had air permit applications reviewed by same permit engineer during the reporting period.	
3. If your facility was not registered to the ISO 14001 standard prior to becoming an ESP member, has ESP helped you to pursue registration? If so, how has ESP been instrumental in achieving registration? AstraZeneca maintains the position that registration would not produce any tangible improvements to our SHE Sustainability efforts.	

SECTION E	ENVIRONMENTAL IMPROVEMENT INITIATIVE RESULTS															
Why do we need this information? Facilities need to share the results of the environmental improvement initiative that was pursued during the reporting period. IDEM needs to report cumulative program reduction results.	What do you need to do? Reference Section F for "Category" and "Indicator" options to complete this section. Summarize your facility's progress on achieving the initiative you identified in the application or last year's APR. For assistance, please call (800) 988-7901 or email esp@idem.IN.gov .															
Initiative #1																
Category 1: <u>Energy Use</u> Indicator 1: <u>Electricity</u>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Baseline <small>(indicate measurement unit)</small></th> <th style="width: 33%;">Current <small>(indicate measurement unit)</small></th> <th style="width: 33%;">Cost Savings</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2015</td> <td style="text-align: center;">2016</td> <td style="text-align: center;">\$3,885</td> </tr> <tr> <td>Actual quantity (per year)</td> <td style="text-align: center;">36,077,381 KWH</td> <td style="text-align: center;">36,034,220 KWH</td> </tr> <tr> <td>Production unit (select one)</td> <td colspan="2"> <div style="display: flex; justify-content: space-between;"> Earned Labor Hours Production units Production lbs. </div> Other -- specify (e.g. Gallons, length, etc.) </td> </tr> <tr> <td>Production Quantity</td> <td></td> <td style="text-align: center;">NA</td> </tr> </tbody> </table>	Baseline <small>(indicate measurement unit)</small>	Current <small>(indicate measurement unit)</small>	Cost Savings	2015	2016	\$3,885	Actual quantity (per year)	36,077,381 KWH	36,034,220 KWH	Production unit (select one)	<div style="display: flex; justify-content: space-between;"> Earned Labor Hours Production units Production lbs. </div> Other -- specify (e.g. Gallons, length, etc.)		Production Quantity		NA
Baseline <small>(indicate measurement unit)</small>	Current <small>(indicate measurement unit)</small>	Cost Savings														
2015	2016	\$3,885														
Actual quantity (per year)	36,077,381 KWH	36,034,220 KWH														
Production unit (select one)	<div style="display: flex; justify-content: space-between;"> Earned Labor Hours Production units Production lbs. </div> Other -- specify (e.g. Gallons, length, etc.)															
Production Quantity		NA														
Normalization factor (Current year production ÷ Baseline year production)																
Normalized quantity (Actual current year quantity - Actual baseline quantity) x Normalization factor																
Briefly describe how you achieved improvements for this environmental initiative or, if relevant, any circumstances that delayed progress. Replaced exterior lights from incandescent and high pressure sodium to LED. Electrical usage and cost savings are based on overall plant usage. Documentation from contractor included with estimated ROI calculations. Installation completed in fourth quarter of 2016.																

SECTION E

ENVIRONMENTAL IMPROVEMENT INITIATIVE RESULTS
CONTINUED

Initiative #2

Category 2: _____ Indicator 2: _____	Baseline (indicate measurement unit)	Current (indicate measurement unit)	Cost Savings
Calendar year			
Actual quantity (per year)			
Production unit (select one)	Earned Labor Hours Other -- specify (e.g. Gallons, length, etc.)	Production units	Production lbs.
Production Quantity			NA
Normalization factor (Current year production ÷ Baseline year production)			
Normalized quantity (Actual current year quantity - Actual baseline quantity) x Normalization factor			
Briefly describe <i>how</i> you achieved improvements for this environmental initiative or, if relevant, any circumstances that delayed progress.			

