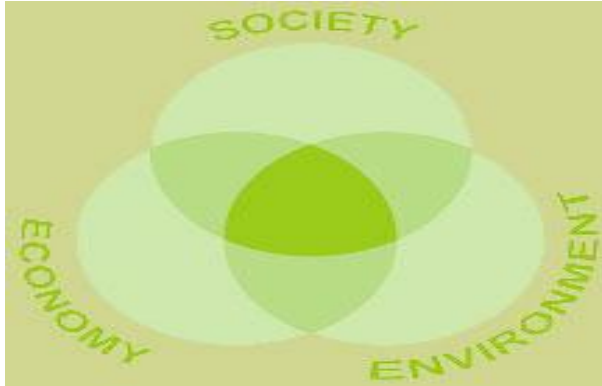




CARIBBEAN
HOTEL & TOURISM
ASSOCIATION

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Sustainability Webinar Series

March 24, 2015

SPONSORS & SPEAKERS



Kevin A. Goldstein is the President of HVS Energy & Sustainability, which provides a range of business-driven consultancy services that enable hospitality firms to enhance efficiency, maximize profitability, and demonstrate a positive commitment to the environment to their stakeholders and investors. Prior to joining HVS, Kevin worked in destination development throughout the Caribbean region, as well as in public policy.



HVS Energy & Sustainability works with hotel owners and operators to reduce utility costs through diligent facility management and informed, strategic investment into building equipment. We adapt our approach on an asset-by-asset basis and focus on the provision of financially-viable recommendations that can be immediately incorporated into both operational and capital plans for a particular property.

LEARNING OBJECTIVES

Reducing Utility Costs at Hotel and Resort Properties in the Caribbean Region

- Hoteliers who focus on controlling their utility consumption have a distinct operating advantage through improved P&L performance
- It is routinely possible to reduce utility line item costs by 5% – 25% through a combination of enhanced operating practices and ROI investment into building equipment
- We will walk meeting participants through a range of individual operating strategies and ROI projects, including typical financials
- We will provide thoughts and recommendations on how to execute these projects at hotels in the Caribbean region

PRIMARY BUSINESS DRIVER – THE BOTTOM LINE

HVS Analysis and Findings

- Hotels that focus on energy-efficiency have utility costs that are 5 – 25% lower than their competitors.
- This translates to an improvement in GOP of up to 2%, which in turns provides for more valuable assets.

Item	Description	Typical Savings
<i>No-Cost Strategies</i>	Operational best management practices, contractual re-negotiation, etc.	0 - 5%
<i>Low-Cost Strategies</i>	Rapid-payback, low-risk equipment upgrades that can be funded within annual operating budgets	5 - 10%
<i>Capital Projects</i>	More significant building equipment retrofits	10 - 25%

SECONDARY BUSINESS DRIVERS

Ancillary Benefits

- **Risk Mitigation** (Rising Commodity Rates, P&L Competitiveness, Failure of Building Equipment, etc.)
- Improved **Guest and Employee Comfort** through improved HVAC equipment
- Enhanced **Owner Relations** for operators
- **Corporate Responsibility** (e.g. investor confidence, employee morale, recruitment/retention, etc.)
- **Enhanced Marketability** for corporate / meeting clientele that request evidence of sustainability as a component of RFP process.



