



SUSTAINABLE BUILDING ASSESSMENT

SECTION I: LIGHTING & WATER

Sample Project – Hotel
Company ABC

Attention:

Mr. Smith
Property Manager

Company ABC
800 Green Avenue
Enviro, IL 60733

EcoHill Solutions

**52 Aster Drive
Suite 1925
Schaumburg, IL 60173
(312) 235-2225
www.EcoHillSolutions.com**

August 28, 2008



CONTENTS

INTRODUCTION LETTER	3
BUILDING ASSESSMENT SUMMARY	4
LIGHTING RETROFIT SUMMARY – SAMPLE PROJECT HOTEL	4
WATER RETROFIT SUMMARY – SAMPLE PROJECT HOTEL	5
ECOHILL OVERVIEW	5
EcoHILL’S MISSION STATEMENT	5
LIGHTING RETROFIT ADVANTAGES	5
ENERGY EFFICIENCY FINANCIAL INCENTIVES	6
LIGHTING SOLUTIONS - SCOPE OF WORK	8
INITIAL PROJECT GOALS	8
PROPOSED LIGHTING SOLUTIONS	8
PROJECT SAVINGS	9
PROJECT COSTS	11
PROJECT DETAILS	12
WATER SOLUTIONS – SCOPE OF WORK	13
PROPOSED WATER SOLUTIONS	13
PROJECT RETROFIT SUMMARY	13
WATER USAGE	14
WATER COSTS	15
FUTURE SERVICES	15
SUSTAINABLE DESIGN & IMPLEMENTATION	15
COMPLETED TASKS	16
<i>Phase 1: Identifying Objectives of Ownership</i>	16
<i>Phase 2: Inspection and Sustainability Analysis</i>	16
FUTURE TASKS	17
<i>Phase 3: Review and Refinement of Final Implementation Scope</i>	17
<i>Phase 4: Project Implementation and Management</i>	17
<i>Phase 5: Post-Project Evaluation</i>	17



INTRODUCTION LETTER

August 28, 2008

Dear Mr. Smith:

Thank you for your interest in *EcoHill Solutions* and our sustainable consulting services and solutions. *EcoHill* looks forward to providing the most innovative green retrofit solutions with the greatest return on investment. We believe conservation measures should never look like an afterthought. In fact, our design goal is to improve visitors' experience and elevate their perception of space while adding excitement to the aesthetics of your facility, when and where appropriate.

EcoHill goes beyond the scope of the common lighting design or electrical upgrades. We pledge to simplify and amplify your lighting assets by using the latest in sustainable lighting technologies to ensure you receive the perfect look for your space.

Recently, key members of the *EcoHill's* consulting staff visited your facility with the assistance of the building manager and engineer. We could see the pride and care taken to maintain such a valuable property. During our site visit, we noticed several real opportunities for energy, water, and maintenance savings in multiple areas of the property.

At your request, we have attached a Sustainable Building Assessment of recommended smart lighting solutions to decrease utilities costs, increase operating efficiency, and create the appropriate ambiance for your business and its prospective customers. In addition, we have included a water efficiency analysis and proposed recommendations on how to dramatically reduce your water usage. The document below includes calculations, charts, graphs and explanations that highlight the potential efficiency and aesthetic improvements that should be implemented at your facility as soon as possible. We would welcome the opportunity to finalize and implement a sustainable action plan for your facility, so your operation can begin reaping energy, water, and cost-cutting benefits as soon as possible.

EcoHill recognizes that you know your facility better than we ever will, which is why we are here to work with you and your facility's staff to develop innovative solutions that will yield the greatest economic results.