Initiative #3

Category 3: _____ Indicator 3: _____	Baseline (indicate measurement unit)	Current (indicate measurement unit)	Cost Savings
Calendar year			
Actual quantity (per year)			
Production unit (select one)	Earned Labor Hours Other -- specify (e.g. Gallons, length, etc.)	Production units	Production lbs.
Production Quantity			NA
Normalization factor (Current year production ÷ Baseline year production)			
Normalized quantity (Actual current year quantity - Actual baseline quantity) x Normalization factor			
Briefly describe <i>how</i> you achieved improvements for this environmental initiative or, if relevant, any circumstances that delayed progress. Replacing lighting with new energy efficient LED fixtures.			
1. Briefly describe the <i>impacts</i> or <i>wastes</i> eliminated resulting from the environmental initiative(s). If multiple initiatives, please indicate which specifically. Reduction in energy usage due to improved efficiencies from change to LED lighting. Improved lighting from LED from previous equipment.			
2. Are there other best management practices (BMPs) you can share correlating to your initiative(s)? No			
3. If the objectives and targets associated with the environmental improvement initiative(s) were not attained, please verify continued progress toward the environmental initiative(s). If multiple initiatives, please indicate which specifically. Limited data to date due to timing of installation.			
4. Please provide a narrative summary of progress made toward <i>qualitative, significant</i> EMS objectives and targets, if any. Continue to pursue other energy audit identified savings opportunities as feasible within company payback structure allows.			
5. Please list any state, U.S. EPA, or other partnership programs to which you are reporting this data (e.g., Energy Star, Project XL). None			
6. Is your entity willing to share the environmental improvement initiative(s) and its best management practices (BMPs) at the ESP Annual Meeting and/or a Partners for Pollution Prevention quarterly meeting or conference? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

SECTION F

ENVIRONMENTAL IMPROVEMENT INITIATIVE

Why do we need this information?

Facilities need to show they are committed to improving their environmental performance.

What do you need to do?

Refer to the Environmental Performance Table and answer the following questions.

1. Select the appropriate boxes in the following table to indicate the **category** and **indicator(s)** that represents the environmental improvement initiative selected by your facility. For the category and indicator selected, list the **baseline year** (e.g., 2015) and the **future year** (e.g., 2016). Next, list the **baseline annual quantity** (e.g., 5 tons) and **future annual quantity** (e.g., 2 tons) you are committing to achieve by the end of the future year.

