



Evason Phuket & Six Senses Spa Eco Story



Energy Efficiency

Evason Phuket, February 2007: It is a well-know fact that global warming is one of the world's most serious environmental problems. Global warming is caused by release of greenhouse gas emissions, particularly carbon dioxide, which is release through burning fossil fuels. Fossil fuels are the globes major source of energy and are burnt when we drive vehicles (car, boat, air-plane), cook, use electricity, etc. The reason why electricity consumption reason why contribute to global warming is that it is very often created by burning of fossil fuels, such as black coal, diesel or petrol.

The most effective way to reduce the negative impact of energy consumption is to reduce energy and waste from energy production through energy efficiency. Renewable energy sources (solar, wind, bio-fuel) are also sound ways, but energy efficiency is nevertheless the first step as one then does not need to create as much energy in the first place. Four principles are followed: Refuse, Reduce, Reuse, Recycle.



Changing out old 100 watt light bulbs to 20 watt, annual savings of 200,000 kWh were achieved.



Evason Phuket & Six Senses Spa was developed in 2001 within the shell of an existing building - it was originally opened as the first resort on Phuket Island in 1972 as Phuket Island Resort



Evason Phuket & Six Senses Spa has put in place many measures, which has made the resort very energy efficient. The resort has achieved 59% better than Green Globe 21 Best Practice Level for Energy Consumption, which is a benchmarking standard comparing resorts world wide. This ensures that guests enjoying a luxurious holiday at Evason Phuket & Six Senses Spa can do so with a minimal contribution to global warming.

Evason Phuket & Six Senses Spa has implemented several projects to upgrade systems to reduce our energy usage and to use renewable energy.

Electricity consumption is a major contributor, as electricity is produced by the electricity supplier by burning black coal. One of the simplest and most important saving done was through installing an energy monitoring system with "peak demand" control. 30% savings has been achieved through monitoring the consumption and changing timers and settings for lighting, pumps and other systems to reduce "peak demand" - times when most electricity is used.

The resort has taken advantage of its hill location. Water is being pumped up to the highest point on the main building and then distributed by gravity. As a result almost all water pumps have been removed saving large amounts of electricity.

Another important saving was to remove all electrical heaters of water and install a Solar Thermal Hot Water Plant supplying hot water. Quantum Heat Recovery is also used for the Pool Villas. The water is heated by recovering heat from air, thus reducing energy consumption. Gas is used for back-up and for heating the water to laundry as it is more environmentally sound than using electricity.



Quantum Heat Recovery System



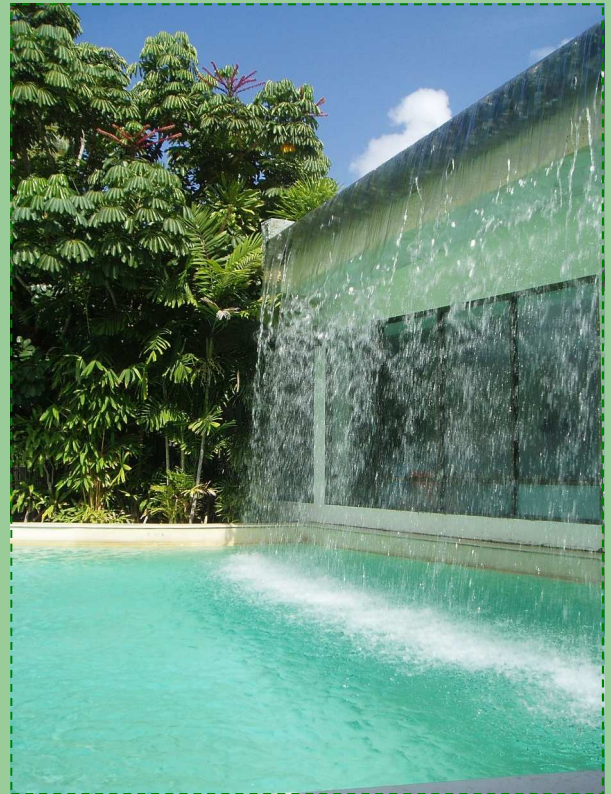
Solar Thermal Plant for Hot water

Electricity is in Thailand typically distributed using spaghetti-like hanging low voltage electrical cables. Not only does it look ugly and is prone to power surges/black-outs during rain, but also wastes a lot of energy. For these reasons, medium voltage (6,6kV) underground electrical copper cables were put in. It is fairly common in the western world, but is unique in Thailand and was a huge challenge implementing in an existing resort.