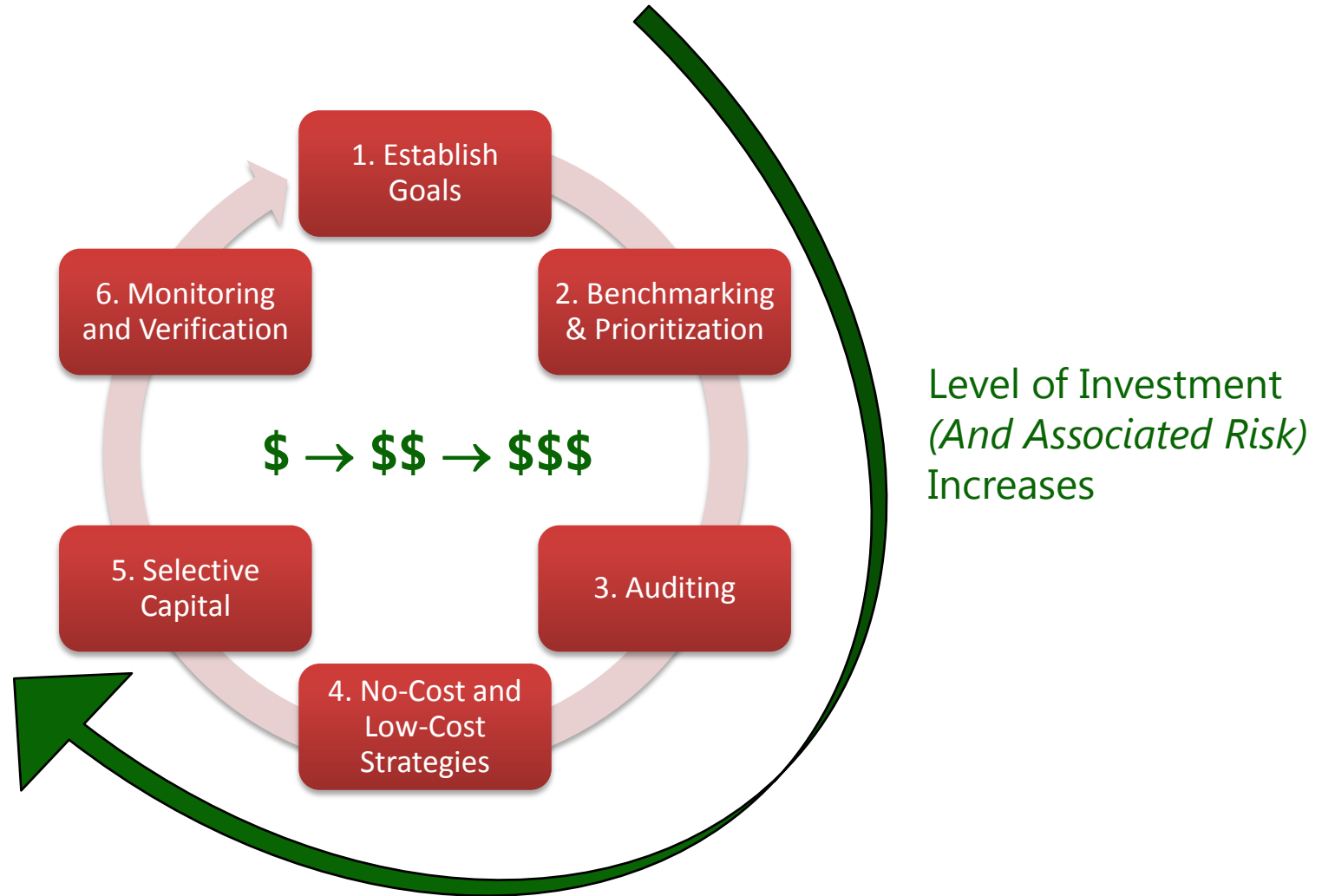
PHILOSOPHICAL APPROACH

HVS Recommends a Phased Approach to Mitigate Risk



PHILOSOPHICAL APPROACH

HVS Recommends a Phased Approach to Mitigate Risk