Category	Indicator	Baseline Year 20_15	Future Year 20_17	Unit
<input type="checkbox"/> Material Procurement	<input type="checkbox"/> Recycled content			Pounds, tons
	<input type="checkbox"/> Hazardous/toxic components			Pounds, tons
<input type="checkbox"/> Suppliers' Environmental Performance	<input type="checkbox"/> Specify indicator: _____			As specified for the particular indicator
	<input type="checkbox"/> Materials used			Pounds, tons
<input type="checkbox"/> Material Use	<input type="checkbox"/> Hazardous materials used			Pounds, tons
	<input type="checkbox"/> Ozone depleting substances used			CFC-11 equivalent pounds
	<input type="checkbox"/> Total packaging materials used			Pounds, tons
<input checked="" type="checkbox"/> Water Use	<input checked="" type="checkbox"/> Total water used	79,660,274	63,017,383	Gallons
	<input type="checkbox"/> Electricity			kWh / MWh, Btu / MMBtu
	<input type="checkbox"/> Steam			kWh / MWh, gallons, ft ³
	<input type="checkbox"/> Natural gas			Btu / MMBtu
	<input type="checkbox"/> Diesel			Gallons
	<input type="checkbox"/> Propane / LPG			Btu / MMBtu, gallons
<input checked="" type="checkbox"/> Energy Use	<input type="checkbox"/> Gasoline			Gallons
	<input type="checkbox"/> Solar			kWh / MWh
	<input type="checkbox"/> Wind			kWh / MWh
	<input type="checkbox"/> Landfill gas			Btu / MMBtu
	<input checked="" type="checkbox"/> Combined heat and power	112,341	95,840	kWh / MWh, Btu / MMBtu
	<input type="checkbox"/> Other: _____			
<input type="checkbox"/> Land and Habitat	<input type="checkbox"/> Land and habitat conservation			Square feet, acres
	<input type="checkbox"/> Community land revitalization			Square feet, acres
	<input type="checkbox"/> Total GHGs			MTCO ₂ E
<input type="checkbox"/> Air Emissions	<input type="checkbox"/> VOCs			Pounds, tons
	<input type="checkbox"/> NO _x , SO _x , PM _{2.5} , PM ₁₀ , or CO			Pounds, tons
	<input type="checkbox"/> Air toxics			Pounds, tons
	<input type="checkbox"/> Odor			European Odour Units
	<input type="checkbox"/> Radiation			Curies, Becquerels
	<input type="checkbox"/> Dust			Pounds, tons
<input type="checkbox"/> Discharges to Water	<input type="checkbox"/> COD or BOD			Pounds, tons
	<input type="checkbox"/> Toxics			Pounds, tons
	<input type="checkbox"/> Total suspended solids			Pounds, tons
	<input type="checkbox"/> Nutrients			Pounds, tons of N or P
	<input type="checkbox"/> Sediment from runoff			Pounds, tons
	<input type="checkbox"/> Pathogens			MPN/ml, CFU/ml
<input checked="" type="checkbox"/> Non-hazardous Waste	<input type="checkbox"/> Landfill			Pounds, tons
<input type="checkbox"/> Hazardous Waste	<input type="checkbox"/> Incineration			Pounds, tons
	<input type="checkbox"/> Reused/recycled off-site			Pounds, tons, gallons
	<input checked="" type="checkbox"/> Other: Waste Generation Reduction	1,409	1,178	Pounds, tons, gallons
<input type="checkbox"/> Noise	<input type="checkbox"/> Noise			dBA
<input type="checkbox"/> Vibration	<input type="checkbox"/> Vibration			Inches per second
	<input type="checkbox"/> Expected lifetime energy use			kWh / MWh, Btu / MMBtu
<input type="checkbox"/> Products	<input type="checkbox"/> Expected lifetime water use			Gallons
	<input type="checkbox"/> Expected lifetime waste to air, water, or land from product use			Pounds, tons
	<input type="checkbox"/> Waste to air, water, or land from disposal or recovery			Pounds, tons

If you need assistance filling out the form, please contact the ESP program manager at either esp@idem.in.gov or 1-(800) 988-7901.

SECTION F

FUTURE YEAR ENVIRONMENTAL IMPROVEMENT INITIATIVE

CONTINUED

2. If the environmental improvement initiative(s) will be *qualitative* in nature, please describe. _____
Initiatives will be *quantitative* measured.
3. What activities or process changes do you plan to undertake at your facility to accomplish your initiative (e.g., technology changes in a particular process line, employee training)? _____
Complete a waste audit early in 2017 to identify waste reduction opportunities. Water reduction projects will be implementing issues identified during a water audit completed in late 2016. Several energy reduction items are scheduled to be implemented during 2017.
4. Does this initiative address a significant aspect in your EMS?
☐ Yes
☒ No—If no, please explain why you believe this indicator should be included as an environmental improvement initiative: _____
Items indicated are based on facility commitments to corporate to reduce our "Fair Share" toward global targets.

CERTIFICATION AND PLEDGE

On behalf of (name of facility) AstraZeneca Pharmaceuticals LP

I certify that the information contained in this Annual Performance Report and attachments is accurate to the best of my knowledge and that this facility is, to the best of my knowledge and based on reasonable inquiry, currently in compliance with all applicable federal, state, and local environmental requirements, or has a corrective action program in place to attain compliance.