New LV copper cables have replaced the old alu cables to the laundry and pump house - two heavy energy consumers. This has reduced the accumulative peak in cable transfer and thus

reduced energy consumption is achieved.

As Evason Phuket & Six Senses Spa was in 2001 developed in the shell of an existing building, originally opened as the first resort on Phuket Island in 1972 as Phuket Island Resort, major energy and resources savings was already achieved. Typically the manufacture, transportation and installation of construction materials represent a huge proportion of the total energy consumption of a building. Using innovative design improvements in terms of energy efficiency was achieved. For example, the water pond in the lobby not only added a spectacular iconic view of the resort, but also created insulation for the conference room below. Same concept was used with the water fall at Family Pool, which provides a great atmosphere but reduces air-conditioning consumption in the Just Kids! Club.



Waterfall at Family Pool

Insulation is just as important in a tropical as a cold climate as it keeps heat outside. Double glazed windows have also been installed to reduce energy loss when using air-conditioning and passive cooling is used. All restaurants, bars and lobby utilize natural ventilation instead of air-conditioning, both reduces energy consumption and gives guests a fresher experience. Overhanging roofs are build to create shading from the sun.

In the Sundeck Wing, an energy efficient 'air-cooled' mini-chiller system was installed in the 2003 major renovation reducing energy consumption for air-conditioning by 60% of original BTU load. For other buildings the air-conditioning engines have been changes to more efficient ones. Furthermore, our 700 garden light bulbs have been changed to energy efficient compact fluorescent light bulbs, PAR 38 "megaman". By changing out old 100 watt light bulbs to 20 watt annual savings of 200,000 kWh were achieved.



Energy Efficiency with Good-looking Design

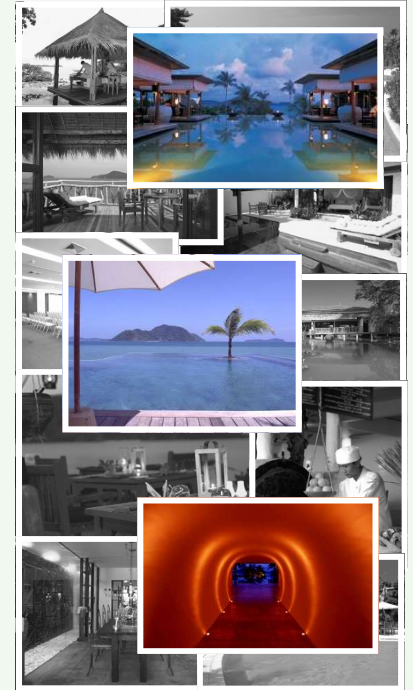
The newly introduced electrical buggies are equipped with reverse engine charging when going downhill, thus parts of the recharging will take place when guests are transported.

Another big contributor to greenhouse gas emissions are two stroke speed-boat engines. The reason for this is that oil and petrol is mixed in the burning process and burns inefficient leaving up to 30% spillage straight out in the ocean. Unfortunately, this is the main practice on Phuket Island. The resort's speedboat Evason I has been equipped with 4 stroke engines, where only petrol is burnt efficiently and oil is recycled in the engine reducing negative effect on the marine environment dramatically.

All these measures taken by Evason Phuket & Six Senses Spa ensure guests can enjoy their stay knowing that less energy is used for their pleasures. However, to further reduce energy consumption help is needed from guests through remembering to turn of air-conditioning and lights and to reduce hot water consumption and laundry.

Contact Details

Property name: Evason Phuket & Six Senses Spa
Location: Phuket Thailand
Phone number: +66 76 381 010 (up to 7)
Fax number: +66 76 381 018
Contact Person: Environment Coordinator
Email: environment-phuket@evasonresorts.com
Web site: www.sixsenses.com/evason-phuket



EVASON PHUKET

& SIX SENSES SPA

Prepared by Arnfinn Oines
January 2008



2006 Responsible Tourism



AWARD
www.wildasia.net

2007 Responsible Tourism Award



Finalist
www.wildasia.net