STEP 1: DEFINE GOALS

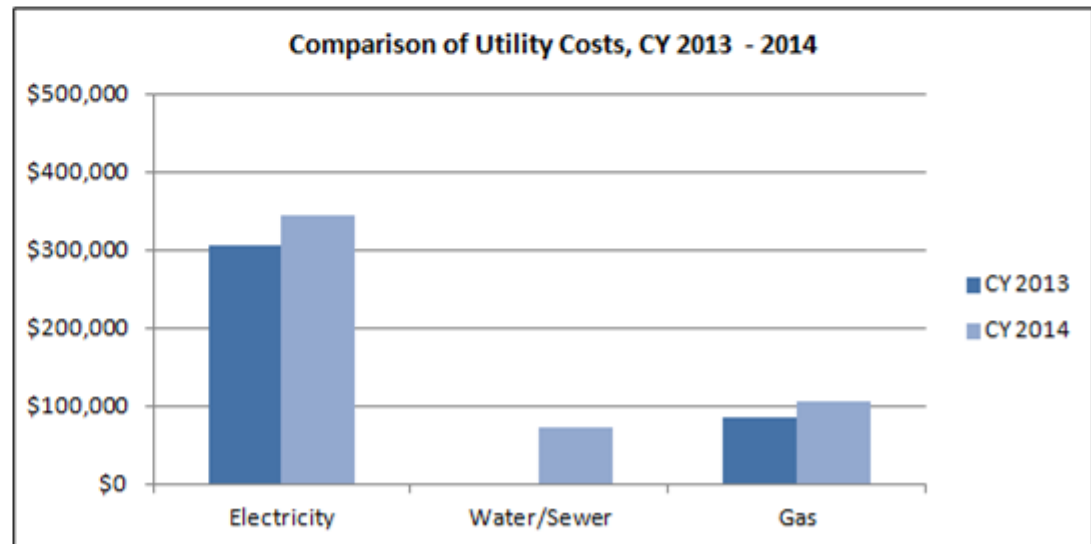
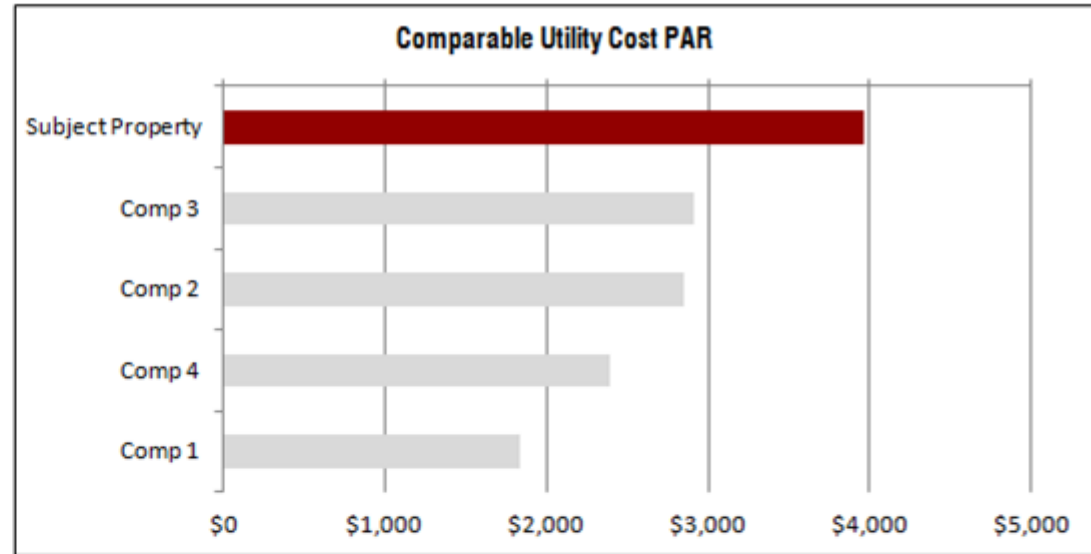
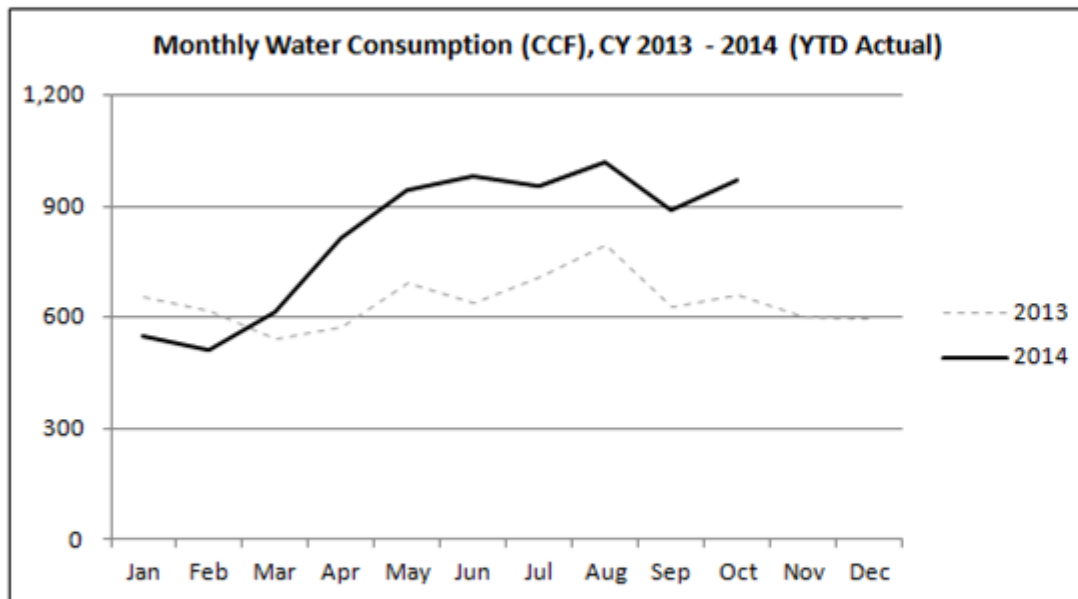
Questions for Owners and Operators to Contemplate...

