

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com





Integrated Water & Energy Solutions for the Hospitality Industry

presented by

Charles A. Smith, CEO

Hotel Sustainability Solutions, Inc. / Integrated Sustainability Solutions, Inc.
chuck@hotelsustainabilityinc.com | 412-445-4237 | www.hotelsustainabilityinc.com

SUSTAINABILITY



Sustainability is an Integral Component of Value Creation Through the Application of Sound Business Practices to Systems, Products and Technologies!



THE OBJECTIVE MANDATES

- ◆ **Establish Sustainability Leadership in the Competitive Market and Beyond**
- ◆ **Reduce Operating Cost**
- ◆ **Create Added Asset Value**
- ◆ **Transferability**
- ◆ **Develop Maximum Integrated and Collaborative Program**
- ◆ **Combine Renovation & Development of Sustainability Platform**

THE PROJECT BACKDROP

- ◆ **Branded Hotel Built in 1980**
- ◆ **329 Guest Rooms**
- ◆ **Full Service**
- ◆ **11 Stories**
- ◆ **Work in Progress**
- ◆ **Prototype for Global Rollout**
- ◆ **Sustainability Flagship**



INTERSTATE
HOTELS & RESORTS



Hilton
CONCORD

THE PROGRAM

PHASE I

**ANALYSIS
&
FEASIBILITY**



**PRESENT FINDINGS
&
RECOMMENDATIONS**



**DESIGN
&
IMPLEMENTATION**



PHASE III

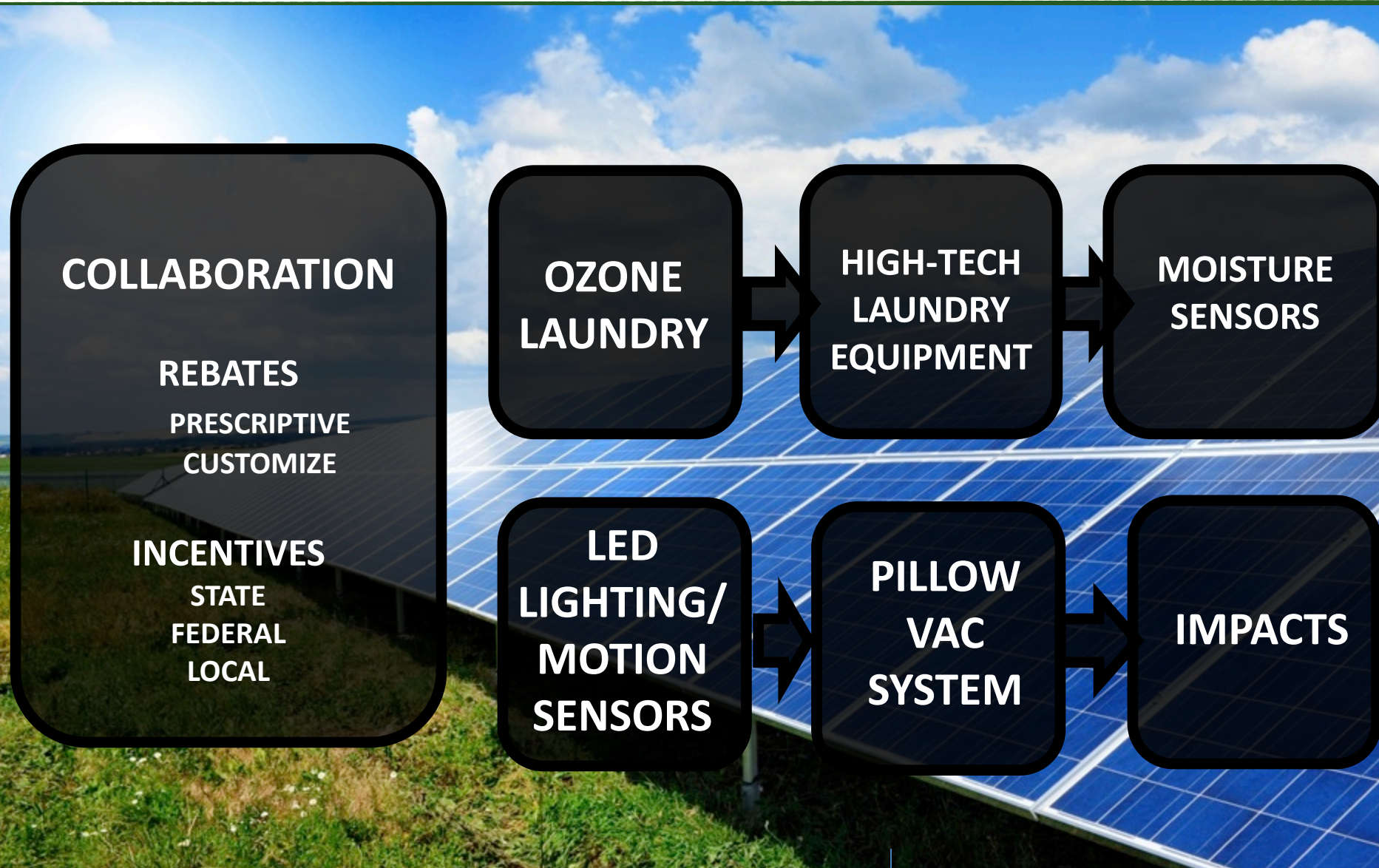
**MONITORING,
REPORTING
& NEW
TECHNOLOGY
OPTIONS**



**RESEARCH AND DEVELOPMENT OF
PRODUCTS, TECHNOLOGIES
AND SYSTEMS**

**How Integration and Collaboration
Practices Significantly Impact a
Sustainability Platform**

SAMPLE ILLUSTRATION OF COLLABORATION & INTEGRATION



SAMPLE ILLUSTRATION OF COLLABORATION & INTEGRATION REDUCTIONS

COLLABORATION

REBATES

PRESCRIPTIVE
CUSTOMIZE

INCENTIVES

STATE
FEDERAL
LOCAL

OZONE
LAUNDRY

WATER
GAS THERMS

LAUNDRY
EQUIPMENT

ELECTRIC
GAS THERMS
WATER
LABOR

MOISTURE
SENSORS

WATER

LED
LIGHTING/
MOTION
SENSORS

ELECTRIC
LESS INVENTORY

PILLOW VAC
SYSTEM

LANDFILL
DIVERSION

IMPACTS

REDUCING CO2
EMISSIONS
CARBON FOOTPRINT
REDUCTION
GHG REDUCTION
ROI

Sustainable Initiatives Implemented at Hilton Concord

ENERGY REDUCTION INITIATIVES

GAS AND ELECTRIC

- ◆ **LED LIGHTING**
- ◆ **HI EFFICIENCY LOW WATTAGE TUBE LIGHTS**
- ◆ **ENERGY MANAGEMENT SYSTEM (HVAC)**
- ◆ **ADVANCED TECHNOLOGY LAUNDRY SYSTEM**
- ◆ **OZONE LAUNDRY SYSTEM**
- ◆ **LED LAUNDRY CEILING RETROFIT**
- ◆ **LED MEETING ROOMS / BALLROOM / PUBLIC AREA CEILING LIGHTS**
- ◆ **PLATE & VINE RESTAURANT – ALL LED LIGHTING**
- ◆ **PORTE-COCHERE LED RETROFIT**

ENERGY REDUCTION INITIATIVES

GAS AND ELECTRIC

- ◆ **REFRIGERATION DOOR SEALS AND CURTAIN REPLACEMENTS**
- ◆ **FOOD PREPARATION EQUIPMENT**
- ◆ **LOW TEMP DISHWASHER**
- ◆ **PARKING LOT LED RETROFIT & MOTION SENSORS**
- ◆ **PERIMETER BUILDING SECURITY LIGHTING**
- ◆ **INCLUDING PLATE & VINE ENTRANCE**
- ◆ **WINDOW FILM**
- ◆ **ENERGY STAR OFFICE EQUIPMENT**
- ◆ **HVAC ROOFTOP UNITS – ECONOMIZERS**

WATER REDUCTION INITIATIVES

- ◆ **LOW FLOW TOILETS**
- ◆ **LOW FLO SHOWER HEADS**
- ◆ **AERATORS THROUGHOUT HOTEL**
- ◆ **LANDSCAPE IRRIGATION**
- ◆ **OZONE LAUNDRY**
- ◆ **NATURA WATER SYSTEM**
- ◆ **HIGH TECHNOLOGY LAUNDRY SYSTEM**



TRASH/WASTE INITIATIVES

- ◆ **BIOHITECH ORGANIC WASTE DECOMPOSING FOOD**
- ◆ **INTERNAL RECYCLING**
- ◆ **PILLOWVAC – RECYCLING / LANDFILL DIVERSION**
- ◆ **DYSON AIR HAND DRYING SYSTEMS**
- ◆ **PAPERLESS CHECK IN**
- ◆ **NATURA WATER SYSTEM**
- ◆ **CONSTRUCTION DEBRIS RECYCLING**

FULLY INTEGRATED OPTIONS AND INITIATIVES



ONSITE WASTE MANAGEMENT SYSTEM

High Volume Organic
Waste-to-Energy
Waste Composting System

REBATES, INCENTIVES, GRANTS

Off Balance Sheet Financing
Power Purchase Agreement PPA
Lease Agreement
Utility Financing Agreements

OZONE LAUNDRY/ POOL/SPA SYSTEMS

Aquawing Ozone Systems

GUEST ROOM ENERGY MANAGEMENT SYSTEM

HVAC
Motion Sensor /PIR / Smart Outlets

KITCHEN SUSTAINABILITY PROGRAMS

Dishwashers

PILLOW RESTORATION PROGRAM

PillowVac System

LED LIGHTING PROGRAM

Indoor - Outdoor

RENEWABLE ENERGY SYSTEMS FOR POWER GENERATION

Fuel Cell
Cogeneration
Solar
Micro Turbine
Geothermal / Biomass / Biofuel

WATER ANALYSIS

Water Purification System

REFRIGERATION EFFICIENCIES

Motors, Curtains, Seals

ELEVATOR EFFICIENCIES

Motor, Lighting

IRRIGATION SYSTEM

Drip and Controlled
Moisture Sensors
Gray Water Systems

INTEGRATION WITH PIP

ELECTRIC VEHICLE CHARGER
Hydraulic Hybrid

PARKING LOT, POOL, COURTYARD, RO TOP & BUILDING PERIMETER LIGHTING ALTERNATIVE

Induction Lighting System
Led Lighting System

SOLAR THERMAL HOT WATER SYSTEM

Building
Pool

FUNDING PROGRAMS

EPA 179D Energy Depreciation IRS
Cost Segregation
Self Funding

SUSTAINABILITY PUBLIC RELATIONS

LOCAL
NATIONAL

SUSTAINABILITY MEASURES & PROCEDURES

PURCHASING
PRODUCTS/ SUPPLIES
RECYCLING
STAFF PARTICIPATION

CENTRALIZED ENERGY MANAGEMENT SYSTEM

Common areas, meeting Rooms. offices
Metrics modeling

PRIMARY INITIATIVES

SECONDARY INITIATIVES

HOW MANAGEMENT GOALS HELP SHAPE A SUSTAINABLE PROJECT

- ◆ Establish ROI Thresholds
*Incorporate **ROI Blending***
- ◆ **Rebate Reinvestment**
- ◆ Approvals for Maximum Incentives
- ◆ Response Time Sensitivity
- ◆ Corporate Commitment and Program Support
- ◆ Promotional Support



A Well Integrated Hotel Sustainability
Program Can Typically Achieve

8-10%

(or greater)

Reduction of TOTAL
Current Operating Budget 

ANTICIPATED SUSTAINABILITY SAVINGS BY HOTEL SIZE

Number of Hotel Rooms	Anticipated Annual Savings From	Anticipated Annual Savings To
1000-1500	\$661,658	\$1,654,145
900-1000	\$502,860	\$1,257,150
800-900	\$449,927	\$1,124,818
700-800	\$396,995	\$992,487
600-700	\$344,062	\$860,155
500-600	\$291,129	\$727,824
400-500	\$238,197	\$595,492
300-400*	\$175,207	\$438,018
200-300	\$132,332	\$330,829
100-200	\$79,399	\$198,497

Values are theoretical only. Actual results will vary by initiatives undertaken, rebates, incentives and other factors