Best regards,

EcoHill Consulting Team



BUILDING ASSESSMENT SUMMARY

LIGHTING RETROFIT SUMMARY – Sample Project HOTEL

Financial Summary	
Project Savings (Revenues)	
Energy Savings (\$0.10 kWh)	\$24,753
Lamp Replacement Savings	\$3,141
Maintenance Savings	\$5,910
TOTAL SAVINGS	<u>\$33,803</u>
Project Costs (Expenses)	
Material Costs	\$32,653
Labor Costs	\$4,299
Disposal / Misc. Costs	\$2,590
TOTAL COSTS	<u>\$39,542</u>
NET SAVINGS (1st Year)	<u>-\$5,739</u>
Payback (years)	1.17
1 Year Return On Investment (ROI)	85.5%

Table 1 - Financial Summary

Capital Budgeting - Energy Savings									
Year	0	1	2	3	4	5	6	7	Total
Costs	-39,542	0	0	0	0	0	0	0	-\$39,542
Net Savings (5% kWh Increase)	-5,739	25,991	27,290	28,655	30,088	31,592	33,171	34,830	\$205,878
Discounted Cash Flows	-5,739	23,628	22,554	21,529	20,550	19,616	18,724	17,873	\$138,736
Rate =	10%								
NPV =	\$138,736								
IRR =	407.2%								

Table 2 - NPV & IRR



WATER RETROFIT SUMMARY – Sample Project HOTEL

Fixture Type	Fixture Quantity	Solution	Total Costs
Toilet	221	Tank Diverter - Reduces by 0.9 gpf	\$530.40
Bathroom Sink	221	Aerator - 0.5 gpm	\$265.20
Shower	221	Shower Head - 1.5 gpm	\$2,254.20
Total Fixtures	663		
TOTAL RETROFIT PRICE			\$3,049.80
TOTAL ANNUAL SAVINGS			\$3,288.32
Payback (years)			0.93
1 Year Return On Investment (ROI)			107.8%

Table 3 - Water Summary

ECOHILL OVERVIEW

EcoHill is proud to present a Sustainable Building Assessment for your facility. We strongly believe in providing the most complete assessment to ensure that property decisions are made based on realistic, accurate, and applicable information.

EcoHill's Mission Statement

The Mission of EcoHill is to listen and work with our clients to create, design, and implement sustainable, environmental, and innovative solutions that produce the greatest economic results.

Our mission is accomplished by:

- Continuously listening and working with our clients to meet and exceed their goals and objectives.
- Providing lighting / energy audits and analysis that are comprehensive, precise and practical.
- Constantly striving to meet our clients' demands by remaining sensitive to their goals, objectives and values.
- Supplying sustainable products that use innovative and cutting-edge technology and are proven to be energy efficient and environmentally responsible.
- Providing world class light design to improve the aesthetics of your facility while creating an extraordinary and striking business environment for customers and employees.

Most importantly, our staff is comprised of professionals who are dedicated to protecting our environment, and helping others committed to sustainability, achieve their environmental and social goals.

Lighting Retrofit Advantages

- 25% to 75% annual energy savings
- Lamp replacement and maintenance savings

EcoHill Solutions, LLC • 52 Aster Drive, Suite 1925, Schaumburg, IL 60173 • Phone: (312) 235-2225

www.EcoHillSolutions.com



- Reduction in total operating costs
- Reduction in lighting-generated heat and HVAC operating costs
- Reduction in kilowatt demand
- Improved employee productivity
- Better visual performance
- Improved facility aesthetics
- Positive impact on the environment
- Reduction in building's carbon footprint

ENERGY EFFICIENCY FINANCIAL INCENTIVES

As a green consulting company, one of our primary concerns is energy management, which has the potential to dramatically reduce a building's operating expenses. The development of new lighting technologies in recent years has created advanced solutions that make lighting one of the easiest low-hanging fruits in sustainable building design upgrades. One financial advantage of pursuing energy-efficient upgrades for commercial facilities is the Energy Policy Act of 2005 Tax Deduction of up to \$0.60 per square foot.