- What are we trying to accomplish?
 - *E.g. P&L improvement, hedge against inflating utility costs, respond more competitively to meeting RFPs, enhance guest experience, etc.*
- What is the ownership objective for the asset?
- What are our investment criteria?
- Can we realize economies of scale by combining with other efforts? (e.g. renovations, equipment servicing, planned closures)
- Do we have internal alignment on the goals between owner, operator, and any third parties (e.g. consultants, contractors, etc)?



STEP 2: BENCHMARKING AND PRIORITIZATION

Sample Metrics



STEP 3: ENERGY AUDITING

Issues to Consider

- Can we undertake this internally, or do we need out of house expertise?
- If out of house –
 - Have we thoroughly reviewed the qualifications and experience of the firm? Do they understand hospitality? Do they understand construction?
 - Are they sending the right individuals?
 - Will they look at other utilities (e.g. water and sewerage) and waste / recycling?
 - Will their report be presented in a format that supports rapid business decision making?



STEP 4: TYPICAL NO COST STRATEGIES



Control of Cooking Gas
Savings: \$100/yr



Dirty Refrigeration Coils
Savings: \$125/yr



Use of Water to Defrost Food
Savings: \$450/yr



Faucet Aerators
Savings: \$2,400/yr



Manual Turn-Down of Lights
Savings: \$3,300/yr



Renegotiate Contracts
Savings: \$18,000/yr

STEP 4: TYPICAL LOW COST STRATEGIES (1/2)



