



Environmental Best Practice Recommendations



The best practices compiled in this document came about via a collaboration of the SLHTA environmental committee. We chose, as a group, to spend time to visit each other's properties with a view to openly share what is working for us and to generally expand the knowledge and opportunities that would be of global value to the industry within St. Lucia.

Philosophical

Relating or devoted to the study of the fundamental nature of knowledge.

1 Share openly
One of the team's findings is that there's a tendency within our industry to be proprietary about what we do and resist the practice of sharing. The committee, through mutual collaboration, sought to break down these barriers and openly share the things that work for us. The will to openly share environmental initiatives is therefore our first and most rewarding best practice. From an environmental perspective we should not operate in isolation - we should always be open to sharing

2 Is your whole team on board?
The resorts/hotels that are excelling in their demonstration of environmental commitment are those who have invested the time and effort in creating an environmental mission statement that is shared with all employees and guests alike. Typically there's an individual within all organizations who is a person of passion and purpose. This person should be encouraged and provided with the resources to develop ideas and the general internal philosophy that supports the teams education and transformation towards a community of employees who are all on the same page and equipped with knowledge about the specific hotel/resort's environmental profile and targets.

3 Success starts with strong support from the top

It is 100% clear that the resorts/hotels that are succeeding with their environmental commitment are those who have senior leadership (especially general managers and or ownership). Without this support and drive from the top it is very challenging for a resort/hotel to maintain momentum towards achieving their environmental initiatives. There are so many good reasons to have an environmental profile that any organization ignoring their role is losing out. Below are some great reasons for organizational leaders to be fully supportive.

- a. **Marketing "Guests expect it"** – Currently 12% of independent travelers reflect on the environmental profile of the destination they are traveling to. 30% of group/incentive business organizers reflect on the environmental profile of the destination they are considering. Your environmental profile counts even more if the incentive group has itself a strong environmental position.
- b. **Economical - direct operational savings** – An operation run on well established environmental principals is likely to be highly focused on minimizing its energy footprint. In an energy market where we typically pay three times the developed world's cost for energy this has a direct and major positive enhancement to the bottom line.

- c. **It's just the right thing to do** – In a world where, finally, climate change and environmental concerns are ever increasing it is essential that each resort/hotel is seen to be doing its part.

4 **Overcome a barrier**

A stated reason that inhibits resorts/hotels from pursuing green technology is that it potentially alters the visual aesthetics of the facility (Solar Hot Water heating for example). It's commonly thought that the look of PV solar panels or roof-top mounted hot water systems detract from beauty and in some way negatively reflect on the resort/hotel. The committee however finds the exact opposite is true. With a well-messaged environmental statement that is shared with the guests a guest noticing the technology will have a good feeling and an understanding of the positive efforts of the respective resort/hotel. The message here is not to be concerned about the visual aspects but rather to celebrate (along with your guests) your choices that demonstrate your facility's commitment towards sustainability and the reduction of fossil fuel consumption.

5 **What becomes a positive habit at the home becomes a positive habit in the work place**

There are many training philosophies that we use to encourage understanding and change. Some more effective than others. We have found that the best way to influence meaningful and lasting change towards workplace energy management is to start by assisting our employees to understand how to beneficially make changes within their home environments. We therefore produced a great PowerPoint presentation that can be used to help our employees discover how they can dramatically reduce their bills for electricity and water. The training explains the cost of power and water and gives real life scenarios to allow the employees to see how they can save dollars by making minor adjustments to the way they use their utilities at home. The training is specifically NOT targeted at what to do in the work place. We have found that after a month or two the employees notice their reduced bills and are enjoying the extra cash in their pockets as a result. What is achieved is a change in your employee's personal habits at home. It then becomes a simple transition to encourage the good newly-learned habits to transfer to the workplace. Effectively everyone within your organization becomes an energy manager.