The Energy Policy Act of 2005 includes a tax incentive to improve the energy efficiency of commercial facilities. The *Commercial Building Tax Deduction* establishes a tax deduction for expenses incurred for energy efficient building upgrades made by a building owner. The deduction is limited to \$1.80 per square foot of the property, with allowances for partial deductions for improvements in interior lighting, building envelop, HVAC and hot water systems. The provision was effective for system upgrades that were put in service from January 1, 2006 through December 31, 2007, *but has been extended until December 31, 2008.*

ComEd Lighting Incentives – To encourage businesses to take advantage of advanced lighting technology and retrofit opportunities, ComEd is offering incentives that will generate an even larger return on energy investment and accelerate the payback period. Once the project is approved, incentive checks are usually mailed out within four to six weeks. Below is a table outlining the incentives currently offered by ComEd:

ComEd Lighting Incentives	
Equipment	Incentive Amounts
Screw-In Compact Fluorescent Lamps (CFLs)	Up to \$2 per lamp
Hardwired Fluorescent Fixtures	Up to \$50 per fixture
Permanent Lamp Removal	Up to \$16 per lamp
High Performance T-8 Retrofits & Electronic Ballasts	Up to \$10 per lamp
Pulse-Start & Ceramic Metal Halide Fixtures	Up to \$40 per fixture
Cold Cathode Lamps	\$3 per lamp
High-Efficiency Exit Signs	\$22 per fixture
Occupancy Sensors	Up to \$0.10 per watt controlled
New High-Performance T-8/T-5 Fixtures	Up to \$0.40 per watt reduction

Table 4 - ComEd Incentives

EcoHill Solutions, LLC • 52 Aster Drive, Suite 1925, Schaumburg, IL 60173 • Phone: (312) 235-2225

www.EcoHillSolutions.com



ComEd Lighting Incentives – Project			
Equipment	Max. Amounts	Quantity	Total
Screw-In Compact Fluorescent Lamps (CFLs)			
15w or Less	\$1.50		\$0
16w - 25w	\$1.50		\$0
25w or Greater	\$2.00		\$0
Hardwired Fluorescent Fixtures			
29w or Less	\$25.00		\$0
30w or Greater	\$50.00		\$0
Permanent Lamp Removal (Pre-Approval)			
Remove 4-foot Lamp	\$6.00		\$0
Remove 8-foot Lamp	\$8.00		\$0
Remove 4-foot Lamp with Reflector	\$12.00		\$0
Remove 8-foot Lamp with Reflector	\$16.00		\$0
High Performance 4-foot T8			
4-foot Lamp & Ballast	\$7.00		\$0
Reduced Wattage 4-foot T8			
4-foot Lamp & Ballast	\$7.00		\$0
4-foot Lamp Only	\$1.00		\$0
Reduced Wattage 8-foot T8			
8-foot Lamp & Ballast	\$10.00		\$0
8-foot Lamp Only	\$1.00		\$0
Metal Halide Fixtures - Pulse Start or Ceramic			
100w or Less	\$20.00		\$0
101w - 200w	\$35.00		\$0
201w - 350w	\$40.00		\$0
Cold Cathode			
Cold Cathode Lamp	\$3.00		\$0
High Efficiency Exit Signs			
LED, T-1, or Electroluminescent Replacement	\$22.00		\$0
LED Retrofit	\$17.00		\$0
Lighting Controls (Watts Controlled)			
Occupancy Sensors	\$0.10		\$0
New T-8/T-5 Fixtures (Watt Reduction)			
(Total Existing Fixture Watts) Less (Total New Fixture Watts)	\$0.40		\$0
ESTIMATED TOTAL INCENTIVES			\$0
Retrofit Price			\$0
Retrofit Savings			#DIV/0!
Retrofit Price Less Incentives			\$0
Payback (years)			#DIV/0!
1 Year Return On Investment			#DIV/0!

Table 5 - Project Incentives

EcoHill Solutions, LLC • 52 Aster Drive, Suite 1925, Schaumburg, IL 60173 • Phone: (312) 235-2225

www.EcoHillSolutions.com



LIGHTING SOLUTIONS - SCOPE OF WORK

From the selected property outlined in the work order, *EcoHill* has identified lighting areas that can yield substantial cost savings through sustainable lighting improvements and solutions. An extensive analysis was conducted to yield specifications, options, pricing, and ROI calculations. *EcoHill* has provided a detailed assessment that outlines the project management and implementation of the approved lighting specifications for designated areas and/or the whole property. Follow-up analysis and maintenance options also are discussed.