ECONOMIC IMPACT

COLLABORATIVE RESULTS TO DATE

HILTON CONCORD REBATES

- ◆ **Contra Costa Water District**
2 Rebates
\$49,380.40



- ◆ **PG&E**
9 Rebates
\$54,088.09



- ◆ **Smart Lights/ Lodging Savers**
6 Rebates
\$27, 112.81

Rebate Categories Detailed in
Online Supplement

TOTAL OF ALL REBATES

\$132,887.63

REBATES RECEIVED TO DATE

\$131,718.33

REBATES YET TO BE RECEIVED

\$1,169.30

RESULTS TO DATE

Savings
\$151,000

Net Cost
\$632,932

**Integrated
Payback**
4.1 Years

Added Asset Value
\$1,800,000

using 8% capitalization rate

WATER CONSERVATION

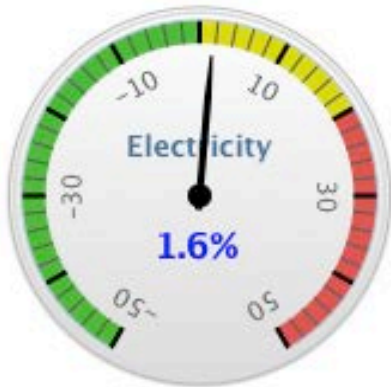
- ◆ **High-Efficiency Toilets**
- ◆ **Bathroom Sink Faucets with Aerators in Taps**
- ◆ **Landscape Irrigation Service - Reuse of Gray**
- ◆ **Weather or Sensor-Based Irrigation Control Technologies**
- ◆ **Showerheads: Low Flow Rate-Air Ejection**
- ◆ **Waterless Urinals**
- ◆ **Laundry: Rinses Water Re-Use for Wash Cycle**
- ◆ **ENERGY STAR qualified – Clothes Washer, Dishwasher and Ice Makers**



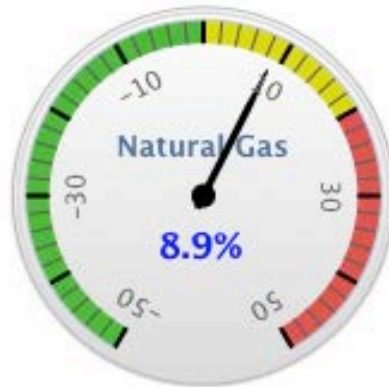
METRICS MODELING



All Resources Cost \$1,330/day for Year Ending May-2013 **↑ 1.6% (\$20.83/day)** compared to the prior year



Electricity
\$922/day



Natural Gas
\$197/day



Water
\$139/day



Waste
\$72/day

WATER

USAGE SUMMARY FOR A ROLLING 12 MONTHS COMPARED TO THE BASELINE

This is your Usage summary for a rolling 12 Months compared to the

- Electricity
- Natural Gas
- Water**
- Waste
- Carbon

19.4%
(-8.67 ccf/day)



-19.4%

(-8.67 ccf/day)

for the Year Ending May-2013

WATER

USAGE SUMMARY FOR A ROLLING 12 MONTHS COMPARED TO THE BASELINE

Usage for May-2013:
38.1 hcf/day

Change from Baseline:
-18.1% (-8.41 hcf/day)

[View Facility](#)

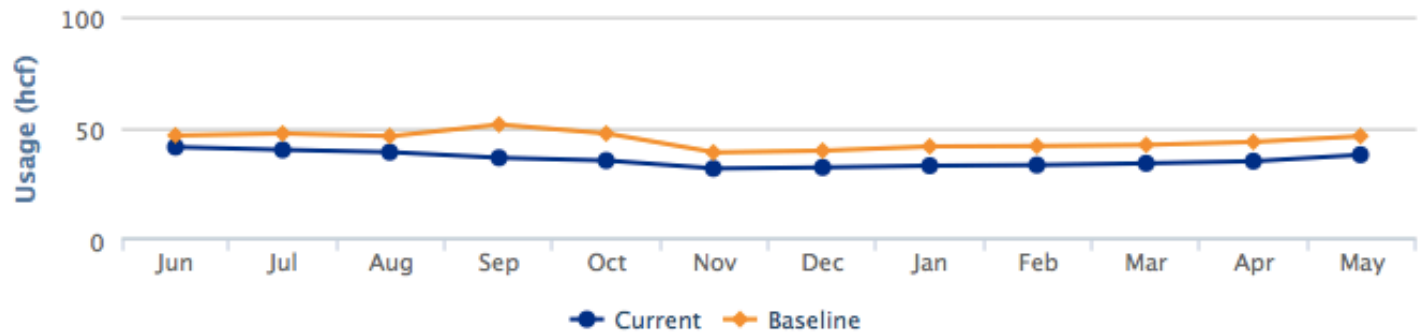
Compared to the same Month last year the
Largest Decrease
was

Sep: ↓ -15.0 hcf/day

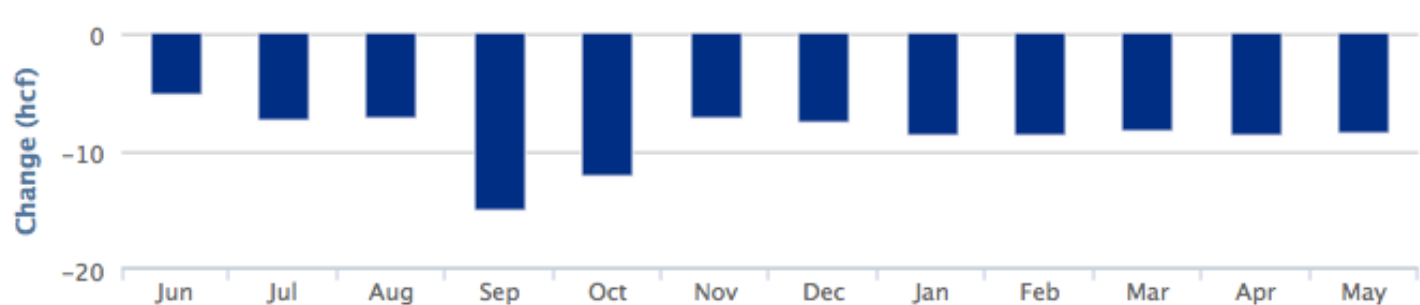
Latest Month was

May: ↓ -8.41 hcf/day

Average Daily Usage for Jun-2012 to May-2013 versus the Baseline



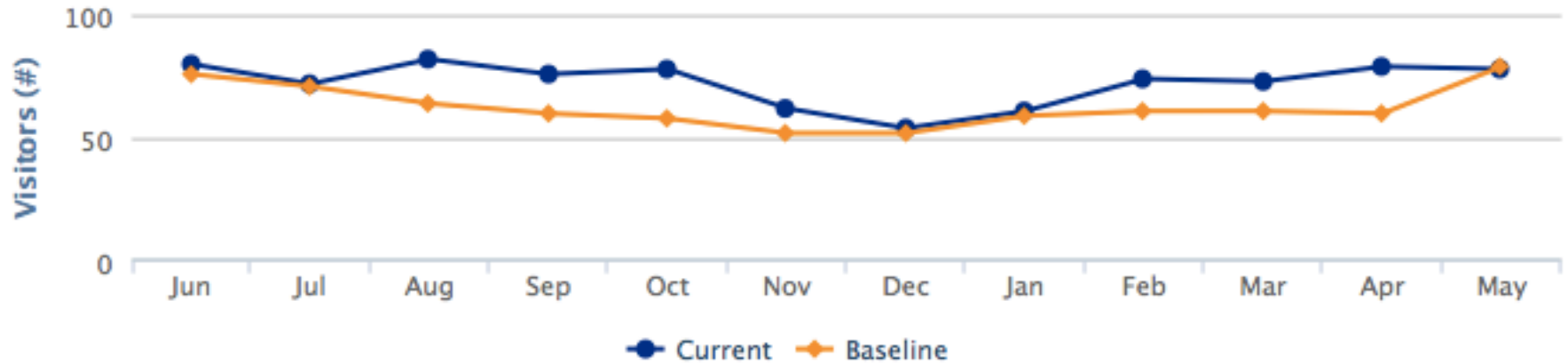
Change in Average Daily Usage for Jun-2012 to May-2013 versus the Baseline



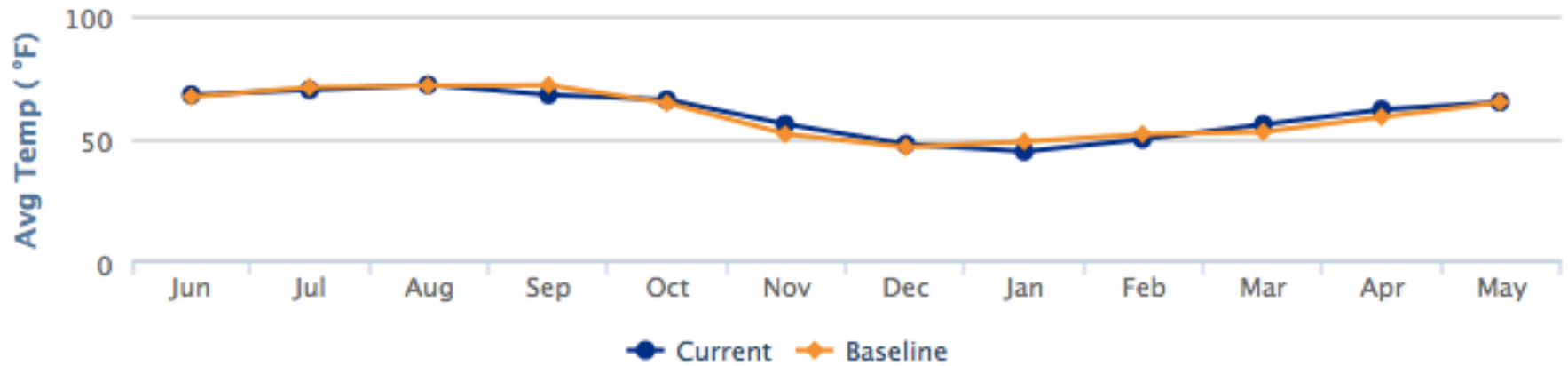
WATER

USAGE SUMMARY FOR A ROLLING 12 MONTHS COMPARED TO THE BASELINE

% Occupancy for Jun-2012 to May-2013




Average Temperature for Jun-2012 to May-2013




WATER

USAGE SUMMARY FOR A ROLLING 12 MONTHS COMPARED TO THE PRIOR YEAR

This is your summary for a rolling 12 Months compared to the

 **-9.8%**
(-4.12 ccf/day)

for May-2013

 **-8.8%**
(-3.50 ccf/day)

for the Year Ending May-2013

WATER

USAGE SUMMARY FOR A ROLLING 12 MONTHS COMPARED TO THE PRIOR YEAR

Usage for May-2013:
38.1 hcf/day

Change from Prior Year:
-9.8% (-4.12 hcf/day)

[View Facility](#)

Compared to the same
Month last year the

Largest Increase
was

Sep: ▲ 1.21 hcf/day

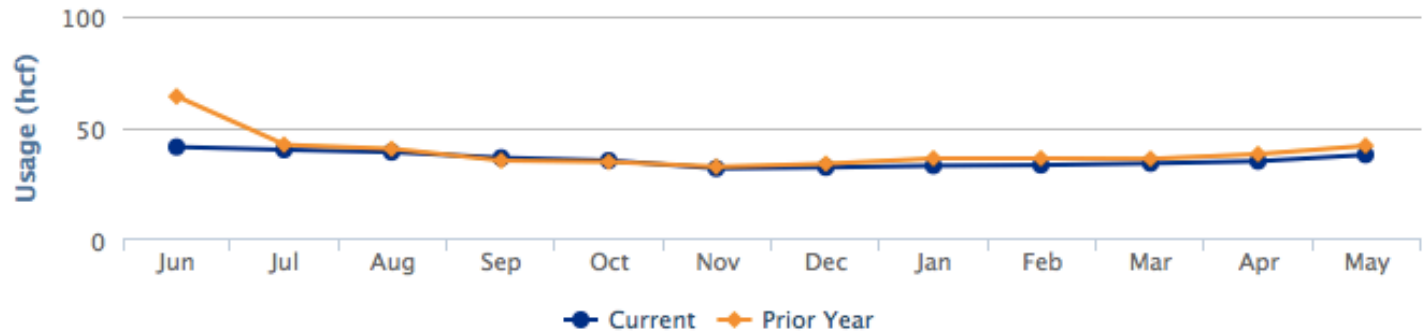
Largest Decrease
was

Jun: ▼ -22.5 hcf/day

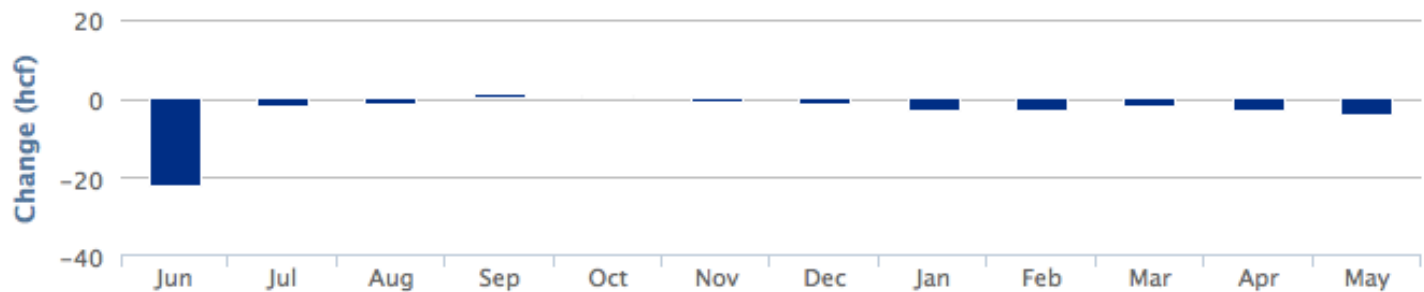
Latest Month was

May: ▼ -4.12 hcf/day

Average Daily Usage for Jun-2012 to May-2013 versus the Prior Year



Change in Average Daily Usage for Jun-2012 to May-2013 versus the Prior Year



WASTE USAGE

is your summary for a rolling 12 Months compared to the



-21.4%

(-0.15 tons/day)