6 **Support locally produced products**

This sounds like a no brainer however we were alarmed at how many resort/hotel operations are still choosing to import goods and produce that are available directly from St Lucia or the region. We strongly urge that all resorts/hotels look closely at what they can obtain from St Lucia and the region in preference to US imports. The benefits are many. Below are listed some key points to help drive this decision.

- Exposes your guests to real island products
- Directly boosts the local and Caricom economy
- Local is fresher and tastes better as produce and fruits mature naturally to full flavor
- Local is Green - Eating local reduces your carbon footprint. When your food doesn't travel long distances, you're promoting better air quality and reducing pollution.

7 **Waste Reduction**

Collectively we send tonnes of garbage weekly to St. Lucia's landfills. Much of this waste can be either avoided or diverted. One of the best ways to avoid creating waste in the first place is to work with purchasing to look at ways to reduce packaging. This is typically done by buying in bulk. Example: Some hotels use individual servings of jam, honey etc in small glass jars. The jars are discarded and create large volumes of unnecessary waste – Alternative being buy jam, honey etc in bulk containers and decant into locally made pottery jars that are washed and reused minimizing the waste otherwise generated. Food waste would always be welcomed by your local pig farmer to use as pig food. Build a connection with a local farmer – Help reduce his costs and your disposal costs too as they will come to collect your food waste for you.



Devices and new products to reduce utility footprint. Reduction of your energy and water consumption. Why your property engineer should be your best friend.

The ideas and suggestions below came from discussions based on the idea of reducing the utility footprint of a hospitality operation without affecting the guest's expectations for utility delivery. I.E. a hot shower with good pressure or a cold room or bright lighting to read by etc...

The number one saver – Your People

A minimum of 15% of electrical and 20% of water consumption in any resort/hotel operation can be achieved if you have created a conscious culture of saving. There are many approaches to getting everyone on board and actually turning off taps, lights, AC units etc.. Resorts/hotels that achieved this led the culture change through people of passion who get strong support from the top. Please support your people of passion, empower them and let them have time in their schedules to be real change agents. The benefits will quickly become clear.

Properties with a higher focus on the environment that have also engaged their teams through training and best practice use also have happier teams, less turn over and greater productivity. It's just a better way to be.

The above was started with the statement; "A minimum of 15% of electrical and 20% of water consumption in any resort/hotel operation can be achieved if you have created a conscious culture of saving". You should reflect on the reverse also being true if you are not supporting the change of your employees work practices then you are losing a lot on many levels.

Your property engineer should be tracking your utilities. You should always track your utilities with daily readings from your meters. Do not work with just your monthly utility

bills. Track occupancy daily also. Note: A hotel with a committed team focused on energy savings achieves the greatest matching of utility consumption to occupancy.

Go for the low hanging fruit first

Easiest to pick and yields the better rewards. Energy and water savings that deliver the greatest savings of both consumption but also dollars are; Water usage, Water Heating, Air Conditioning, Lighting, Pumps and Motors.

Water

Not our most expensive utility but one we can't operate without at all. The ways to reduce water consumption by guests are easy and consist of:

- Install aerators to basin faucets. Have someone check them regularly that they are actually there. It's been noted that aerators go missing and or have had their innards removed. An aerator will limit the flow of that tap to 2.5GPM great for guests who leave the tap running while brushing teeth, shaving etc... NOTE: Do not install aerators on a bath tub it just annoys the person waiting to fill a tub.
- Shower heads should also be 2.5GPM maximum also. These days there are many great designs and features available all in 2.5GPM flows. Important to always have a few extra shower heads so you can be doing your cleaning program. What has worked best for the participants is just using a container of white vinegar, change three heads daily for clean ones and soak the removed ones in the vinegar over night and rotate through all showerheads in 4-6 monthly cycles depending on the calcium levels in your water.
- Use low flow toilets. Check your existing units, you should be using 1.6gallons maximum for any of your toilets on property.