Lighting Controls

Cost: \$300

Incentive: \$50

Net Cost: \$250

Annual Savings: \$125

Simple Payback: 2.0 years



Group Flapper Replacement

Cost: \$400

Incentive: \$0

Net Cost: \$400

Annual Savings: \$2,800

Simple Payback: 0.1 years



Water Cooled HVAC

Cost: \$3,800

Incentive: 0

Net Cost: \$250

Annual Savings: \$12,000

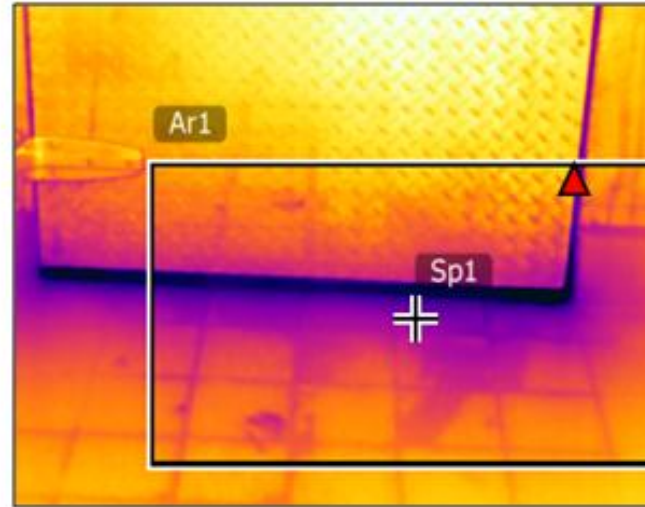
Simple Payback: 0.3 years

STEP 4: TYPICAL LOW COST STRATEGIES (2/2)



Showerhead Retrofits

Cost: \$6,250
Incentive: \$1,250
Net Cost: \$5,000
Annual Savings: \$3,200
Simple Payback: 1.6 years



Walk-In Door Repair

Cost: \$100
Incentive: \$0
Net Cost: \$100
Annual Savings: \$170
Simple Payback: 0.6 years



Leak Detection

Cost: \$3,800
Incentive: \$0
Net Cost: \$3,800
Annual Savings: \$15,500
Simple Payback: 0.2 years

STEP 5: CAPITAL ROI PROJECTS



LED Lighting Retrofits

Cost: \$92,000
Incentive: \$18,500
Net Cost: \$73,500
Annual Savings: \$28,000
Simple Payback: 2.6 years



Demand-Responsive Ventilation

Cost: \$44,000
Incentive: \$8,000
Net Cost: \$36,000
Annual Savings: \$16,000
Simple Payback: 2.3 years



Cooling Tower Replacement

Cost: \$120,000
Incentive: \$52,000
Net Cost: \$68,000
Annual Savings: \$18,600
Simple Payback: 3.7 years

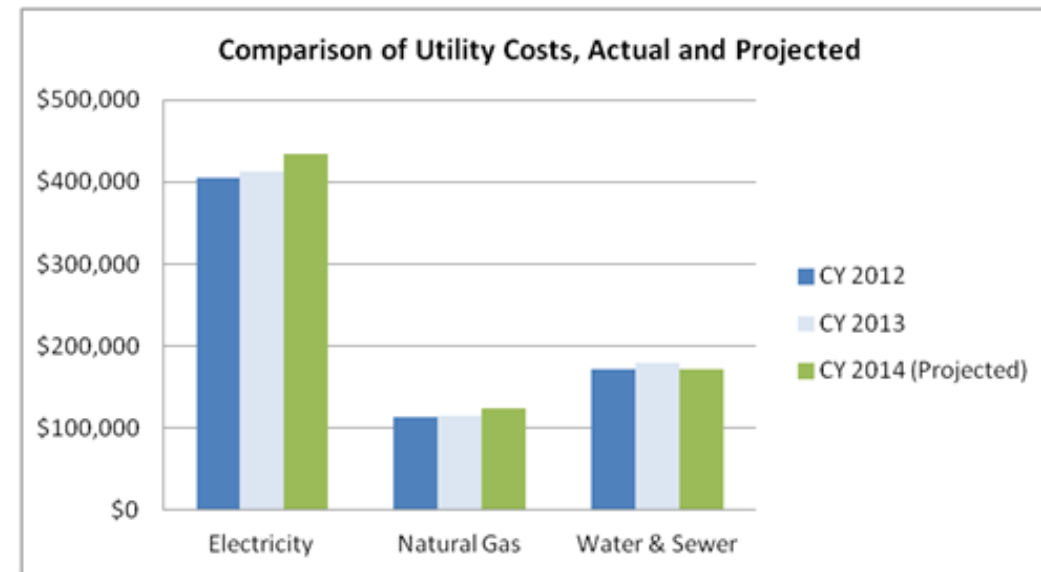
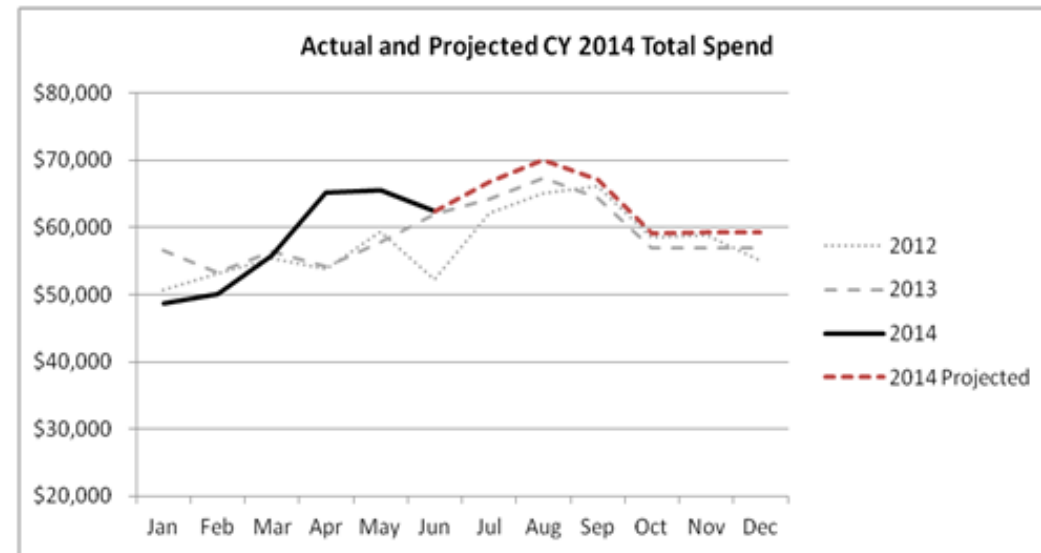
TYPICAL ENERGY AUDIT RESULTS (FROM STEPS 3 – 5)