Diversion Rate: 37% (0.33 tons/day)

for May-2013



-19.4%

(-0.12 tons/day)

Diversion Rate: 32.4% (0.24 tons/day)

for the Year Ending May-2013

WASTE USAGE

Usage for May-2013:
0.56 tons/day

Change from Baseline:
-21.4% (-0.15 tons/day)

Diversion Rate:
37% (0.33 tons/day)

[View Facility](#)

Compared to the same Month last year the

Largest Increase was

Nov: ▲ 0.08 tons/day

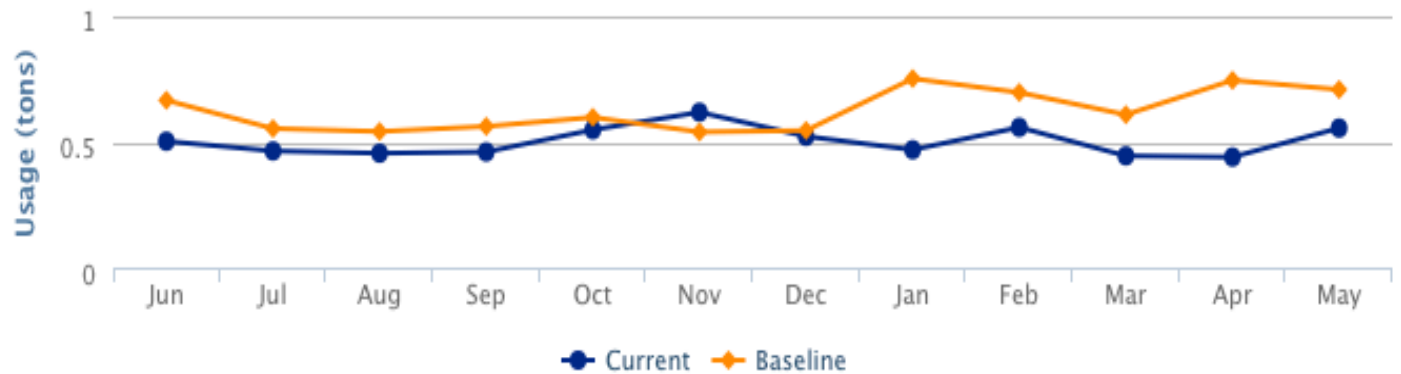
Largest Decrease was

Apr: ▼ -0.30 tons/day

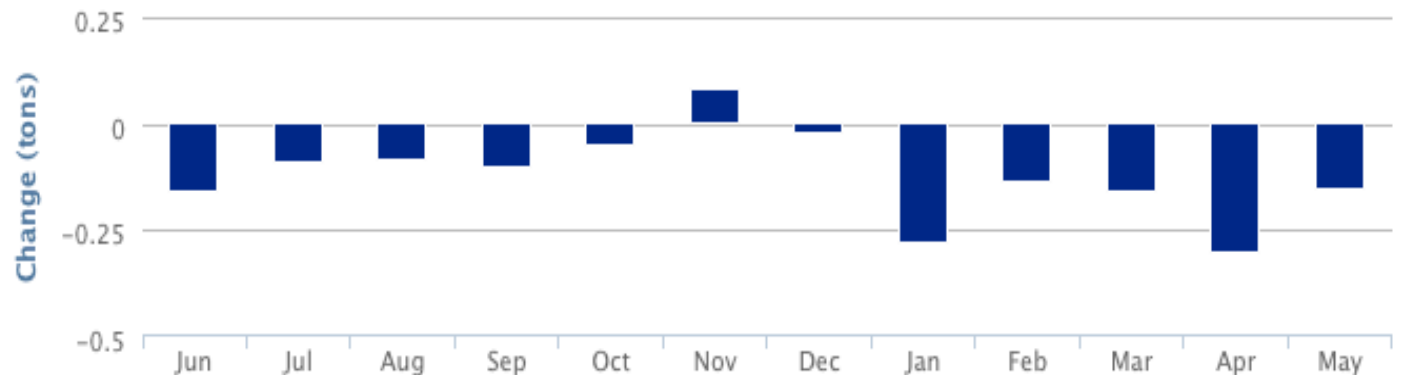
Latest Month was

May: ▼ -0.15 tons/day

Average Daily Usage for Jun-2012 to May-2013 versus the Baseline

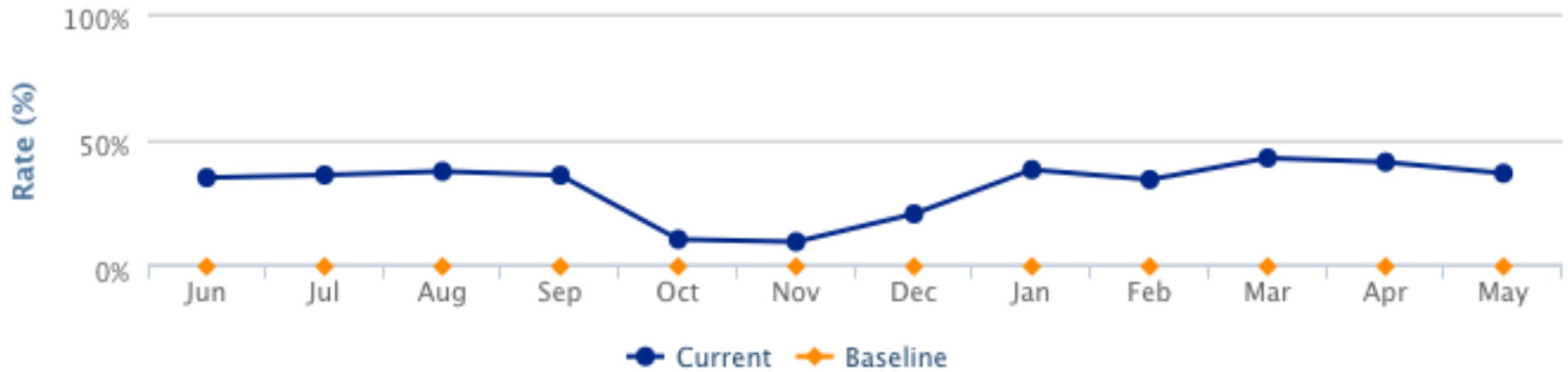


Change in Average Daily Usage for Jun-2012 to May-2013 versus the Baseline

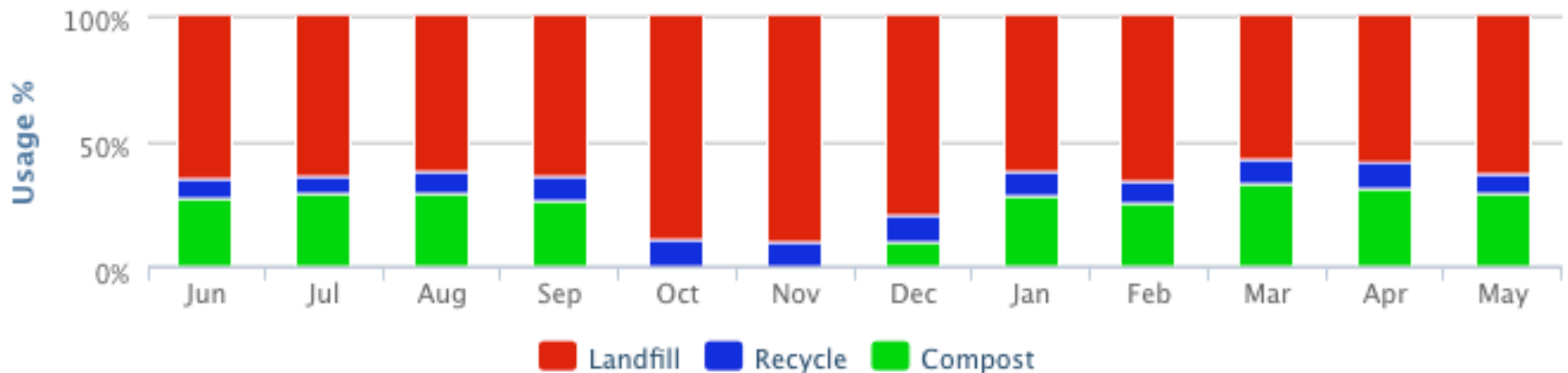


WASTE USAGE

Diversion Rate for Jun-2012 to May-2013



Waste Separation for Jun-2012 to May-2013



COGENERATION = HEAT + POWER USAGE = REDUCTIONS + CONSERVATION

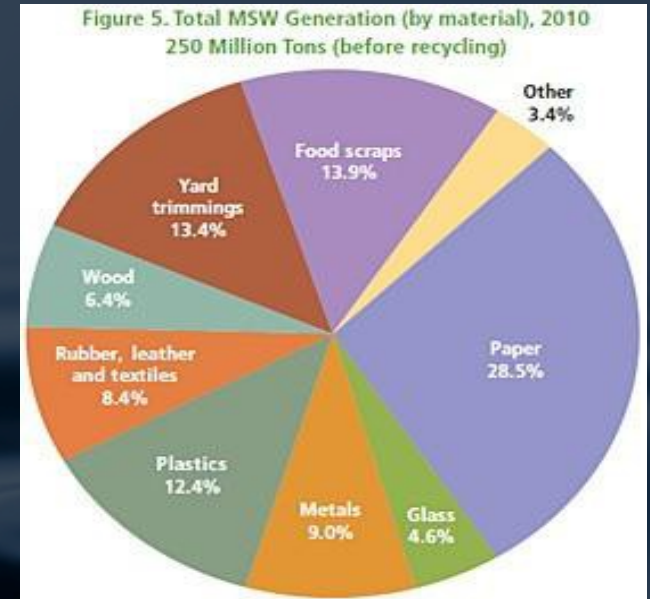
- ◆ **Usage** Reductions = Gas, Electric, Water, Waste, Carbon Footprint and GHG
- ◆ Onsite Power **Generation** = Cost Reduction Using Micro turbines
- ◆ kWh at \$0.10 Less Than Current Rates + Escalation
- ◆ Annual use of 2,530,000 kWh = \$250,000 Annual Cost Reduction
- ◆ Adjusted for utility charges = \$175,665 Annual Savings
- ◆ **FREE** Hot Water up to 89% Occupancy

LAS VEGAS ENERGY PARK MSW PROJECT PHASE II

Energy-Inc

1,500 TONS PER DAY of **MSW** PRODUCES

- ◆ Synthetic Diesel – 13,830,000 gallons per year
- ◆ Metals – 40,000 Tons per year
- ◆ **Potable Water – 200,000,000 + Gallons Per Year**