- Our #1 best practice is - Collaborate with housekeeping monthly and do a dye test. Simple way to see if you are losing water from the tank to the bowl past the flapper – A loss of up to 10 gallons an hour – Use a few drops of blue food dye dripped into the water in the tank when the room attendant enters the room. When the bathroom is being made up check to see if there's any trace of blue color in the toilet bowl. If there is then inform maintenance to take a look at the tank flapper.

That's about it guest water use is easy to control, the challenge is with our teams and processes.

Operational Water

Outside of being on top of fixing all leaks and metering your consumption daily to look for anomalies, the reduction of water consumption can only be achieved through your teams conscious efforts. The culture is a simple one and it is to "just do at work what you already do habitually at home." That's it.

Water Heating

Heating water using any other means except for Solar in our location is surely reckless. Solar Hot Water systems have evolved significantly and now for the most part use Evacuated Tube technology. This differs greatly from the old flat plate type Solar Heaters of the past. Evacuated tubes are far more reliable and heat your water even on cloudy days so there's more consistent hot water and far less dependency on electrical back up. Solar Hot Water heaters typically have an R.O.I. of less than one year and where extensive new pipe work is required less than 2 years for the return of investment. Note evacuated tube Solar Systems have a life cycle of 15-20 years.

Air Conditioning

We have a lot of Split systems in use and many are still the old R22 type that are poorly maintained. These units are energy hogs and when new had a SEER energy rating of just 9 with lack of proper maintenance and age the efficiencies are likely to be even lower. If this is where you are and your existing AC units are approaching the 5 year mark, or even before if you are committed to immediate reduction, then go for the new inverter drive A/C 410a units you will save a minimum 30% just on energy costs. The newer inverter units generally have a SEER rating of 20-22 and a typical 18,000 Btu A/C unit has an R.O.I. in St Lucia's energy market of 2.47 years and a life cycle of 8 years before reinvestment.

Going Further

You can tweak the 30% savings to over 50% with some additional investments into controls. These additional

savings can be gained by resorts which do not already have sensor controls for the guest space air conditioning. At a minimum you should have smart thermostats with occupancy sensors – these units set back the temperature to 25 degrees when the room is empty but allows the user of the room to set any temperature when the room is in use. Another essential are door contacts, they turn off the air conditioner if the guest leaves the patio door open. Without them we are simply unsuccessfully trying to air condition St Lucia.

Note: the newer Inverter 410a A/C units are for the most part compatible ready for sensor controls to be added to them – check with your supplier.

Don't ignore your back of house

Refrigeration technologies overall have become more efficient and our second look at the fruit tree should be to our walk in storage and food and beverage refrigeration. Be critical but also creative. Consider at a minimum upgrading all R22 Operational refrigeration applications. Consider refrigeration component only replacement on expensive enclosures that are otherwise in good shape. R.O.I Studies on several of these component only changes return in <3 years life cycle 10-12 years.

Lighting

In St Lucia we have been using compact fluorescents as a replacement for incandescent bulbs for a while now with mixed results. The promised returns have not really materialized and the general issues with CFL's has meant that they have been more of a disappointment to our industry rather than a great light source delivering great energy savings.

The issues with CFL's are:

- Less than satisfactory life span - this is mostly due to the power fluctuations and the general inferior standard of CFL's being sold locally.
- Slow start up – CFL's tend to have a lag of between 30 seconds to a few minutes before they reach full brightness.
- Poor dimming ability – CFL's can be dimmed but at lower light levels emit annoying buzzes.
- CFL's when used on mass in circuits produce dangerous harmonics into your electrical installation.
- Loss of color rendering as the CFL gets older – CFL's rated to give 2600-2700K light become greenish as they age. This can dramatically affect the intended color schemes you are trying to show off.

Now with the newer LED lighting that is available, and finally affordable, the issues above have been resolved.