We, AstraZeneca Pharmaceuticals LP, commit to maintaining the principles and goals outlined in our Environmental Management System for our facility's Indiana Environmental Stewardship Program status. We agree to strive for full compliance with all regulations promulgated by the U.S. EPA, state, or local jurisdictions. We agree to promote the Indiana Environmental Stewardship Program and to share our success stories with other facilities. We understand that we must meet the requirement of implementing one (1) new, independent environmental improvement initiative each year of membership (for a total of four (4) initiatives), that the Annual Performance Report must be submitted to IDEM by April 1st of each year, and that we must reapply to the Indiana Environmental Stewardship Program every four (4) years.

I understand that the information provided in this Annual Performance Report will be public record. I am the senior facility manager or authorized facility signatory, and fully authorized to execute this statement on behalf of the corporation or other legal entity whose facility is submitting this Annual Performance Report.

Signature



Date (month, day, year)

4/4/2017

Printed signature

Neil Reichel

Title

Senior Director Site Engineering, Facilities Mgmt and OpEx

MORTON ELECTRIC

Vectren SBES Trade Ally

Vand. Co. Master Electrical License #ELE0347M

Kentucky Master Electrical License #ME64073

Illinois DG License #13-0615

Energy Efficiency Products & Services

Licensed – Bonded – Insured



Prepared for:

AstraZeneca

4601 Hwy 62 East

Mount Vernon, IN.

PO Box 9104 • Evansville, IN 47711-9104
(812) 402-0900 Fax (812) 402-9695

MEC16001
Parking and Walkway Lighting LED Upgrade
8/4/2016

To: Bryan Williams,
Michael Fuqua

We are proposing the following description of work:

(111) Retrofitting a total of 111 parking lot and area walkway lights to Lithonia equivalent LED lights.

Total Upgrade Price **\$130,500**

Morton Electric thanks you for the opportunity to quote this project. Please feel free to contact myself with any questions or for additional information.

Best Regards,
Thomas Huffman
Morton Electric, LLC
Evansville, Indiana
(812)402-0900
bmorton@mortonsolar.com

Acceptance of Proposal

The above prices, specifications, and conditions are found to be satisfactory and hereby accepted. Morton Electric is authorized to proceed with the execution of this project.

Date of Acceptance _____

Signature _____

Printed Name _____

MORTON

SOLAR

Client: AstraZeneca
Date: 9/2/2016
Made by: Alex Schmitt

Old bulb wattage	New bulb wattage	Number replaced	Watts saved per bulb	Usage (hr/day)	Price per kWh	Energy savings per year (MWh)	Savings per year	GHG savings (tons of CO2 per year)
1085	487	4	598	10	0.09	8.73	\$785.77	14589.1668
1085	487	2	598	10	0.09	4.37	\$392.89	7294.5834
460	183	8	277	10	0.09	8.09	\$727.96	13515.7164
1085	183	8	902	10	0.09	26.34	\$2,370.46	44011.4664
1085	487	2	598	10	0.09	4.37	\$392.89	7294.5834
460	183	3	277	10	0.09	3.03	\$272.98	5068.39365
460	183	1	277	10	0.09	1.01	\$90.99	1689.46455
460	131	47	329	10	0.09	56.44	\$5,079.60	94311.15645
460	131	4	329	10	0.09	4.80	\$432.31	8026.4814
460	131	1	329	10	0.09	1.20	\$108.08	2006.62035
130	45	27	85	10	0.09	8.38	\$753.91	13997.54925
190	52	4	138	10	0.09	2.01	\$181.33	3366.7308
Totals							128.77	\$11,589.15
								215171.9

Summary

Cost of project	\$130,500.00	Percent saved	69.08%
Energy savings per year	128.8 MWh/year	Payback period	9.603248591 years
Savings per year-energy	\$11,589.15		
Savings per year-maintenance	\$2,000.00	Savings over life of bulbs	\$57,945.76
Annual savings	\$13,589.15	GHG savings over life of bulbs	1075859.564 tons CO2
GHG savings per year	215171.9129 tons CO2	Gross cost of GHG savings	\$0.12

Return on Investment