Initial Project Goals

- Reduce lighting energy load and utility costs while increasing the value of the facility.
- Upgrade lighting fixtures to dramatically improve the look and feel of the facility.
- Decrease heat generated by lighting and decrease HVAC cooling demand.
- Develop evenly-lit spaces that meet IESNA illumination standards and reduce glare.
- Improve lighting quality, color temperature and color rendering index (CRI) of work spaces.
- Automation of lighting systems to create the maximum operating efficiency.

Proposed Lighting Solutions

We have completed our evaluation and have developed some impressive energy-saving lighting solutions that will greatly enhance the curb appeal of the subject properties. In addition, the purpose for this proposal is to not only cut energy and maintenance expenses, but to improve the aesthetic appearance of the common spaces and work areas for employees. This proposal features some of the latest lighting technology such as Light Emitting Diodes (LED) and Dimmable Compact fluorescents. All product selected is UL approved. We would enjoy the opportunity to perform all of the recommendations and welcome any questions you might have before making a decision on how to proceed.

- ✓ The objectives of the other proposed lighting solutions are to reduce and, if possible, eliminate T12 lamp and incandescent light bulbs on the property. These solutions will have a dramatic effect on energy consumption and costs.



Project Savings

Energy, Lamp Replacement, & Maintenance Savings								
ID	Fixture Reference	Quantity	Current Annual Lighting Energy Costs	Retrofit Annual Lighting Energy Costs	Annual Energy Savings	Annual Lamp Replacement Savings	Annual Maintenance Savings	Total Annual Savings
R1	1x3x1	29	\$1,165	\$684	\$481	\$0	\$26	\$507
R2	1x4x1	36	\$1,510	\$881	\$629	\$0	\$32	\$661
R3	1x4x2 -12 Hour	51	\$1,827	\$1,002	\$824	-\$1	\$51	\$874
R4	1x4x2 - 24 Hour	79	\$11,318	\$3,106	\$8,213	\$36	\$438	\$8,687
R5	Cans - 4 Hours	8	\$73	\$7	\$66	\$37	\$42	\$145
R6	Cans - 16 Hours	58	\$1,689	\$169	\$1,520	\$673	\$757	\$2,950
R7	Cans - 24 Hours	40	\$1,747	\$175	\$1,572	\$695	\$790	\$3,057
R8	Cans - PAR 38	20	\$156	\$29	\$127	\$36	\$48	\$210
R9	Cans - PAR 30 4 Hour	89	\$602	\$130	\$472	\$184	\$212	\$868
R10	Cans - PAR 30 16 Hour	25	\$874	\$204	\$670	\$208	\$222	\$1,100
R11	Cans - R20 4 Hour	26	\$135	\$14	\$122	\$57	\$75	\$254
R12	Cans - A19	270	\$821	\$291	\$531	-\$39	\$642	\$1,134
R13	Wall Sconce	50	\$874	\$175	\$699	\$243	\$431	\$1,372
R14	Parking/Outside	50	\$10,243	\$5,788	\$4,455	-\$354	\$28	\$4,129
R15	Landscaping	130	\$4,259	\$568	\$3,691	\$1,352	\$1,697	\$6,740
R16	Rope Light	300	\$786	\$105	\$681	\$14	\$420	\$1,114
Total		1261	\$38,078	\$13,325	\$24,753	\$3,141	\$5,910	
TOTAL RETROFIT SAVINGS								\$33,803
Percentages					73.2%	9.3%	17.5%	