- Life span is far less impacted on by voltage fluctuations
- Start up is instant
- LED's dim well without noise and with less harmful harmonics than CFL's (ensure you have bought "dimable" LED's). Caution the low dimming threshold of a LED is 25% of full brightness, attempting to dim lower than 25% will shut off the LED.
- Great color rendering.
- VERY low heat output – Great therefore for air conditioned spaces

"K" is VERY important. K is Kelvin and represents the temperature of the light source. To see colors as they would look in daylight use LED's in the range of 2600K to 2900K. Anything higher produces that harsher white/blue light. Get it wrong on a buffet display and your tomatoes will look blue and your lettuce will be grey.

LED's only shortfall is the lux level "brightness". A good tip when shopping is to compare your current incandescent wattage (say 40W) and times that wattage by 13 to get the incandescent lux equivalent you should be looking for from your LED light choice. (I.E. $40 \times 13 = 520$ Lux) The brightest (highest Lux level) LED's replicate about 85 watts of incandescent light.

A few other encouraging updates:

- All LED lamp formats with the exception of a very few exotic lamp types are now available in LED choices.
- You save 85% of the power that an incandescent lamp and 40% of the power that a CFL lamp uses when you switch to a LED lamp
- Your R.O.I. based on energy savings on any light that is in operation 12 or more hours a day will be less than 90 days
- You will cut down on guest complaints and maintenance time due to dramatically less failures.

A wise operation should consider allowing employees to purchase the same LED's they see at work from you at your bulk cost price. A great way to spread the energy savings and helps prevent theft of your LED's.

Pumps and Motors

These are slightly higher up the tree but nevertheless well worth going for. Like for Air Conditioning inverter control has greatly assisted in improved efficiencies Inverter driven pumps are very much the way to go. An inverter driven pump will save you between 20-30% of the energy of a standard pump. The reason inverter driven pumps are so efficient

is that they only rotate the pump at the speed needed to maintain the dynamic pressure of your water distribution. They also help smooth out your water by maintaining a set point pressure in your system rather than cycling up and down as a regular pump does. Motors for A/C fans and other applications should also be considered for changing to higher efficiency motors but they will need to be maintained in order to get the savings-reward. Higher efficiency motors will typically pay for themselves over a 4-5 year cycle. It's therefore essential to maintain these motors to ensure the full life cycle and therefore yield the expected savings. Inverter Pumps can pay for themselves on energy savings in 3-4 years.

Other direct actions to consider

Composting

Composting is a simple way to add nutrient-rich humus which fuels plant growth and restores vitality to depleted soil. It's also free, easy to make and good for the environment.

Soil conditioner: With compost, you are creating rich humus for lawn and garden. This adds nutrients to your plants and helps retain moisture in the soil.

Recycles kitchen and yard waste: Composting can divert as much as 30% of household waste away from the garbage can.

Introduces beneficial organisms to the soil: Microscopic organisms in compost help aerate the soil, break down organic material for plant use and ward off plant disease.

Good for the environment: Composting offers a natural alternative to chemical fertilizers.

Reduces landfill waste: Most landfills in North America are quickly filling up; many have already closed down. One-third of landfill waste is made up of compostable materials.

See more information on easy composting at www.eartheasy.com

Recycling

Until recently there was no real recycler in St Lucia to assist us on the collection of separated garbage – The impact of simply throwing away recyclable materials to St Lucia's landfills is clearly evident – The landfills are filling faster than originally forecasted. We have become more of a consumer based society and generate more and more waste yearly. The Hospitality sector has the ability with the implementation of separated garbage collection and storage to lower its garbage collection bill via reducing the volume of what's collected in addition to dramatically lowering the waste that's trucked to the landfills. Separated

materials can now be collected on a weekly or bi-weekly basis directly from your establishment. Ti Kaye is inviting other hotels and resorts to join them in this initiative in order to increase the total volume of waste shipped off-island. Adding other participants to the initiative will also make the collection more cost effective for the recycling company and strengthen the sustainability of the action. The initiative is being coordinated by Our Planet so if you are interested to join Ti Kaye and are committed, as they are, to protecting our environment please contact Sarah and Pablo Rosenthal-Almirall at ourplanetworld@gmail.com for more information.

Shout about it. Celebrate.