Typical Summary of ROI Opportunities

Number	Measure	Description	Annual Savings (\$)	Estimated Project Cost (\$)	Estimated Incentive (\$)	Net Project Cost (\$)	Simple ROI (Yrs)
No Cost Measures							
ECM 1	Natural Gas Procurement	Request competitive quotes for the procurement component of natural gas supply	\$3,975	\$0	\$0	\$0	n/a
ECM 2	Laundry Scheduling	Shift laundry operation to overnight for off-peak electric rates	\$4,250	\$0	\$0	\$0	n/a
Low Cost Measures							
ECM 3	Hot Tub Cover	Procure a hot tub cover for use overnight to prevent evaporation and energy loss	\$353	\$500	\$0	\$500	1.4
ECM 4	Pool Pump Conversion to Variable Speed	Convert constant speed pool and hot tub pumps to variable speed units	\$1,104	\$3,200	\$750	\$2,450	2.2
ECM 5	Vending Machine Controls	Install vending misers to regulate lighting and compressor cycling	\$1,321	\$2,280	\$600	\$1,680	1.3
Capital Improvements (Preliminary Analysis)							
ECM 6	Lighting (Common Areas)	Replace common area lighting with LED	\$10,933	\$29,600	\$8,950	\$20,650	1.9
ECM 7	Lighting Controls	Install lighting controls in multiple front of house areas (subject to relamping w/ LED)	\$3,426	\$14,100	\$2,045	\$12,055	4.1
		Install lighting controls in <u>typical</u> back of the house space with low utilization	\$147	\$200	\$35	\$165	1.1
		Install lighting controls in <u>typical</u> back of the house space with high utilization	\$113	\$200	\$35	\$165	1.5
ECM 8	Guest Bathroom Exhaust/ MAU Unit Replacement and Rebalancing	Replace guest bathroom exhaust fans and MAU with 25 CFM units per code allowance	\$9,800	\$36,500	TBD	\$36,500	3.7