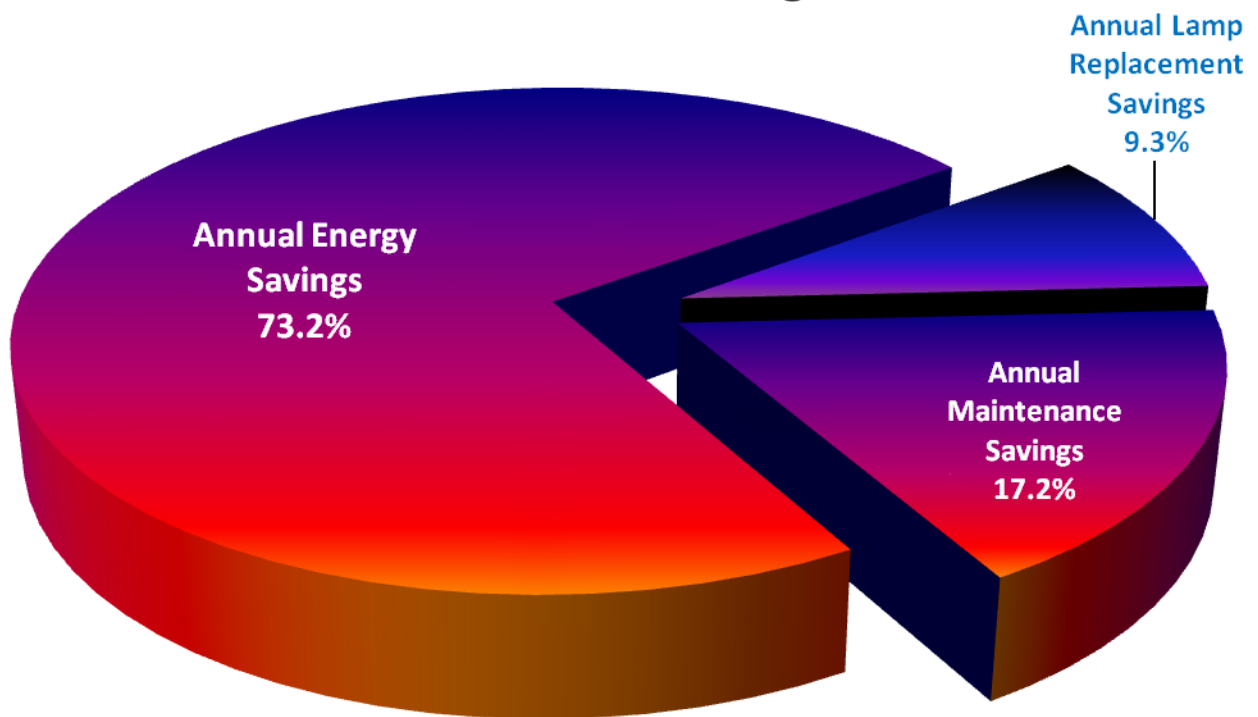
Table 6 - Savings Summary

Type	Yearly	Monthly	Weekly	Daily
Energy Savings (\$)	\$24,753	\$2,063	\$476	\$68
Kilowatt Hour Saving (kWh)	247,531	20,628	4,760	678
Carbon Savings (Kg CO₂)	139,112	11,593	2,675	381

Table 7 - Environmental Savings



Total Annual Savings





Project Costs

Lighting Retro-Fit Costs						
ID	Fixture Reference	Retrofit Lamp	Fixture Quantity	Total Costs	Total Annual Savings	1 Year ROI
R1	1x3x1	T8 3ft 28w	29	\$752	\$507	67.4%
R2	1x4x1	T8 4ft 28w	36	\$967	\$661	68.3%
R3	1x4x2 -12 Hour	T8 28w	51	\$1,720	\$874	50.8%
R4	1x4x2 - 24 Hour	T8 28w	79	\$2,862	\$8,687	303.5%
R5	Cans - 4 Hours	LED MR16	8	\$320	\$145	45.2%
R6	Cans - 16 Hours	LED MR16	58	\$2,284	\$2,950	129.2%
R7	Cans - 24 Hours	LED MR16	40	\$1,600	\$3,057	191.1%
R8	Cans - PAR 38	CFL-R	20	\$525	\$210	40.0%
R9	Cans - PAR 30 4 Hour	CFL-R	89	\$1,669	\$868	52.0%
R10	Cans - PAR 30 16 Hour	CFL-R	25	\$469	\$1,100	234.7%
R11	Cans - R20 4 Hour	R20 LED	26	\$650	\$254	39.1%
R12	Cans - A19	Dimm. CFLs	270	\$4,388	\$1,134	25.9%
R13	Wall Sconce	LED BiPin	50	\$1,813	\$1,372	75.7%
R14	Parking/Outside	Pulse Start MH	50	\$15,500	\$4,129	26.6%
R15	Landscaping	Par 38 LED	130	\$3,088	\$6,740	218.3%
R16	Rope Light	LED Per Foot	300	\$938	\$1,114	118.9%
Total Number of Fixtures			1261			
				Sales Tax		
TOTAL RETRO-FIT PRICE				\$39,542		
TOTAL ANNUAL SAVINGS				\$33,803		
Payback (years)				1.17		
1 Year Return On Investment (ROI)				85.5%		