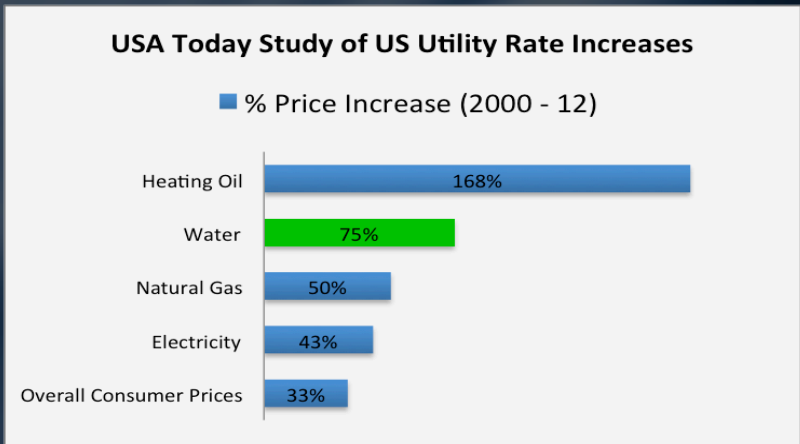
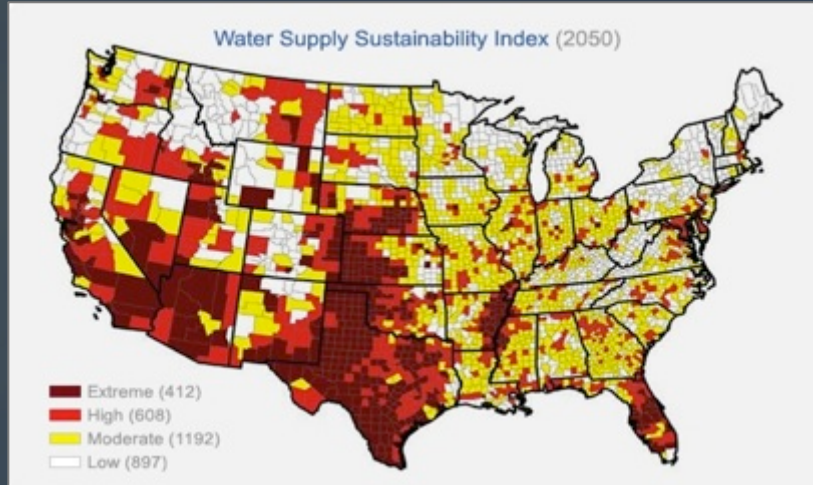


SLUDGE = WATER/POWER/FUEL/BIOCHAR

Energy-Inc



WATER IS AN INCREASINGLY SCARCE AND EXPENSIVE COMMODITY



- ◆ 65% of water used in the US is for irrigation.*
- ◆ *USGS report on Estimated Use of Water in the United States
- ◆ **Population growth**, particularly in sunbelt states, is putting unsustainable pressure on scarce natural resources.
- ◆ **Climate change** is estimated to make weather patterns and water supply more unpredictable.
- ◆ **Water costs** will continue to rise far above the rate of inflation.
- ◆ **Water conservation** initiatives have proved they can make a major difference in reducing the human impact on water sources.

A study by the University of Florida estimates that up to **80%** of landscape irrigation water is typically wasted through inefficiency or **overwatering**.



Solution Provided by UgMO

Using patented wireless technology that actually measures the moisture content in the soil, thereby automatically preventing overwatering or waste, UgMO is able to save users between **30%** and **60%** of their irrigation water.

PROVEN TRACK RECORD OF REAL & MEASURABLE SAVINGS

- ◆ Marco Island, FL residence saved **47%**
- ◆ Fulton County, GA residence saved **51%**
- ◆ Westchase complex, Houston, TX saved **55%**
- ◆ Pebblebrook HOA, Fort Meyers, FL saved **76%**
- ◆ Ocean Grand townhouses, Jupiter, FL saved **60%**
- ◆ Hammock Creek HOA, Fort Meyers, FL saved **50%**
- ◆ Golden Bear Plaza, West Palm Beach, FL saved **39%**
- ◆ The Heights community, Woodstock, GA saved **77%**
- ◆ 21 McDonalds in Athens, GA saved **40%**

ENVIRONMENTAL BENEFITS

- ◆ Studies prove UgMO **saves more than 2 days/wk restrictions**
- ◆ Customers have **received exemptions** from restrictions
- ◆ Stress free watering
- ◆ Preserves healthy/lush landscapes

Other Environmental Advantages:

Reduce water usage 30-50% across communities (save millions of gallons per year)

Saving water saves money and it saves the environment

Helps Communities:

- ◆ **Achieve mandated reductions**
- ◆ Balance water usage (hotels, commercial, education, golf, HOA, homes and cities)
- ◆ Facilitate development/expansion
- ◆ Address run off and environmentally sensitive areas
- ◆ Maintain lush community look & feel (versus xeriscaping)

SWAT tested and approved (rebates)

Deploying UgMO contributes to LEED points

**Details of Technologies, Systems and Products
Implemented Available on Conference Site
Within Supplemental Data**

ALTERNATE FUNDING OPTIONS FOR SUSTAINABILITY PLATFORMS

There are **multiple funding options** that can be considered:

- ◆ Grants/Incentives - Federal, State Local
- ◆ Rebate Providers Highest Rebate Availability
- ◆ Lease Options
- ◆ Power Purchase Agreements (PPA)
- ◆ Utility Financing (off balance sheet)
- ◆ Vendor Financing
- ◆ IRS Programs-EPAct 179D Energy Depreciation
- ◆ Self Funding
- ◆ Cash Awards

SUSTAINABILITY FUNDING ALTERNATIVES



- ◆ *Cost Segregation at the Hilton Concord = \$3.4M of deductions = **\$1.2M tax savings***
- ◆ *Projecting to six properties = **\$7.2M** of funding for sustainability initiatives.*
- ◆ *EPA Act 179D = \$1.80 per sq. ft.*
- ◆ *Hilton Concord benefits equates to \$686,476 from Lighting, HVAC and Building Envelope*
- ◆ ***Additional tax savings \$200-300K***

IMPORTANCE OF CORPORATE SUSTAINABILITY

- ◆ **Sustainability is Quickly Becoming Obligatory**
- ◆ **Ownerships Must Address Compliance and Rethink Budget Allocation**
- ◆ **Non-Compliance Penalties are Expected to be Significant and when Avoided Equal Revenue**
- ◆ **Penalties and Savings** Should be Dually Weighed Against Corporate Risk Register
- ◆ **New Mandates are Emerging from Employees, Investors, and Governmental Groups**
- ◆ **Products, Systems and Technologies Allow Management to Develop Cost Effective Strategies, Planned Responsiveness and Transparency**

HILTON CONCORD SUSTAINABILITY

LEADERSHIP FREE RECOGNITION IN THE MEDIA

**WALL STREET
JOURNAL**



green lodging news™
the lodging industry's leading environmental news source

Forbes

Business Wire
A Berkshire Hathaway Company

**Eyewitness
News** KBK
FOX KBFX



Smart meetings

Concord

Hotel News Resource

**American
LAUNDRY NEWS**

**Hotel
interactive**

YAHOO!
FINANCE

CoolCalifornia.org
Simple steps for a sustainable future

tripadvisor

SUMMARY

Sustainability Once a **Whisper** is Now a **Global Voice**

Creating a Sustainability Prototype Demonstrates to Stakeholders:
Social Responsibility + Global Commitment

Continued Public Recognition Demonstrates
Market Strength + Competitive Edge

Shifting Your Thinking + **Taking Action**
Offers Great Opportunities



Integrated Water & Energy Solutions for the Hospitality Industry

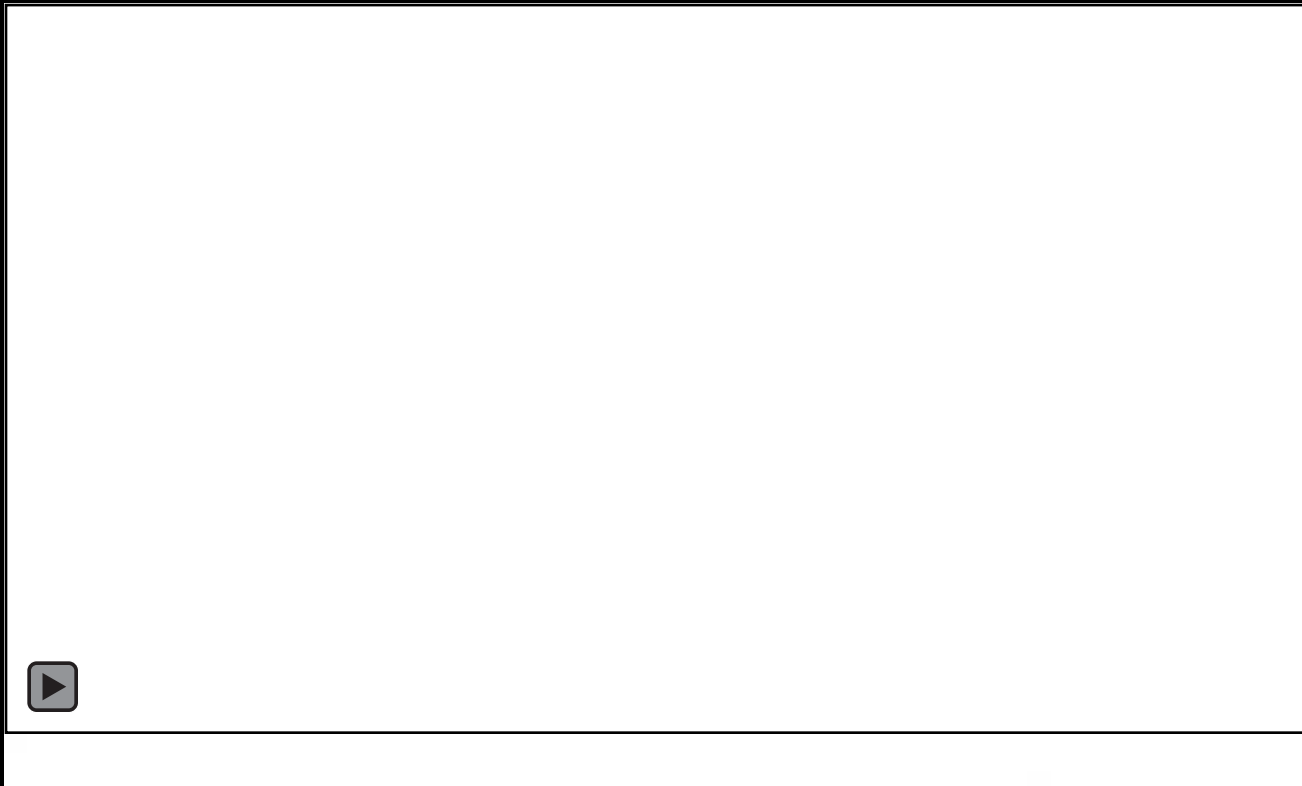
Thank You

Charles A. Smith, CEO
chuck@hotelsustainabilityinc.com
412-445-4237
www.hotelsustainabilityinc.com

PG&E VIDEO

CLICK MOUSE TO START VIDEO
to view high definition please visit our website:

<http://www.hotelsustainabilityinc.com/pge-video/>



WHITE PAPER
September, 2013

INTEGRATED SUSTAINABILITY = HOSPITALITY PROSPERITY

Prepared by
Charles A. Smith, CEO
Hotel Sustainability Solutions, Inc. (HSSI)
chuck@hotelsustainabilityinc.com | 412-445-4237 | www.hotelsustainabilityinc.com

INTEGRATED SUSTAINABILITY = HOSPITALITY PROSPERITY

The sustainability tsunami came ashore in the USA with a force that grabbed the attention of the hospitality industry, displaying an impact that the industry was unprepared for. Additionally, the industry was focused on a downward trending market condition with a preoccupation for setting alternative strategies in place. In 2007, when a beginning wave action occurred, most hospitality companies were reluctant to consider giving sustainability any attention. That is until 2009, when the concept began as a seedling, by displaying placards suggesting guest consideration for reuse of sheets, towels and cleaning options.

Both business and leisure travelers, domestic and international, had begun broadcasting a consciousness of sustainability practices in their personal lives and expected it to travel with their luggage. A new market emerged in sustainable tourism in lodging, transportation and food. Hospitality companies were caught unaware of the deepening environmental expectations of their frequent and seasoned guests. The wakeup call came, when booking and travel groups began publishing separate property listings highlighting environmental/sustainability hotels whose practices were demonstrated in their daily operations. Further imprint was evidenced by multi-national companies who were already aggressively assuming their sustainability and social responsibilities for the protection of the environment and seeking to do business with like-minded organizations.

The triple bottom line of “**planet/social/economic responsibility**” has become a mandate within global organizational operations. No longer is the excuse “too costly” being heard, but instead a resounding realization that “sustainability” is here to stay with lasting impact and is being demanded by more guests! Today, that fact is clearly embedded in the engagement of stakeholders, inclusive of ownership, financial parties, and prospective buyers, along with federal, state and local regulatory agencies. Clearly, the trend is to permanently embed sustainability into their individual properties, entire portfolios including operations and employee engagement. A careful balance must be considered by the hospitality industry. Of significant importance is the level of accountability and decision making within the organization - whether it should be centralized versus decentralized. It is suggested that both corporate and individual properties develop a sustainability plan for ongoing operations having accountability for reducing GHG’s and resource conservation. Included should be a plan for emergency response.

