PV system by Swimsol at Holiday Inn Kandooma- FAQ

What is the capacity of the solar power system (kWp), and what is the maximum power output (kW) it can produce?

The PV (photovoltaic) System has a nominal capacity of 259,3 kWp.
This nominal capacity is a value achieved at set laboratory test conditions (a light intensity of 1.000 W/m², sunlight hits solar cells perpendicularly, standard airmass (AM) of 1,5 and a temperature of 25°C at the solar cells).
The real-life max. output is approx. 20 % lower (due to heat, angle etc.).

Note: the maximum production is only achieved during mid-day hours of a sunny day. In the early morning and late evening there is much less solar power, and during the night there is no solar power.

kW is power and kWh is energy. What is the difference?

We measure live power in kW (kilo Watts); this how for example an electric tea kettle is rated e.g. 1 kW. This means that as long as it is switched on, the kettle will consume 1 kW of power. If you keep that kettle turned on and boiling for 1 hour you will end up using exactly 1 kWh of energy i.e. 1-kiloWatt-for-1-hour. We pay our energy bills per kWh.

How much energy (kWh) is being produced by the entire PV System

The average daily output of the entire PV System is 840 kWh per day. The day-to-day output depends on the weather and shading of clouds on the PV system.

The expected yearly production of our PV system is 306 601 kWh per year.

How much energy (kWh) does the resort need? How much of it is produced by solar?

The resort needs approximately 16 800 kWh per day. The PV system produces 840 kWh/day, therefore it covers around 5 % of the daily demand.

How much diesel is saved by the PV System daily/yearly?

Without the solar PV, the resort would burn 4 468 litres of diesel in 24 hours.
The PV system saves around 223 litres of diesel per day, i.e. 81 543 l/year.

How much CO_2 emissions is prevented by the PV System?

The solar system prevents around 1 tonnes of CO_2 per day, i.e. 215 t/CO_2 per year.
The annual reduction in CO_2 emissions is equivalent to flying London - Male 172 times

Does the solar power system power all facilities, i.e. kitchens, as well as rooms?

Solar system first supplies the closest consumer – e.g. energy from the panels on staff kitchen will first power staff kitchen, and any remaining solar power gets shared in the power grid of the resort - it blends with diesel energy. Therefore, solar power (in different proportions together with diesel energy) is used for everything on the island.

How much energy is 1 kWh and what can you do with it?

One kWh is the amount of energy delivered by a 1kW system running continuously for 1 hour.
An electric dishwasher needs around 2 kWh per load.
An air conditioner uses approximately 2 kWh of energy every hour.

How can guests track the clean energy production?

Guests can track the solar production via the solar TV screen at Entrance hall, as well as via a dedicated channel on the in-room IPTV