Table 8 - Cost Summary

The labor charges are based on completing all tasks in one project, not as several projects covering an extended time frame. Pricing is also based on current marketplace prices and are subject to change. Prices quoted here are guaranteed for 30 days only. EcoHill reserves the right to replace any materials presented in this proposal with materials that are considered to be of equal or better quality, performance and/or efficiency.



Project Details

Below is a list of the current lighting systems that are installed at your facility and the recommended energy-saving lighting retrofit solutions by fixture type:

Current Lighting System					Retrofit Lighting System				
ID	Fixture Reference	Ballast	Lamp	Total Watts	ID	Fixture Reference	Ballast	Lamp	Total Watts
C1	1x3x1	Magnetic	T12 3ft	46	R1	1x3x1	Electronic	T8 3ft 28w	27
C2	1x4x1	Magnetic	T12 4ft	48	R2	1x4x1	Electronic	T8 4ft 28w	28
C3	1x4x2 -12 Hour	Magnetic	T12	82	R3	1x4x2 -12 Hour	Electronic	T8 28w	45
C4	1x4x2 - 24 Hour	Magnetic	T12	82	R4	1x4x2 - 24 Hour	Electronic	T8 28w	45
C5	Cans - 4 Hours	0	MR16 12V	50	R5	Cans - 4 Hours	0	LED MR16	5
C6	Cans - 16 Hours	0	MR16 12V	50	R6	Cans - 16 Hours	0	LED MR16	5
C7	Cans - 24 Hours	0	MR16 12V	50	R7	Cans - 24 Hours	0	LED MR16	5
C8	Cans - PAR 38	0	PAR 38	75	R8	Cans - PAR 38	0	CFL-R	14
C9	Cans - PAR 30 4 Hour	0	PAR30 Halogen	65	R9	Cans - PAR 30 4 Hour	0	CFL-R	14
C10	Cans - PAR 30 16 Hour	0	PAR30 Halogen	60	R10	Cans - PAR 30 16 Hour	0	CFL-R	14
C11	Cans - R20 4 Hour	0	R20 Halogen	50	R11	Cans - R20 4 Hour	0	R20 LED	5
C12	Cans - A19	0	Incand. A19	65	R12	Cans - A19	0	Dimm. CFLs	23
C13	Wall Sconce	0	CFT9W/G23 /27	20	R13	Wall Sconce	0	LED BiPin	4
C14	Parking/Outside	0	HP Sodium	469	R14	Parking/Outside	0	Pulse Start MH	265
C15	Landscaping	0	PAR 38	75	R15	Landscaping	0	Par 38 LED	10
C16	Rope Light	0	Incand. Per Foot	6	R16	Rope Light	0	LED Per Foot	0.8

Figure 1 - Current vs. Retrofit



WATER SOLUTIONS – SCOPE OF WORK

Proposed Water Solutions

For hotel guest rooms, there are substantial opportunities to reduce water consumption and the costs associated with this water usage. The proposed water solutions are retrofits of the current plumbing fixtures, which will create the best value and highest return on investment (ROI) compared to total plumbing fixture replacement. We were extremely conservative in our water analysis because the water costs do not include the associated sewage fees. The details of the sustainable water solutions are proposed below:

- ✓ **Tank Toilets** – Install tank water diverters that reduce the gallons per flush by approximately 25 percent. The current tank toilets are 3.5 gallons per flush (gpf), which will be reduced to 2.6 gallons per flush (gpf).
- ✓ **Bathroom Sinks** – Install faucet aerators that will reduce water usage from 2.2 gallons per minute (gpm) to 0.5 gallons per minute (gpm).
- ✓ **Shower Heads** – Install water efficient shower heads that reduce water consumption from 2.5 gallons per minute (gpm) to 1.5 gallons per minute (gpm).