The “catch up” mentality has given way to hospitality companies proactively pushing sustainability in many segments of their operations. Some proceed in a “piecemeal approach”, while the more aggressive seek a “fully integrated approach”, achieving multi-operational results simultaneously. The integrated approach has led to market leadership in sustainability, together with a distinctive competitive edge over competition, much quicker than the piecemeal approach. Property promotion and recognition for sustainability achievements can propel significant marketplace recognition in local, regional and global markets. The resulting “free” publicity can be a huge economic benefit for property sales and marketing teams and contribute to budget elasticity. The following is a partial list of media outlets who have covered the efforts being undertaken at the Hilton Concord:



Hilton Concord Sustainability Leadership was recognized by **PG&E** via a professional photo/video shoot at the property, which is now featured on the **PG&E** web site as a case study in integrated sustainability achievement.

PG&E has booked **\$100,000.00** of initial business activity at the Hilton Concord.

**NOW IS THE TIME TO COUPLE HOSPITALITY MANAGEMENT EXPERTISE WITH
SUSTAINABILITY LEADERSHIP THROUGH AN
"INTEGRATED SUSTAINABILITY INITIATIVES PROGRAM"**

The economic benefits today are significant, due to reduced net operating expenses, contributing to added asset value. It is clear that the current direction of legislative mandates will favor all properties and portfolios which demonstrate sustainability compliance. Those forward thinking and acting organizations will be in the enviable position of realizing better market value and having assets more readily marketable in both upward and downward trending markets. Recent data from the **United States Green Building Council states that hotels represent more than 5 billion square feet of space, nearly 5 million guest rooms, and nearly \$4 billion in annual energy use. Business meetings constitute a \$175 billion industry, and Americans make more than 400 million business trips annually.** The environmental and economic impact of the hospitality industry is significant when weighed against the above statistics.

Regardless of the individual property or portfolio size (owned, partially owned, or third party managed), the opportunity to lessen carbon footprint, contribute positively to the environment, reduce operating costs, and add asset value is significant and worthy of serious action. Established sustainability leadership will pay huge dividends in local communities served, generate industry wide recognition, and provide enhanced economic benefits. There are very few, if any, areas of operations within a hotel that could not improve in cost and environmental efficiency with sustainability leadership in place.

A focus on the long-term benefits realized from the implemented sustainability initiatives should receive attention when evaluating net upfront costs, especially when weighed against reduced maintenance and energy savings, considering the expected escalating costs of energy, water and landfill regulation, all of which are significant budgeted line items. There is a current trend by regulatory agencies to begin programs of disincentives for over consumption of water and energy. It is vitally important to become proactive, rather than reactive, to environmental issues and legislative mandates.

Technologies have progressed to such an advanced stage that prior restrictions are being mitigated. An example is the implementation of wireless systems in HVAC energy management applications, regardless of property age. **Today the array of products, systems and technologies provides phenomenal opportunities in achieving bottom line operational efficiency.** This is further enhanced by applying integration strategies. The continuous roll out of advanced technology will be a constant benefit to hospitality operations, whether it is for existing or new construction.

Readers must understand that sustainability is entrenched in today's hospitality culture and that expedient **implementation via an integrated sustainability platform will achieve quicker sustainability leadership, stronger sales/marketing teams, deeper market penetration, and a dependable stream of like-minded corporate, group and leisure traveler guests.** Sales/marketing teams will have the advantage of demonstrated sustainable practices, prior to booking decisions being made. Focus should be on the emerging millennial generation who are very sustainable minded. This competitive edge is a necessity in an upward or downward trending market in order to achieve expected performance results of the individual property or portfolio.

Hotels represent more than 5 billion sq. ft. of space nearly 5 million guest rooms, and nearly \$4 billion in annual energy use.

***Business Meetings:**
\$175 Billion Industry*

***American Business Trips:**
400 Million + Per Year*

Today the array of products, systems and technologies provides phenomenal opportunities in achieving bottom line operational efficiency.

**AN INTEGRATED
SUSTAINABILITY PLATFORM
WILL ACHIEVE:**

***Quicker Sustainability Leadership
Stronger Sales Teams
Stronger Marketing Teams
Deeper Market Penetration
+
Dependable Stream of Like-Minded Corporate, Group and Leisure Traveler Guests.***

IMPORTANCE OF CORPORATE SUSTAINABILITY

The pathway for sustainability is quickly shifting from being an option to becoming an obligation.

While countries such as the UK have already mandated sustainability practices, the USA, with many of the current pieces of federal and state legislation under consideration, will soon establish sustainability as an obligation. California's 2014 Title 24 revisions are setting forth new standards for existing retrofit and new construction, all requiring sustainability measures be implemented. Many other states are establishing requirements with far-reaching impact on hospitality financial planning. Such an example is the state of Massachusetts, where a prohibition of diverting food waste to landfills will soon be imposed. A full service hotel currently generating 6-12 tons of food waste per month is faced with alternative strategies and the costs associated with their alternatives. The penalties for non-compliance on any mandated initiative must be given serious consideration when weighed against the corporate risk register. It is expected that the penalties to be imposed will be significant and reflect an added source of revenue for those enforcing them. This is a risk most hospitality asset owners cannot afford to take. In preparation for the cost allocations required to initiate sustainability programs, ownerships will have to rethink the distribution of budgets to include sustainability compliance.

New mandates are emerging from employees, investors, and governmental groups (city/county/state/federal).

Lenders are instituting measures to confirm that assets considered for financing within their loan portfolio's are implementing programs which are delivering environmental improvement and social performance. HSSI has been significantly encouraged with the momentum and cooperation that has been experienced across the entire Hilton Concord operational spectrum. Many of the products, programs and technologies have given management the ability to become responsive, transparent, and able to develop strategies for enhanced sustainability results in a cost effective manner.

INDUSTRY DIRECTION

In a recent study conducted by Deloitte, **50% of CFOs from 255 global companies confirmed that sustainability is a key driver** of financial performance and that two-thirds of them are involved in driving sustainability strategies within their organizations.

Further, they reported that their **accountability to the company boards has increased from 20% to 36%**, as overall stakeholders' interest in sustainability has grown.

Sustainability leadership, at the CEO level, is experiencing a transition, with many shifting accountability and responsibility into the hands of those with operating authority and budget planning expertise.

Technologies, systems and products achieving sustainability results in operational efficiencies are high on their radar screens. The report concluded that an organization's understanding of how its stakeholders perceive and value the organization's environmental, social and governance issues can lead to financial benefits, such as more readily available assets (sustainability compliant) and reduced operating costs, which when capitalized create added asset value opportunities.

50% of CFO's from 255 global companies confirmed that sustainability is a key driver.

Accountability to the company boards has increased from 20% to 36%.

Technologies, systems and products achieving sustainability results in operational efficiencies are high on the radar screens of executives.

RELATIVE INDUSTRY STANDARDS – CARBON REDUCTION

Current industry standards for measuring sustainability performance have created a great deal of confusion. A need exists for uniformity for the hospitality sector. Many of the existing models have not been applicable or have created confusion regarding ownership and brands. Especially within the business communities which are demanding relevant and consistent sustainability results that support their booking and planning decisions, the confusion has been evident. The call for a standardized reporting system will enable meeting planners to make comparative evaluations prior to booking commitments. **Progress toward uniformity in reporting and measuring property/portfolio performance is emerging through the efforts of the industry. This initiative is known as the Hotel Carbon Measurement Initiative (“HCMI”, also referred to as “HCMI 1.0”, name of first version).** This is an industry response to corporate customers who have been requesting a uniform methodology. The result is expected to produce a unified voice from the entire hospitality sector and is the right solution, since it is industry-wide developed, participated in, and agreed to.

A standardized and simplified approach will enable apple to apple comparisons for all parties making business booking decisions, including the conscientious sustainable-minded leisure traveler. Note that **HCMI** will not replace pre-existing sustainability initiatives currently implemented at Interstate properties. Rather it will give direction to needed collaboration and preservation of initiatives deemed essential to achieve corporate goals of sustainability leadership, reduction of operating costs, and added asset value. When reviewing the extensive array of **green** legislation worldwide and its potential impact on global organizations, one cannot dismiss the profound potential dynamics of operating within the global market. The final analysis should prove very positive for sustainability and those who embrace it. **This success will not occur overnight, but rather through an orderly and consistent plan for implementation of all sustainability initiatives, coupled with consistent communication of accomplished results,** which will enable hospitality companies to maintain their market competitiveness and sustainability leadership.

It should be noted that both **Hilton and Marriott expect to incorporate HCMI in their existing sustainability programs**, and there is high assurance, due to a more simplistic and uniform approach, that all others will as well. This initiative will unite the industry so that all entities are speaking the same language regarding sustainability performance.

Progress toward uniformity in reporting and measuring property/portfolio performance is emerging through the efforts of the industry.

This initiative is known as the Hotel Carbon Measurement Initiative - “HCMI” .

The HCMI model has been incorporated into the Hilton Concord (Interstate) Verdafero Metrics Model.

This success will not occur overnight, but rather through an orderly and consistent plan for implementation of all sustainability initiatives, coupled with consistent communication of accomplished results.

Hilton and Marriott expect to incorporate HCMI in their existing sustainability programs.

METRICS MODELING SYSTEM

USAGE REDUCTION

COST REDUCTION

CO2 CALCULATIONS

LANDFILL DIVERSION

NORMALIZATION FOR OCCUPANCY AND WEATHER

ENERGY, WATER AND WASTE REDUCTION INITIATIVES IMPLEMENTED AT HILTON CONCORD*

ENERGY REDUCTION INITIATIVES

LIGHTING RETROFIT
 LED LIGHTING WITH DIMMERS AND MOTION SENSORS
 HI EFFICIENCY LOW WATTAGE TUBE LIGHTS
 ENERGY MANAGEMENT SYSTEM (HVAC)
 ADVANCED TECHNOLOGY LAUNDRY SYSTEM
 OZONE LAUNDRY SYSTEM
 LED LAUNDRY CEILING RETROFIT
 LED MEETING ROOM CEILING LIGHT (CLUB ROOMS 1 & 2).
 PLATE & VINE RESTAURANT LED RETROFIT
 PORTE COCHERE LED RETROFIT
 REFRIGERATION DOOR SEALS AND CURTAIN
 FOOD PREPARATION EQUIPMENT
 LOW TEMP DISHWASHER
 PARKING LOT LED RETROFIT & MOTION SENSORS
 BUILDING PERIMETER LED LIGHTING
 HVAC ROOFTOP UNITS – ECONOMIZERS
 ENERGY STAR OFFICE EQUIPMENT
 GUEST ROOM LED RETROFIT
 WINDOW FILM

WATER REDUCTION INITIATIVES

LOW FLOW TOILETS / LOW FLO SHOWER HEADS
 LANDSCAPE IRRIGATION
 OZONE LAUNDRY
 ADVANCED TECHNOLOGY LAUNDRY SYSTEM
 NATURA WATER SYSTEM

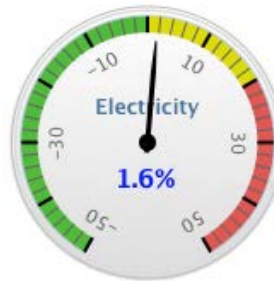
TRASH/WASTE INITIATIVES/ CARBON FOOTPRINT REDUCTION

FOOD DIGESTER – WASTE DIVERSION
 INTERNAL RECYCLING
 PILLOW VAC
 DYSON AIR HAND DRYING SYSTEMS
 PAPERLESS CHECK IN
 RECYCLED PAPER PRODUCTS
 NATURA WATER SYSTEM

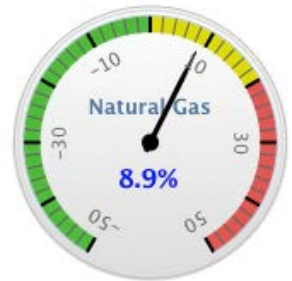
Current cost reductions to date are not reflective of a fully mature integrated sustainability program.



All Resources Cost \$1,330/day for Year Ending May-2013 1.6% (\$20.83/day) compared to the prior year



Electricity
\$922/day



Natural Gas
\$197/day



Water
\$139/day



Waste
\$72/day

*See **appendix** for more details on initiatives to date and their objectives.