STEP 6: ONGOING MONITORING & VERIFICATION

Total Utility Spend Per Month				
Sample Hotel, Anytown, USA				
Period	Electricity	Natural Gas	Water & Sewer	Total Cost/Month
Jan-12	\$27,678	\$12,292	\$10,630	\$50,600
Feb-12	\$29,811	\$11,437	\$11,812	\$53,058
Mar-12	\$28,261	\$12,298	\$14,709	\$55,269
Apr-12	\$30,752	\$10,059	\$12,928	\$53,739
May-12	\$33,873	\$9,604	\$15,862	\$59,339
Jun-12	\$36,311	\$1,033	\$14,826	\$52,170
Jul-12	\$38,656	\$6,435	\$14,975	\$62,066
Aug-12	\$39,440	\$8,210	\$17,432	\$65,082
Sep-12	\$41,488	\$8,819	\$15,737	\$66,044
Oct-12	\$34,073	\$10,715	\$13,847	\$58,435
Nov-12	\$34,060	\$9,570	\$15,181	\$58,811
Dec-12	\$30,067	\$11,215	\$13,730	\$55,012
Annual Total or Avg.	\$404,492	\$113,687	\$171,470	\$689,648
Var. to Prev Annual	n/a	n/a	n/a	n/a
Jan-13	\$30,260	\$12,420	\$13,970	\$56,650
Feb-13	\$29,115	\$9,935	\$14,177	\$53,228
Mar-13	\$30,171	\$10,025	\$16,225	\$56,421
Apr-13	\$32,102	\$9,260	\$12,767	\$54,129
May-13	\$36,333	\$6,460	\$12,942	\$55,735
Jun-13	\$37,200	\$6,116	\$18,684	\$62,000
Jul-13	\$40,483	\$8,024	\$15,712	\$64,219
Aug-13	\$42,256	\$7,718	\$17,327	\$67,301
Sep-13	\$38,023	\$8,161	\$18,253	\$64,437
Oct-13	\$32,105	\$9,349	\$15,388	\$56,842
Nov-13	\$32,896	\$10,624	\$13,410	\$56,930
Dec-13	\$32,119	\$15,153	\$9,697	\$56,969
Annual Total or Avg.	\$413,064	\$115,245	\$178,551	\$706,860
Var. to Prev Annual	2.1%	1.4%	4.1%	2.5%
Jan-14	\$29,716	\$13,176	\$5,810	\$48,706
Feb-14	\$31,434	\$12,222	\$6,466	\$50,122
Mar-14	\$32,127	\$11,363	\$12,350	\$55,841
Apr-14	\$35,263	\$9,819	\$20,132	\$65,235
May-14	\$40,324	\$9,175	\$16,091	\$65,590
Jun-14	\$39,133	\$6,213	\$17,046	\$62,393
Jul-14	\$0	\$0	\$0	\$0
Aug-14	\$0	\$0	\$0	\$0
Sep-14	\$0	\$0	\$0	\$0
Oct-14	\$0	\$0	\$0	\$0
Nov-14	\$0	\$0	\$0	\$0
Dec-14	\$0	\$0	\$0	\$0
Annual Total or Avg.	\$208,019	\$61,970	\$77,897	\$347,886
Var. to Prev Annual	6.6%	10.2%	-12.2%	2.3%



CASE STUDY

Upper Upscale Full Service Boutique Hotel (<150 rooms), U.S. Major City

- **Annual Utility Reductions**

- Electricity – 395,000 kWh
- Natural Gas – 8,700 therms
- Water/Sewer – 1,104,000 gallons
- Waste Cost Reduction – 70% savings

- **P&L Impact**

- **USD \$75,000 savings per year, or a 25% reduction in utility costs**
- **Improvement to GOP margin of over 1%.**

- **Investment Synopsis**

- Final ROI: **\$230k net investment / \$75k annualized savings = 3.1 yr simple payback**
- Over \$100k in incentives secured to offset capital cost
- Apply a market-appropriate capitalization rate to the savings – @7cap, **over \$USD 1M in value has been created**