Project Retrofit Summary

Fixture Type	Fixture Quantity	Solution	Total Costs
Toilet	221	Tank Diverter - Reduces by 0.9 gpf	\$530.40
Bathroom Sink	221	Aerator - 0.5 gpm	\$265.20
Shower	221	Shower Head - 1.5 gpm	\$2,254.20
Total Fixtures	663		
TOTAL RETROFIT PRICE			\$3,049.80
TOTAL ANNUAL SAVINGS			\$3,288.32
Payback (years)			0.93
1 Year Return On Investment (ROI)			107.8%

Table 9 - Water Summary

Prices quoted here are guaranteed for 30 days only and do not include the costs associated with installation.



Water Usage

IPC 2006 Baseline	Fixture	Daily Use	Flowrate (gallons per use)	Duration (minutes)	Occupancy Rate (%)	Occupants (1.5 per room)	Water Usage (gallons)	Baseline 100%
	Toilet	2	1.6	1	69.1%	229	733	
	Bathroom Sink	3	0.5	1	69.1%	229	344	
	Shower	1	2.5	5.3	69.1%	229	3,037	
Total Gallons Per Day							4,114	Baseline 100%
Total Annual Water Usage (365 days)							1,501,690	
Current Fixtures	Fixture	Daily Use	Flowrate (gallons per use)	Duration (minutes)	Occupancy Rate (%)	Occupants (1.5 per room)	Water Usage (gallons)	Baseline 150%
	Toilet	2	3.5	1	69.1%	229	1,604	
	Bathroom Sink	3	2.2	1	69.1%	229	1,513	
	Shower	1	2.5	5.3	69.1%	229	3,037	
Total Gallons Per Day							6,154	Baseline 150%
Total Annual Water Usage (365 days)							2,246,260	
EcoHill Retrofit	Fixture	Daily Use	Flowrate (gallons per use)	Duration (minutes)	Occupancy Rate (%)	Occupants (1.5 per room)	Water Usage (gallons)	Baseline 82%
	Toilet	2	2.6	1	69.1%	229	1,192	
	Bathroom Sink	3	0.5	1	69.1%	229	344	
	Shower	1	1.5	5.3	69.1%	229	1,822	
Total Gallons Per Day							3,358	Baseline 82%
Total Annual Water Usage (365 days)							1,225,613	

Table 10 - Water Usage



Water Costs

Current Annual Water Costs					
Current Fixtures	Fixture	Daily Usage (1,000 Gal.)	Price (1,000 gallons)	Daily Cost	Annual Cost
	Toilet	1.604	\$3.22	\$5.17	\$1,886.74
	Bathroom Sink	1.513	\$3.22	\$4.87	\$1,778.93
	Shower	3.037	\$3.22	\$9.78	\$3,571.33
	Total	6.154		\$19.83	\$7,237.00
Retrofit Annual Water Costs					
EcoHill Retrofit	Fixture	Daily Usage (1,000 Gal.)	Price (1,000 gallons)	Daily Cost	Annual Cost
	Toilet	1.192	\$3.22	\$3.84	\$1,401.58
	Bathroom Sink	0.344	\$3.22	\$1.11	\$404.30
	Shower	1.822	\$3.22	\$5.87	\$2,142.80
	Total	3.358		\$10.82	\$3,948.68

Table 11 - Water Costs

EcoHill will explore other areas to conserve water, but more accurate water usage information is needed to create a fair analysis and assessment. The other areas of focus will be landscape irrigation and food service water fixtures, which are a large part of the hotel's overall water usage. This analysis will be presented in Section 2 of our proposal.