REBATES

Hilton Concord Rebates:
(From 8/30/2011 to 6/21/2013)

CONTRA COSTA WATER DISTRICT

Low Flush Toilets	47,796.40
Ozone Laundry	1,584.00
Total	\$49,380.40

PG&E

Low Temperature Dishwashers	2,318.50
Ozone Laundry	16,162.50
Motion Sensors Phase 1	1,290.00
Motion Sensors Phase 2	429.99
FryMaster	749.00
Pelican Wireless	3,598.20
Electrolux Laundry System	11,782.00
Window Film 1	1,197.45
Window Film 2	16,560.45
Total	\$54,088.09

Smart Lights

Common Area Lighting	16,434.86
Porte-Cochère	749.70
Parking Lot LED	6,629.46
Perimeter Building LED	739.31
Laundry LED Ceiling Retrofit	233.20
Plate & Vine	2,326.28
Total	\$27,112.81

Lodging Savers

Guest Room Lighting	2,306.33
Total	\$2,306.33

TOTAL OF ALL REBATES

(From 8/30/2011 to 6/21/2013)

\$132,887.63

REBATES RECEIVED TO DATE

(From 8/30/2011 to 6/21/2013)

\$131,718.33

REBATES YET TO BE RECEIVED

\$1,169.30

SUGGESTIONS FOR GOING FORWARD

ACCOUNTABILITY

Placement of accountability needs to be considered in all sustainability programs. The model provides several management tools that create a new level of transparency to assist in operations, budgeting, capital allocations, and optimal maintenance planning. **These tools should create corporate directives for General Managers, who in turn can set energy management, water conservation, and waste reduction goals monthly/annually, with expectations further directed to department heads for achieving such goals.**

Perhaps a tiered incentive/punitive system can be developed to create goal achievement, resulting in operating cost reductions and regular employee recognition. These results would have a significant ongoing impact on profitability margins for ownership. An integrated sustainability performance management structure, where incentives and corporate strategy are aligned, can be significant in achieving company-wide commitment. The benefits of operating cost reductions and profit margins can be significant via energy reduction alone, especially viewing projected escalations. Sustainability programs at their design, development and **implementation stages need to carry a corporate mandate**, much like other corporate-directed programs, giving General Management guidelines to promote property personnel cooperation and to maximize expected results. **This approach will guard against excessive profit leakage.** A sustainability program needs corporate surveillance and continual attentiveness to maintain its focus. This is necessary because newly implemented technologies often require changing responsibilities, work habits, and adjusted maintenance demands, and until they become natural changes, there can be slippage in the expected results. Due to the capital investment which has been committed, this corporate and managerial supervision is necessary during the transition phase in order to achieve a successful end result.

There are several Suggested strategies to assist in both the implementation and transitional phase. The creation of **“Green Teams”** which would include employees and management personnel to foster understanding of sustainability initiatives benefits for dissemination to guests, fellow employees and the community. Rewards and incentives could be developed to encourage all team members to continually make contributions to improve the sustainability platform. This program could be expanded by creating an additional level **“Green Ambassador”** for exceptional team members, who could travel to other portfolio properties to upgrade low performance or to assist in the expediency of original program implementation. A further expansion, would be to establish **“Green Challenges”** creating sustainability achievement competitions between properties demonstrating corporate sustainability commitment.

MARKETING

Marketing leadership highlighting property sustainability achievement’s needs to be focused on adding value to the bottom line, via increased booking and sustainability loyalty, through communication of the results of implemented sustainability initiatives and their environmental impacts. Today’s travelers are more conscientious than ever and more responsive to sustainability, as being demonstrated by their increasing response rate toward those who have a corporate awareness of sustainability and social responsibility. Many of the major brands today are taking leadership to the corporate level for owned or managed portfolios. As Interstate’s presence in sustainability leadership becomes more prominent, a corporate performance management program may need to be considered in order to drive company-wide commitment. Underwriting could be achieved via a charge back system to each property, benchmarked to their sustainability cost reduction achievements. **Overwhelming evidence shows that combining sustainability and innovation results in the advancement of both, raising the bar of sustainability leadership for those committed to going beyond the norm. This is what has been achieved at Hilton Concord, thus establishing a competitive advantage in the property’s sustainability leadership placement in the market place.** It is the time for a winner’s circle event, generated from business growth.

SUGGESTIONS FOR GOING FORWARD

SUSTAINABILITY FUNDING OPTIONS

COST SEGREGATION

Funding allocations for sustainability initiatives could be allocated for use across the entire portfolio, by using this approved accounting method. In lieu of paying taxes to the Federal Government, via the accelerated depreciation schedules, those tax dollars could now be diverted to select properties. It is projected that the application of Cost Segregation at the Hilton Concord would generate \$3.4M of additional depreciation, resulting in a \$1.2M tax savings available for elected sustainability initiatives. Applying the approach across the Interstate portfolio of wholly-owned assets, it is projected to be \$7.2M of diverted tax dollars to sustainability initiatives within the portfolio. These dollars are normally paid in taxes but would now be available for sustainability investment to **create** market leadership and **reduced** operating costs, which when capitalized = **ADDED ASSET VALUE!** Clearly, it would be a more opportunistic application for redirecting Interstate tax savings. All losses have a five (5) year loss carry forward provision.

FEDERAL ENERGY CODE SECTION 179D

Pursuant to the code, commercial buildings, including hotel properties, are eligible for energy efficiency tax deductions of up to \$1.80 per-square-foot. Hilton Concord as an example would equate to \$686,476, if applicable in all three (3) categories. The three categories are: 1) lighting 2) HVAC and 3) building envelope. Each category is administered \$0.60 per square foot, if qualifications are met. In this case an additional \$200-\$300,000 of tax savings could be added to the STC. All losses have a five (5) year loss carry forward provision.

NOTE: Hilton Concord is a highly probable candidate for both of the above programs. It should also be noted that the tax provisions allow for both programs to be concurrently applied to a single property.

The above are suggestions for creating sustainability capital that could be used universally, across the portfolio, without competing for budgeted capital allocated to operations.

“Sustainability Funding”

*It is projected that the application of Cost Segregation at the Hilton Concord would generate **\$3.4M** of additional depreciation, resulting in a **\$1.2M tax savings**.*

Applying the approach across the Interstate portfolio of wholly-owned assets, it is projected to be **\$7.2M** of diverted tax dollars to fund sustainability initiatives.

Hotel properties are eligible for energy efficiency tax deductions of up to **\$1.80 per square foot**.

Hilton Concord, as an example, would equate to **\$686,476**, if applicable in all of the following categories:

- 1) Lighting
- 2) HVAC
- 3) Building Envelope

Each category is administered a \$0.60 per-square-foot, if qualifications are met. In this case, an additional **\$200-\$300,000** in tax savings could be added to the STC.

CORPORATE DECLARATION

A review of the Hilton Concord prototype and Interstate's recognized commitment may now give some level of clarity to begin adopting or expanding formal sustainability policies and postures for a company-wide declaration of Interstate's commitment to environmental preservation and acceptance of its social responsibility. **This will give notice to all stakeholders of Interstate's governance and integration throughout its global market presence, attesting to its hospitality leadership and confirming its sustainability commitment.**

Resulting from this undertaking, sustainability strategies, planning, and the identification of future opportunities can occur. **Integration will occur across the entire landscape of Interstate's hospitality management platform** and develop into an everyday, natural component of environmentally responsible operations. These environmentally responsible property actions in the retrofitting of existing buildings and new construction in planning and implementation will publicly declare Interstate's environmental commitments. This progress will be further demonstrated through the commitment to providing a comfortable and relaxing guest experience through implemented sustainability initiatives.

COMMUNITY OUTREACH

The development of a continuous and dedicated community outreach program, which includes external communication through a variety of media including social media platforms, is an **extremely important component** for successful public and corporate awareness of sustainability accomplishment. It will ultimately lead to consistent business development opportunities, because Interstate will be synonymous with sustainability leadership, and all will know sustainability to be a part of its culture.

COMPETITIVE EDGE

The use of spreadsheets alone does not match up with maintaining a leadership edge over the competition. **Keeping an advantage over competitors** will require the employment of current and yet-to-be-developed information technologies that will provide the data basis for staying ahead of the competition. The technological revolution is unprecedented and is moving with such speed that R & D is paramount to retaining the competitive edge. The components of future vision, constant technology awareness, and consistent good data flow will enable maintenance of industry leadership.

In a recent meeting with Sony executives, a comment was made that the technology available to college freshmen today will likely be obsolete by their junior year. **Future applications of technology, products and systems will need to be considered in order to upgrade, without the need to discard existing capital investment.** The recently installed Electrolux Laundry System at the Hilton Concord is an example of how this issue was considered in its selection due to systems upgrade technology. Additionally, the challenge of identifying energy usage patterns, while having one electric meter, has required the temporary installation of PG&E energy loggers on nine electrical panels.

These loggers have been loaned to HSSI and the property by PG&E for a thirty- day window, in order to drill deeper into the electrical usage patterns. Trusting the data to be helpful, its interpretation, with the assistance of PG&E, may provide a well-defined plan to achieve additional energy reduction measures at the property. The review of the data from the loggers substantiates the previously-referenced value of using informational technologies to guide intelligent and successful decisions in the area of sustainability.

ENERGY ANALYSIS

The Hilton Concord Sustainability Program has targeted four main areas in which to achieve reductions in gas, electric, water and waste. These categories have been selected in response to the focus of current regional, state and federal legislative action and the proposed mandates for reporting reductions. These specific categories are components of mandated climate control initiatives.

Additionally, it is certain that significant escalations in costs for these categories can be expected and must be planned for, either by implementing technologies, products, or systems (or a combination of these elements) that will hold the line on these operational costs. Energy plus cost reduction is focused on **usage** and **generation** to achieve maximum economic impact.

The evaluation of **usage** has been challenging due to a single meter at the Hilton Concord property. This is being resolved through the temporary installation of data recording loggers in nine (9) major panels to measure specific use patterns from the collected data. The findings will enable the formulation of various alternatives to achieve further reductions.

Energy **generation** offers significant possibilities through its cogeneration (heat + electricity) properties. Current analysis shows the ability to produce a kWh at \$0.10 **less than** current rates being paid before proposed escalations (\$0.145). Additionally, capturing the heat through cogeneration from the production of electricity will reduce the need for inefficient boilers.

Cogeneration can produce all hot water requirements for 89% occupancy, thus utilizing boilers only for the last 11% of full occupancy status. **Considering current annual use of 2,530,000 kWh, the result is a raw cost reduction of \$250,000.00 per year. Adjusted for Microturbine production capacity, annual savings could be approximately \$175,665.00.**

HILTON CONCORD SUSTAINABILITY PROGRAM
has targeted four main areas in which to achieve reductions in energy (gas/electric), water and waste.

ENERGY + COST REDUCTION is focused on **usage** and **generation** to achieve **maximum economic impact**.

Current analysis shows the ability to produce a kWh at \$0.10 less than current rates being paid before proposed escalation (\$0.145).

Considering current annual use of 2,530,000 kWh, the result is a raw cost reduction of \$250,000.00 per year.

Adjusted for Microturbine production capacity, annual savings could be approximately \$175,665.00.

Combined heat and power Microturbines are an economical, clean and reliable power generation source for on-site energy.

CONCLUSION

The voice of sustainability, which at one time was a whisper, is now a voice to be reckoned with on a global scale. The search for sustainability commitment by travelers, corporate partners, meeting planners, and governmental agencies is becoming a focused mandate. Those that ignore this voice will find themselves conducting business in a changed environment and could be subject to serious ramifications, both economic and legislative.

Interstate Hotels & Resorts is a highly respected and recognized leader in hospitality in the global market. **Their commitment to creating a sustainability prototype demonstrates their acceptance of corporate and social responsibilities to the global community and to all their stakeholders.**

The development of a broad platform of “Sustainability Initiatives” at the Hilton Concord enables the selection of individual initiatives or groupings of initiatives for application to the selected properties for sustainability portfolio expansion. This versatility is a tangible result of their continued sustainability leadership in their respective market segments and will continue to broaden their client base.

Continued public recognition in each active market served by Interstate will create market strength and presence and will further set Interstate apart from the competition. Marketing and sales teams then can compete for business with a unique advantage over their competition, by demonstrating their existing list of “Sustainability Initiatives” and performance record. Once the Interstate name becomes *synonymous* with sustainability leadership industry wide, portfolio networking should result in added business partnerships with those seeking to do business with like-minded companies.

There are great opportunities available to those who are willing to accept the challenge of shifting their thinking and taking action similar to that of Interstate. Technologies, systems and products focused on sustainability do and will continue to impact bottom line economic and market performance in a positive way, both in the short and long term. The benefits realized will serve ownership in both upward and downward trending markets.

The goals of establishing sustainability leadership and market dominance, reducing operating costs for increased net cash flow, and creating added asset value are waiting just over the threshold to be achieved.

Those that cross over by making a commitment to sustainability will set themselves apart from the competition.

The voice of sustainability, which at one time was a whisper, is now a voice to be reckoned with on a global scale.