UNDISTRIBUTED OPERATING EXPENSES				
Administrative & General	522	8.5%	3,000	11.07
Marketing	463	7.5%	2,661	9.82
Prop. Operations & Maintenance	314	5.1%	1,805	6.66
Utilities	225	3.7%	1,293	4.77
Total	1,524	24.8%	8,759	32.33
HOUSE PROFIT	3,087	50.2%	17,741	65.49
Management Fee	185	3.0%	1,063	3.92
INCOME BEFORE FIXED CHARGES	2,902	47.2%	16,678	61.57
FIXED EXPENSES				
Property Taxes	94	1.5%	540	1.99
Insurance	49	0.8%	282	1.04
Incentive Management Fee	68	1.1%	391	1.44
Reserve for Replacement	246	4.0%	1,414	5.22
Total	457	7.4%	2,626	9.70
NET INCOME	2,445	39.7%	14,052	51.87

GENERAL RECOMMENDATIONS FOR PROJECT EXECUTION

Review of HVS-Recommended Best Practices

- Messaging to owners / engaging owners early in the process
- In-house versus out-of-house skills and competencies
- Stringent, defensible project underwriting
 - A strong engineering foundation
 - Vendor-agnostic approach
- Be thorough yet cautious regarding incentives and subsidies
- Retain control over project design to ensure the project conforms to owner/operator objectives and to solicit “apples to apples” contractor bids
- Strong construction management



SPECIFIC GUIDANCE FOR THE CARIBBEAN REGION

Key Implementation Considerations

- *Due Diligence*
 - Identifying a project execution team
- *Underwriting*
 - Accurate project cost estimation
 - Reducing first cost via negotiations with governments
- *Alternative Financing (PPAs, On-bill, etc.)*
 - Evaluate the cost/benefit before proceeding
- *Preconstruction*
 - Novel contracting mechanisms when a pool of competitive bidders is not available
- *Construction*
 - Keeping projects on time and on budget with minimal change orders



OUTLOOK FOR ENERGY PROJECTS IN THE CARIBBEAN REGION

Supporting Factors

- Very high commodity rates
- Aging building stock / high probability for ROI projects
- Seasonal occupancy patterns support reducing energy use intensity during non-peak season
- Alternative energies should be viable based on geographic location and climate



Challenges / Constraints

- Lack of available comp set data on utility consumption and costs
- Lack of diversity amongst local engineers and contractors can result in high project costs
- International procurement / shipping / logistics further burdens project costs and extends payback period
- Monopolistic utilities can make business difficult
- Lack of available financing is a detriment for some owners

WHAT FACTORS SHOULD HOTEL OWNERS/OPERATORS LOOK FOR?

You should consider taking a closer look at your utility spend if the following factors apply to your hotel:

- Utility line item costs are higher than anticipated or increasing sharply over time.
- Commodity rates are increasing (e.g. cost of electricity or water/sewer)
- Aging HVAC/MEP equipment, and significant level of deferred capital
- Presence of a centralized HVAC plant
- Presence of laundry, F&B, meeting space, extensive landscaping, pools, and other hotel amenities
- Availability of incentives to offset capital requirements
- Pending renovations (combine ROI initiatives with capital projects to reduce overhead costs)
- Guest complaints relating to HVAC (temperature or acoustics)
- Properties impacted by emerging regulatory requirements
- Properties where there has not been a dedicated historic focus on ROI initiatives

RESOURCES FOR CARIBBEAN HOTELIERS

Energy Conservation – What You Need to Know (PA Consulting Group / USAID)

http://www.caribbeanhotelandtourism.com/downloads/CHTAEF_Energy.pdf

Kuoni Guide to Water Management at Hotels *(Thailand-focused, but with applicability elsewhere)*

http://www.kuoni.com/docs/kuoni_wmp_manual_0.pdf

American Hotel & Lodging Association Case Studies

<https://www.ahla.com/Green.aspx?id=24988>

HVS Publications on Utility Efficiency, Investment Strategy, and Risk

<http://www.hvs.com/Services/SustainabilityServices/?v=ar>

For individual ROI opportunities and cost/benefit calculators...

Try to Google it!!!

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Thank you for your kind attention – Questions or Comments?

THANK YOU TO OUR STRATEGIC PARTNER



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