FUTURE SERVICES

- LEED certification and management
- Irrigation water-efficiency analysis
- Building envelope assessment
- Indoor air quality analysis
- HVAC-R evaluation
- Building automation (DDC)
- Wind and solar power generating equipment

SUSTAINABLE DESIGN & IMPLEMENTATION

EcoHill will conduct the following to produce a comprehensive lighting retrofit implementation plan, which will improve energy consumption and reduce the building's impact on the environmental. The project phases are outlined below:



Completed Tasks

Phase 1: Identifying Objectives of Ownership

EcoHill will work directly with the building owner and asset managers to determine the main lighting objectives for a given building section and/or entire development. A schedule of evaluations will be created to track progress. *EcoHill* will coordinate with all members of the property's team to execute the necessary steps to move forward in the lighting evaluation process.

Deliverable: Proposed meeting and inspection schedule, along with work flow documentation for the property under consideration.

Phase 2: Inspection and Sustainability Analysis

EcoHill will conduct a site visit to a candidate property that will include a complete site walk-through of any or all outer parking areas, common areas, major tenant space and smaller tenant spaces where time allows. Evaluation will require roof and physical plant access, where possible.

Deliverable: An Observation & Sustainability Report will be provided, which will consist of general conditions, energy savings opportunities and light solution costs.

Physical review: Soft count of fixtures and lamps, physical plant systems, roof, water use, both internal and external, and site layout and design. Extensive access to property will be required. Utility bills will be consolidated to build a baseline of current systems and create future energy use projections.

Analysis: The site walk-through will be analyzed by the consulting team for lighting solutions that will meet corporate sustainability goals by increasing energy efficiency and reducing environmental impacts.

Site Analysis Costs: Site walk-through and lighting sustainability analysis will range from \$500 to \$3,000 per building, depending on the size of the development. Discounts will be applied to multiple buildings on the same site.

Travel Expenses: For developments located more than 50 miles from our downtown Chicago office, additional travel expenses will apply. Travel expenses will include car rental and gas, air travel, and hotel rooms. The expenses will vary by the development location. All other travel expenses will be covered by *EcoHill*.

Substitute Property: Minimum energy savings will be considered as a prerequisite for conducting a comprehensive analysis. If a property does not conform to *EcoHill* standards for minimum energy savings, the client will have an opportunity to substitute a secondary property at the cost of additional travel expenses. If no substitute properties exist, the client will be refunded the site analysis costs.

Note: Staff cooperation: Where and when necessary, EcoHill will be provided access to tenant space, roof, ceilings and necessary utility bills. Additional time and material charges will apply if resources and access are not provided by local property team.



Future Tasks

Phase 3: Review and Refinement of Final Implementation Scope

EcoHill will review the comprehensive analysis provided in Phase 2 with the building team to further narrow the sustainable building options that best suit the objectives and budget of the client company.

Deliverable: Complete explanation and specific details of the sustainable lighting solutions approved by the client company.

Final Costs: The total costs of the approved sustainable lighting solutions will be finalized, and a contract will be signed to start the implementation process.

Phase 4: Project Implementation and Management

Upon the mutual approval of the lighting solutions plan between *EcoHill* and the client company, *EcoHill* will schedule and provide complete turn-key implementation of the Phase 3 specifications and scope of work, which will include the following operations:

- Product procurement
- Permitting (when needed)
- Sub-contractor bid coordination (when needed)
- Installation, oversight and management
- Certified disposal and waste recycling
- Final inspection for quality control

Deliverable: Completed turn-key project delivered in an expeditious manner with the utmost integrity of design and implementation.

Estimated billable timetable: 50% of the project invoice will be paid before starting the implementation of the project; 50% of the project invoice will be paid at the completion of the project.

Phase 5: Post-Project Evaluation

EcoHill will provide a post-evaluation of the project to verify that the client is satisfied with the work and to address any concerns or problems. In addition, a lamp-purchasing contract will be implemented between *EcoHill* and the client to offer the client the best value when purchasing replacement lamps.