Marketing your Environmental Efforts – With so many travelers now focused on the environmental profile of their chosen destination it is essential that we not only do the right thing but that we also brag about it. Ensure your sales and marketing team is fully on board with what you are doing and that they are publically celebrating your achievements in addition to updating your marketing material and websites.

Social Media infusions

Make a point of celebrating your environmental efforts on social media. With each step of progress or each new initiative adopted you should be letting your followers know.

Teach and inform

Many of our visitors are new to the tropical environment and will have a lot to learn from us. Ensure you have quality information available and try to incorporate some of what you are doing into your guest orientation. You may also wish to consider having your in-house environmental champion be equipped to provide tours and or presentations of the initiatives you are most proud of.

Most importantly - Don't just pay lip service to the environment. Prove to your guests that you are serious about your environmental practices and train your resort teams to work accordingly. Never place signs such as "save the planet" or "re-use towels" unless you and your resort team do in fact take ownership of the programs and actually respect & value your guest when they indicate their desire to participate alongside you. Guests will notice very quickly if you are not serious about your hotel's green claims and will leave disappointed that you have not followed through with the "contract" you encouraged them to make with you.

Green Certifications

There are many "green certification agencies". If you are interested in obtaining a green certification, you can contact SLHTA or CAST, the Caribbean Alliance of Sustainable Tourism, an initiative by the Caribbean Hotel and Tourism Association for further information. Whilst

some certifications can be costly, Trip Advisor for example now offers a Greenleaders Certification Opportunity free of charge.

Resources

R.O.I. (Return on investment) Excel work sheet for energy projects. This should be used before presenting any energy reducing expenditure for financial consideration to be an easy and painless process. The R.O.I Sheet calculates and presents the energy reduction being considered as:

- Simple Payback
- Life Cycle Reinvestment
- Net Present Value
- Buy or conserve analysis.

Energy Presentation

A PowerPoint presentation you can use with your teams to help them see where they spend their LUCELEC and WASCO dollars at home. This has proved to be effective in allowing your employees to save money at home consume less and learn better habits. The extension of this is to encourage those newly learned habits at home to flourish in the workplace.

For those of you who would like presentation assistance of this material to your teams please contact any of the members listed below in the contacts section.

Follow up

- If you have been inspired by reading this then start something within your organization.
- We encourage more participation in the SLHTA Environmental Committee. Seek out the person within your team who can participate and give them the time and support to succeed.
- Collaborate with like minded people and share what works for you. We all struggle with similar issues and someone within the team will have been there before – Reach out.
- Lobby – Become knowledgeable about the work of the NURC (National Utilities Regulatory Commission) and participate in reshaping the Energy Services Bill.
- Lobby – Become knowledgeable about the work of the National Water & Sewage Commission and participate in shaping better consumer response, supply security and quality issue resolution.



SLHTA Environmental Committee Members

- Anse Chastanet / Jade Mountain – Carl Hunter
- Bay Gardens Beach Resort - Bobb Leonce
- Capella 'Marigot - Reinier St Juste
- Cést La Vile - Ashelle Weekes
- Cést La Vile - Ron Raymond
- Coconut Bay Resort - Gibbs Bakie
- Cotton Bay - Fabien Griffith
- Rendezvous - Derrick Lislle
- Rex Resort - Thomas Vitalis
- Sandals Grande - Kenaz Francis
- Sandals Halcyon - Bianca Young
- Sandals Halcyon - Ronald Jean
- Sandals La Toc - Melanie Pamphile
- St James Club - Joseph James
- St. Lucian by Rex - Thomas Vitalis
- Sugar Beach - Gasper Blaize
- The Landings - Julius Feveria
- Ti Kaye Resort - Sheldon Harris
- Ti Kaye Resort - Cheryl Francious
- Windjammer Landing - Perry Baptiste

A big thanks to all the members of the committee who have come together in a spirit of open sharing and enabled this communication. Please reach out to any one of us for further information or to share feedback.