



BEST ENVIRONMENTAL PRACTICES FOR THE HOTEL INDUSTRY

CANDLES HOTEL

Petra, Wadi Mousa, Jordan

HOTEL IN BRIEF

Candles Hotel is a 3-star hotel. It is located on Tourist Street near the entrance to the site of Petra, Wadi Mousa, Jordan. The hotel was established as a family business in 1995. The hotel has 35 rooms, one restaurant and one kitchen. The hotel registered 4'171 guest overnight stays in 2007. It employs 16 employees whose turnover is low. The Environmental audit was conducted with the manager Mr. Abdullah Al-Halalat, on July 8, 2008.



MANAGEMENT CONSIDERATIONS

No environmental management system is established in Candles hotel but the management is conscious of environmental issues and thus applies spontaneously good housekeeping measures. In this respect, all investments and operational costs are carefully registered and monitored.

The hotel management is aiming to enlarge the hotel in a near future. A particular attention will be given to design the new extension in an environmentally friendly way. For example, the management will consider eco labels when purchasing equipment.

The hotel management wishes to apply the Guide of Best Environmental Practices (BEP) for the Hotel Industry mainly in order to reduce costs related to water and energy consumption. This should be achieved through good housekeeping measures and investments in equipment allowing significant annual savings.

ENVIRONMENTAL ASSESSMENT

Water in the hotel is supplied by the municipal network. No water saving measure has been implemented yet. Indeed, no mixers are installed on taps and showers whereas toilets are single flushed. Moreover, some showers and taps leak. The overall water consumption in 2007 was 2'737 m³. Best Environmental Practices (BEP) can be applied in rooms to save water in the long term: flow-regulators on showerheads and water-reducing filters for taps, low or double flush toilets, awareness rising of guests (brochures, flyers, stickers, posters). Figure 1 presents the overall water consumption in cubic meters per overnight stay in 2007 and compare the figures for a same period in 2007 and 2008. An important increase is observed between 2007 and 2008.

Diesel is the most important energy source for the hotel in terms of end energy and costs, as shown in Figure 2. One diesel boiler is used for the production of hot domestic water (60° C) and another boiler provides hot water for the heating system in winter. It must be noted that the building suffers from poor insulation (windows). Furthermore, the efficiency of the boilers has never been measured. The diesel consumption in 2007 was 21'050 L. The total energy consumption in 2007 was 352'122 kWh. The BEP Guide proposes several measures to reduce diesel consumption for heating (better insulation of hot water pipes, double-glazed windows, etc.). It is also proposed to install solar panels to partially supply hot water.

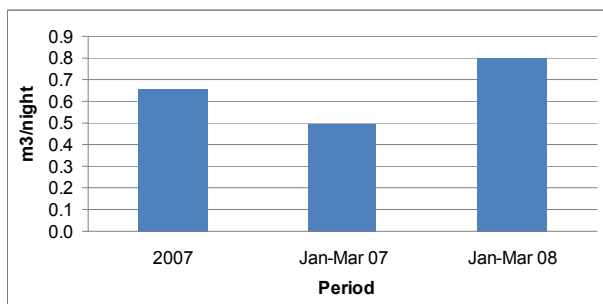


Fig 1 : water consumption per overnight stay

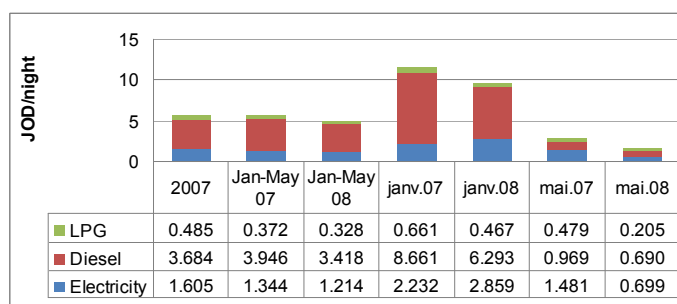


Fig 2 : energy consumption costs per overnight stay

ACTION PLAN

Environmental objective	Action & means	Expected results	Investment	Annual savings
Reduce water consumption in rooms without cutting on guest comfort and tackle calcification problems in pipes	<ul style="list-style-type: none"> Install flow regulators on the showerheads in rooms in order to decrease consumption from 20 to 10 litres/minute Install water-reducing filters for taps in rooms in order to decrease consumption from 6 to 3.6 litres/minute 	<ul style="list-style-type: none"> Reduction by about 50% of the shower flow rate Reduction by about 40% of the tap flow rate Reduction of calcification problems in pipes 	1'200 JOD	1'200 JOD
Reduce the overall energy consumption of the hotel by lying priority on the consumption of diesel for hot water provision	<ul style="list-style-type: none"> Use solar panels to heat water for the guest rooms 	<ul style="list-style-type: none"> Reduction by 80% of the diesel consumption Use of an indigene and clean energy source 	13'000 JOD	12'300 JOD

LESSONS LEARNED

The hotel management is aware of environmental issues and of the economic benefits that environmental action can bring in the water and energy domains. However, other domains covered by the BEP Guide such as waste and purchasing policy are not considered by the management as relevant. Water in Jordan and in the Middle East in general is a major environmental issue. Efficient measures exist that do not cut on comfort guest bring economic benefits on the long term. As for diesel consumption, the management has the choice between increasing the efficiency of its heating system or opting for a new heating system, i.e. solar heating. Improving the efficiency of the heating system will also contribute to lower the water consumption.

Awareness rising initiated by the hotel management is essential. Indeed, the hotel staff is the 'greening actor' as they implement the eco-efficiency measures on a daily basis. Water and energy issues should be addressed in priority, followed by waste management and logistics, and finally the purchasing policy and noise, air quality and landscape integration. It must be noted that many measures have positive effects in more than one environmental domain. Moreover, all measures implemented by the hotel should be communicated to the local and foreign guests who are becoming ever more aware of environmental protection. This communication can be used as a 'green marketing' tool. The ultimate goal can be an environmental management system (ISO 14'001 or EMAS) or an eco-label.

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The Guide of Best Environmental Practices for the Hotel Industry was developed by sba with the participation of the Royal Scientific Society. This Guide presents eco-efficiency measures adapted to the hotel industry of the Mediterranean countries in order to reduce their impact on the environment. These measures are built on sba's experience in the field of environmental management. Cost-efficient and easy to implement, they constitute the first step towards sustainable tourism.