INTERSTATE HOTELS & RESORTS 'S commitment to creating a sustainability prototype demonstrates their acceptance of corporate and social responsibilities to the global community and to all their stakeholders.

Continued public recognition in each active market served by Interstate will create market strength and presence and will further set Interstate apart from the competition.

There are great opportunities available to those who are willing to accept the challenge of shifting their thinking and taking action as Interstate has.

APPENDIX

1. DETAILED ENERGY, WATER AND WASTE REDUCTION INITIATIVES IMPLEMENTED AT THE HILTON CONCORD
2. HILTON CONCORD SUSTAINABILITY INITIATIVES IMPLEMENTED TO DATE AND PLANNED
3. TECHNOLOGIES, SYSTEMS AND PRODUCTS IMPLEMENTED AT HILTON CONCORD
4. HILTON CONCORD SUSTAINABILITY LEADERSHIP RECOGNITION IN THE MEDIA
5. HILTON CONCORD EXCEL SPREADSHEET ANALYSIS
6. HILTON CONCORD IMPACT SUMMARY

ENERGY REDUCTION INITIATIVES

LED LIGHTING – Extensive application in guest rooms, public corridors, meeting spaces, lobby, administration, ballroom, administration offices, club lounge, business center, elevator cabs, elevator lobbies, hospitality suites, pool area, business center, pre function public areas, restrooms, atrium, restaurant (interior/exterior). Scope: 80% of all lighting. ALL dimmable lamps with dimmable control zones including guest rooms, 8-12.5-17 Watt LED bulbs replacing 60-75-100 Watt incandescent bulbs.

HI EFFICIENCY LOW WATTAGE TUBE LIGHTS – Back of house, work areas, stairways, kitchen, storage areas, employee lounge, office areas and meeting rooms. Scope: 20% of all lighting. Some dimmable controls included. **Objective:** Electrical energy usage reduction, reduced maintenance and inventory.

ENERGY MANAGEMENT SYSTEM (HVAC) – Guest rooms, meeting spaces, ballroom, lobbies, pre function areas, restaurant, kitchen, employee lounge, public corridors, administration offices, club lounge, fitness center, business center. **Objective:** Energy reduction (gas /electric), maintenance alerts, maintenance scheduling, management tool for planning and budgeting, create transparency, control vacant spaces electric/gas use.

ADVANCED TECHNOLOGY LAUNDRY SYSTEM - Main laundry area. 350G-Force extraction, dryer moisture control sensors.
Objective: Energy reduction (gas/electric) + water reduction, labor savings and more efficiency of staff, use of advanced technology to control purchase cost and resale of used equipment, eliminate some drying cycles, correct moisture retention, enhance ironing and preserve linen life with softer finish, reduced drying times, increase wash capacity by 40 lbs. and reduce drying capacity by 105 lbs.

OZONE LAUNDRY SYSTEM – Main laundry area. Direct ozone injection into wash tub and wash in cold water with Eco Lab formulas. 60 lb. washer has one formula setting for hot water. **Objective:** Energy reduction(gas/water), enhance life-cycle of linens, produce softer/whiter/fresher linens for improved guest experience, and improve employee air quality by eliminating chemical odors.

LED LAUNDRY CEILING RETROFIT– Main work area, conference area, reception and private office locations. **Objective:** Energy reduction (electric),improve inadequate and inefficient lighting, improve employee environment, reduce maintenance lamp replacement. Motion sensors placed throughout.

LED MEETING ROOM CEILING LIGHT- CREE LED Troffers (35 W) with dimming were added to Club Room 1 & 2 for enhanced lighting using efficient LED application. **Objective:** Energy use control while enhancing foot candle readings at the work surface areas, improve functional use, reduce HVAC impact, LED compatibility with LED recessed ceiling lighting, dimmable controls.

PLATE & VINE RESTAURANT – All LED lighting installed throughout the interior spaces and exterior entrance walkways. Interior is all dimmable lamps and dimmable control, replacing high wattage incandescent lamps. **Objective:** Energy reduction of electric use and reduced impact on HVAC demand, create variable illumination environment throughout operational periods, reduce inventory of replacement lamps due to extended life cycles of LED (25-35,000 hours).

PORTE-COCHERE LED RETROFIT- Retrofit with CREE LED Troffer (52W) and CREE LED(10 W) down lighting. **Objective:** Energy (electrical) reduction from 175 Watts to 52 Watts per fixture, improve guest arrival/departure experience, provide higher quality of (CRI)(true light) in area, highlight and accent the columns and landscape areas.

REFRIGERATION DOOR SEALS AND CURTAIN REPLACEMENTS – Kitchen freezer and refrigeration units. **Objective:** Energy (electrical) use reduction via tighter door closures and curtains to reduce cooling escape.

FOOD PREPARATION EQUIPMENT - Restaurant kitchen. **Objective:** Energy (gas) reduction. Energy Star Rated.

LOW TEMP DISHWASHER - Restaurant kitchen. **Objective:** Energy (gas) reduction and water use reduction. Advanced technology achieves both objectives and increased labor efficiency.

PARKING LOT LED RETROFIT & MOTION SENSORS -Replace 400 Watt Mercury Vapor lamps with LED 120 Watt lamps with motion sensor reduction to 84 Watts during unused periods. Immediate response to full power with any motion in zone. **Objective:** Improved Color Rendering Index (CRI) from 60 to 85+ improving visibility and security. Reduced energy usage.

PERIMETER BUILDING SECURITY LIGHTING INCLUDING PLATE & VINE ENTRANCE - Replaced 250 Watt Sodium Vapor lighting with LED 70 Watt and 90 Watt LED lighting. **Objective:** Improved visibility and security with 85+ CRI. Reduced energy usage.

ENERGY REDUCTION INITIATIVES CONT'D...

WINDOW FILM – Implemented in guest rooms, entrance pool, East/West Facing Guest Tower Exposure, Fitness Center, Administration Offices, Atrium West Glass Wall, West facing entrance. **Objective:** Reduce solar, infrared and ultraviolet transmission from 66/23% to 16% , reducing room temperatures by 7-10 Degrees. Reduce energy use.

ENERGY STAR OFFICE EQUIPMENT - Implementation of energy saving machines with stand by features and sleep modes. **Objective:** Energy savings.

ELECTRIC CAR EV CHARGING STATION - Implemented Electric Car EV Charging Station. **Objective:** CO2 reduction, energy efficiency, guest/community services.

WATER REDUCTION INITIATIVES

LOW FLOW TOILETS - Replaced in all guest rooms (1.28gpf vs. 3.2gpf). **Objective:** Water use reduction. Goal is 650,000 to 750,000 gallons annually.

LOW FLO SHOWER HEADS – Replaced all shower heads and added aerators in guest rooms. **Objective:** Water use reduction. Goal is 150,000 -200,000 gallons annually.

LANDSCAPE IRRIGATION – Two-fold approach: Converted surface spray heads in shrubbery zones to drip irrigation. Transitioned from municipal water to property's own well water.

OZONE LAUNDRY – Washing in shortened cycles due to high bacteria kill of ozone. **Objective:** 300,000 gallons per year reduction.

HIGH TECHNOLOGY ELECTROLUX LAUNDRY SYSTEM - Elimination of sump component of previous equipment. **OBJECTIVE:** Water use reduction. Calculated goal is 325,000 – 350,000 gallons annually.

NATURA WATER SYSTEM - Installed in banquet and restaurant phasing out bottled water in all non brand requirement areas. **Objective:** Eliminate plastic bottles in banquet, fitness center, restaurant, recycle, water upon guest request.

TRASH/WASTE INITIATIVES

BIOHITECH ORGANIC WASTE DECOMPOSING FOOD DIGESTER – Redirect 6.5 tons of food waste per month to digester. Location: kitchen. **Objective:** Reduce haul out monthly charges by 50% by converting heavy (weight) food waste into water and recycling back to sanitation system for processing. Capacity is 1200 lbs. of food processed in a 24-hour period and converted to water. Current haul outs are 3-4 times per month.

INTERNAL RECYCLING – Designated bins are located throughout building for paper, cans/bottles, and waste in order to segregate for proper disposal. **Objective:** To divert all contents away from land fill and channel to appropriate collection centers, reduce haul out frequency and costs.

PILLOWVAC - PillowVac System reducing land fill & CO2 generation. **Objective:** Enhanced guest experience, cost savings.

DYSON AIR HAND DRYING SYSTEMS – Installed in in Public Restrooms. **Objective:** Paper reduction.

PAPERLESS CHECK IN - Implementation of paperless guest check-in system. **Objective:** Paper reduction.

NATURA WATER SYSTEM - Installed in banquet and restaurant phasing out bottled water in all non brand requirement areas. **Objective:** Eliminate plastic bottles in banquet, fitness center, restaurant and recycle.

Implemented: 33 Sustainability Initiatives Implemented to Date (6-21-2013)

- LED Lighting (guest rooms, public corridors, meeting spaces, ballroom, lobby, administration offices, executive club lounge, business center, elevators, elevator lobbies, hospitality suites, pool area, public rest Rooms, Atrium - 80 % LED; the balance T8 low wattage 25W high efficiency (energy reduction)
- Low -Flow Toilets - water conservation 900,000 gallons/year
- Energy Management System for Guest Rooms and Public spaces – (energy reduction, space management) - Pelican Wireless Systems
- Low Flow Shower Heads 2.5gpm with built in aerators in shower head and sink faucets (water savings)
- Ozone Laundry System gas/electric/water savings - Aquawing Laundry Ozone Systems
- Hi Tech Electrolux Laundry System (gas/electric/water reductions) connected with Ozone System
350 G-Force extraction (water, gas, electric savings).
- PillowVac System reducing land fill & CO2 generation. Enhanced guest experience, cost savings
- BioHiTech Organic Waste Decomposing. 6.5 tons of food waste per month now converted to water and sent to filtration plant for reuse. Reduced haul outs from 2-3/month to 1 every 19-20 days (reducing CO2, land fill and cost)
- Extensive recycling program throughout with collection bins on every elevator lobby, main lobby and meeting space, public pre-function areas & employee spaces
- Eco-Friendly Water Bottle Program (Hilton brand requirement)
- Natura Water System installed in banquet and restaurant phasing out bottled water in all non brand requirement areas (eliminate plastic bottles in banquet, fitness center, restaurant, recycle)
- Low Temperature Dish Washing System (energy reduction gas/electric/water) – Aqua Clean Systems
- Dyson Air Hand Drying System in Public Restrooms. (Paper reduction)
- Window Film applied to Atrium, fitness center and Executive offices (west facing window walls) Phase 1
Significant (14 Degree) temperature reductions and lowered thermostat settings - Window Innovations
- Motion Sensors installed in 47 locations (energy reduction, extended lamp life) – Leviton; Phase 1 & 2
- Recycled Paper Content used in operations administration, housekeeping and kitchen
- Paperless Guest Check in System
- Energy Saving copy machines with energy saving/stand by features/ sleep modes (energy savings)
- Drip Irrigation in Shrubbery Zones (water reduction)
- Irrigation for landscape zones provided by hotels own on site well water
- Replaced HVAC Roof top units with Advanced Technology including Economizer Component (energy savings and greater efficiency)
- Refrigeration Doors & seals plus door curtains replacement (energy savings)
- Lighting Dimming Systems in all public, ballroom & meeting spaces, restaurant – Lutron – (Energy Efficiency & Savings)
- Food preparation equipment replacements – (energy efficient /energy star rated)
- Retrofit newly remodeled restaurant (interior/exterior) " Plate & Vine" with LED Lighting and Lutron Dimmers (energy savings)
- CREE LED Troffers (35 W) with dimming were added to Club Room 1 & 2 for enhanced lighting using efficient LED application. (Energy savings and enhanced meeting environment)
- Retrofit Laundry Ceiling Lighting with CREE LED (22/44 W) Troffers (energy savings/ enhanced employee work area)
- Retrofit Porte Cochere lighting with CREE LED Troffer (52W) and CREE LED(10 W) down lighting
- Electric Car EV Charging Station (CO2 reduction, energy efficiency, guest/community services) - Retrofit ---
- Retrofit Sodium Vapor to CREE LED in Parking Lot Area with Motion Sensors and dimming.
- Retrofit Building perimeter security lighting to LED CREE Wall Packs
- Added Window Film Applications guest rooms, entrance pool – East/West Tower exposures (energy reduction, guest satisfaction).
- Land Fill Diversion Practices food waste, Cardboard, cooking oil, glass/plastic/cans

Planned Sustainability Initiatives:

- Micro-Turbine - on site power generation
- Install Grease Capture System "FogBuster" (reduced maintenance and pump out costs-grease trap)
- Install Hydroflow System to pool, spa and building water system. (Reduce maintenance of heating elements, chlorine usage and calcium build up in pipes) higher health standards, water savings, extended equipment life.
- Motor change outs (variable drive) in refrigeration and pool/spa units. (Energy savings)
Phase 2; EPAAct 179D; Cost Segregation
- Air-Handling Vent and Hoods System - Energy Reduction & Efficiency
- Elevator Variable Drive Motor Retrofit - 2013 (Energy Reduction, efficiency - enhanced Guest Experience)
- New Light Sensors, Advanced Timer Technology on exterior lighting zones - (energy and labor savings)

VERDAFERO METRICS SYSTEM – www.verdafero.com; Metrics System used monthly for tracking Electric, Gas, Water, Waste and Carbon Footprint Reduction + Waste Diversion. Metrics Model adjusts for normalization of weather and occupancy factors.

BIOHITECH -food digester; www.biohitech.com ; dishwasher area location.

PELICAN WIRELESS SYSTEM - energy management (HVAC) provided and serviced by Pelican; www.pelicanwireless.com; guest rooms and public space areas (meeting rooms, ballroom, fitness center, administration offices, kitchen, restaurant, hallways, lobby).

AQUA WING OZONE SYSTEM -provided and serviced by Aqua Clean Solutions; www.aquawingozone.com; laundry.

ECOTALITY NORTH AMERICA EV CAR CHARGERS - www.ecotality.com ; ADA and rear parking lot locations.

ELECTROLUX LAUNDRY SYSTEM - provided and serviced through A2Z Laundry Systems; www.electrolux.com.

CMA LOW TEMP DISHWASHER - provided and serviced through Aqua Clean Solutions; www.cmadishmachines.com; located in restaurant area; Energy Star Rated.

WINDOW INNOVATIONS WINDOW FILM – www.windowinnovations.com ; Huper Select DREI 35; fitness center, administrative offices, west facing corridor (atrium) locations.

LUTRON DIMMING SWITCHES - www.lutron.com; dimming switches located in lobby, ballroom, meeting rooms, restaurant.

LEVITON MOTION SENSORS - www.leviton.com; motion sensors located throughout the property in storage spaces and in areas where energy savings could be realized, such as linen storage, service elevator lobbies, laundry area, and some offices; majority of areas now control 24/7/365 wasted energy zones.

CREE LED LIGHTING PRODUCTS - www.betaled.com ; www.cree.com

- A) Porte Cachere down lights in landscape area (LR6; LE6), retrofitted ceiling lights (LR24).
- B) Club rooms 1 &2 (CR22).
- C) Laundry room, office and conference rooms (CR24).
- D) Parking lot retrofits (Edge Series Energy Savers).
- E) Exterior perimeter lighting retrofit.
- F) Atrium.

PHILIPS LED LIGHTING PRODUCTS - www.philips.com

- A. Guest rooms, common areas hallways, public restrooms, lobby, offices, meeting rooms, ballroom, entrances, stairwells, restaurant, pool area, bars.
- B. Tube lights in all back of house areas, storage, linen closets, service elevator lobbies, emergency stairwells, kitchen, lobby soffits, meeting rooms, fitness center, office areas, hallways, cafeteria (employee).

LIGHTING SCIENCE (LED) - www.lsgc.com

- A. Elements Bar, Plate & Vine, exterior entrance to Plate & Vine.

PILLOW-VAC SYSTEM - Harris Pillow Supply, Inc.; www.harrispillow.com; laundry location.

DYSON HAND DRYERS - www.dysonairblade.com; public restroom locations.

TOTO LOW FLUSH TOLIETS (1.28gpf) - www.totousa.com; all guest room locations.

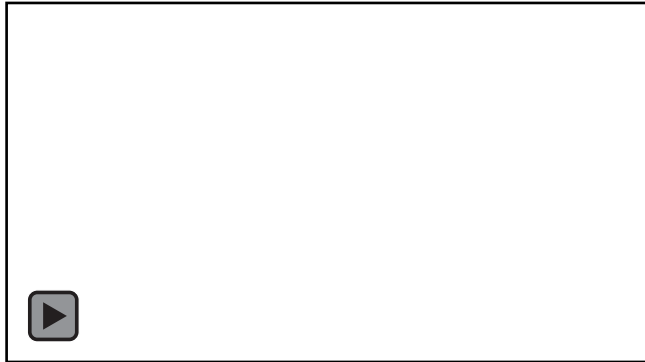
ECOFLOW SHOWER HEADS (1.6GPM) + AERATORS - www.waterpik.com ; all guest rooms, pool.

KITCHEN EQUIPMENT REPLACEMENT - FRYMASTER ENERGY STAR APPROVED - www.frymaster.com; kitchen location.

MICRO-TURBINE CAPSTONE - www.capstoneturbine.com ; supplied and installed by Energy Systems Development; rear parking lot near natural gas inlet.

HYDRO-FLOW SYSTEMS – www.hydroflow.com ; installed and supplied by Aqua Clean Solutions; pool and main building water inlet and kitchen area.

GOSLYN GREASE REMOVAL SYSTEM - www.goslyn.net ; located on dishwasher units.



PG&E Video - November 9, 2012

http://www.hotelsustainabilityinc.com/?page_id=766

Hilton Concord Sustainability Leadership was recognized by **PG&E** via a professional photo/video shoot at the property on September 4, 2012. PG&E has booked **\$100,000.00** of initial business activity at the hotel. The video appears on the PG&E web site as a case study in integrated sustainability achievement.

Hilton Concord Awarded Green Leaders Platinum Level + 2013 Certificate of Excellence by Trip Advisor
www.hotelsustainabilityinc.com/hilton-concord-awarded-2013-certificate-of-excellence-by-trip-advisor

- Forbes Part 1 – August 31, 2012 <http://www.hotelsustainabilityinc.com/?p=625>
- Forbes Part 2 – August 31, 2012 <http://www.hotelsustainabilityinc.com/?p=631>
- Green Lodging News – August 9, 2012 <http://www.hotelsustainabilityinc.com/?p=587>
- Smart Meetings – July, 2012 <http://www.hotelsustainabilityinc.com/?p=515>
- City of Concord Council Meeting– June 5, 2012 <http://www.hotelsustainabilityinc.com/?p=487>
- Green Lodging News – May 9, 2012 <http://www.hotelsustainabilityinc.com/?p=587>

Hotel Interactive – May 4, 2012

<http://www.hotelinteractive.com/article.aspx?articleid=25060>

Green Lodging News – May 3, 2012

<http://www.greenlodgingnews.com/pillow-vac-pillow-renovating-contributes-sustainability>

Cool California – June 26, 2013

http://www.hotelsustainabilityinc.com/?page_id=766

Pillow-Vac Case Study Released Over The News Wire and Appeared in Seven Countries
 Eyewitness News, Business Wire, Action News, Market Watch – May 2, 2012

Note: Several additional sustainability articles are in preparation and case studies are in discussion, which will result in further exposure for Hilton Concord and Interstate Hotels & Resorts regarding their “Sustainability Leadership” program.

Hilton Concord Excel Spreadsheet Analysis

Sustainability Initiative	System Cost	Labor Cost	Total Cost	Rebate	Net Cost	Annual Savings	Payback (yrs)
EV- Car Chargers	\$37,775	included	\$37,775	\$32,638	\$5,137	\$0	-
Porte Cachere	\$4,000	\$3,400	\$7,400	\$525	\$6,875	\$819	8.4
Perimeter Building LED Retrofit	\$7,002	\$2,000	\$9,002	\$750	\$8,252	\$820	10.1
Parking Lot LED Retrofit	\$53,940	\$19,646	\$73,586	\$5,879	\$67,707	\$6,568	10.3
Window Film Tower (Pool Entrance)	\$97,898	\$36,543	\$134,441	\$16,560	\$117,881	\$14,750	8.0
Window Film (Fitness, Atrium,Admin)	\$6,796	\$2,457	\$9,253	\$1,215	\$8,038	\$2,120	3.8
Guest Rooms LED	\$122,032	\$0	\$122,032	\$2,306	\$119,726	\$5,476	21.9
Public Spaces LED (Ballroom, Meeting, Back of House)	\$43,869	\$0	\$43,869	\$16,435	\$27,434	\$19,368	1.4
Club Rooms LED	\$4,100	\$4,000	\$8,100	\$0	\$8,100	\$0	added watts
Motion Sensors (all storage, elevator service landings, linen, vacant spaces)	\$3,029	\$3,075	\$6,104	\$2,701	\$3,403	\$943	3.6
Laundry HiTech System	\$122,300	\$1,860	\$124,160	\$10,642	\$113,518	\$14,927	7.6
Ozone Laundry System	\$32,325	included	\$32,325	\$24,213	\$8,112	\$25,198	0.3
Laundry Room, Offices, Conference LED Troffer Retrofit Ceiling	\$3,586	\$2,214	\$5,800	\$233	\$5,567	\$210	26.5
Plate and Vine Restaurant	\$4,566	\$800	\$5,366	\$2,326	\$3,040	\$1,936	1.6
Plate And Vine LED (Signage + Trees + Patio)	\$2,743	\$485	\$3,228	\$0	\$3,228	\$0	added watts
Low Temperature Dishwashers	\$4,640	\$1,482	\$6,122	\$2,319	\$3,803	\$1,360	2.8
Presidential Suites	\$1,260	\$0	\$1,260	\$200	\$1,060	\$114	9.3
Low Flow Toilets	\$63,924	PIP	\$63,924	\$47,796	\$16,128	\$3,339	4.8*
Digester	\$25,000	\$4,015	\$29,015	\$0	\$29,015	\$12,737	2.3
Low Flow Shower Heads/Aerators	Engineering						
Pillow Vac System Ticks/Feathers	\$13,493	\$0	\$13,493	\$1,349	\$12,144		
Pillow Vac System	\$3,721	\$0	\$3,721	\$500	\$3,221	\$29,390	0.5**
Recycling	Engineering						
Drip Irrigation Shrubs (on site well water supply)	Engineering						
Energy Management System (Throughout)	\$61,616	\$0	\$61,616	\$3,621	\$57,995	\$11,000	5.3
Refrigeration Seals & Doors	Engineering						
Natura Water	Sales						
Dyson Air Hand Drying System (Public Restrooms)	PIP						
HVAC Rooftop Units with Economizers	Engineering						
Paperless Check in, Recycled Paper Content Purchases	Admin						
Energy Saving Copy Machines	Admin						
Food Preparation Equipment - Energy Star Rated	\$4,297	\$0	\$4,297	\$749	\$3,548	-	-
Total	\$723,912	\$81,977	\$805,889	\$172,957	\$632,932	\$151,021	4.1

* labor costs included in PIP project costs

** payback period for total system including ticks/feathers

ACTION	WATER	GAS	ELECTRICITY	RECYCLING/ REUSE	EMISSIONS	TOTAL SAVINGS
EV- Car Chargers					X	\$0
Porte Cachere			X			\$819
Perimeter Building LED Retrofit			X			\$820
Parking Lot LED Retrofit			X			\$6,568
Window Film Tower (Pool Entrance)		X	X			\$14,750
Window Film (Fitness, Atrium,Admin)		X	X			\$2,120
Guest Rooms LED			X			\$5,476
Public Spaces LED (Ballroom, Meeting, Back of House)		X	X			\$19,368
Club Rooms LED			X			\$0
Motion Sensors (all storage, elevator service landings, linen, vacant spaces)			X			\$943
Laundry HiTech System	X	X	X			\$14,927
Ozone Laundry System	X	X	X			\$25,198
Laundry Room, Offices, Conference LED Troffer Retrofit Ceiling		X	X			\$210
Plate and Vine Restaurant	X	X	X	X		\$1,936
Plate And Vine LED (Signage + Trees + Patio)			X			\$0
Low Temperature Dishwashers		X	X			\$1,360
Presidential Suites			X			\$114
Low Flow Toilets	X					\$3,339
Digester	X			X		\$12,737
Low Flow Shower Heads/Aerators	X					
Pillow Vac System Ticks/Feathers				X		
Pillow Vac System				X		\$29,390
Recycling						
Drip Irrigation Shrubs (on site well water supply)	X					
Energy Management System (Throughout)		X	X			\$11,000
Refrigeration Seals & Doors			X			
Natura Water	X			X		
Dyson Air Hand Drying System (Public Restrooms)				X		
HVAC Rooftop Units with Economizers		X	X			
Paperless Check in, Recycled Paper Content Purchases				X		
Energy Saving Copy Machines			X			
Food Preparation Equipment - Energy Star Rated		X				
Total Savings						\$151,021
Integrated ROI						4.1 Years
Projected Asset Growth at 8% Cap						\$1,997,762