

ENVIRONMENTAL EDUCATION AT SCANDIC HOTELS – APPROACH AND RESULTS

Paulina Bohdanowicz*

Tek.Lic., M.Sc. B.Sc., PhD candidate

Dep. of Energy Technology, Royal Institute of Technology, 100 44 Stockholm, Sweden

E-mail: paulinka@energy.kth.se, Phone: +46 8 790 7682, Fax: +46 20 30 07

Branko Simanic

M.Sc. B.Sc., PhD candidate

Dep. of Energy Technology, Royal Institute of Technology, 100 44 Stockholm, Sweden

E-mail: simanic@energy.kth.se, Phone: +46 8 790 7682, Fax: +46 20 30 07

Ivo Martinac

Ph.D., Associate Professor

Dep. of Energy Technology, Royal Institute of Technology, 100 44 Stockholm, Sweden

E-mail: im@kth.se, Phone: +46 8 790 8740, Fax: +46 8 411 23 23

Abstract

Energy is one of the most crucial resources utilised by the hotel industry. High proportions of fossil fuel generated energy, with the utilisation of renewable energy sources still at a marginal level, directly translate into significant pollution of the environment, both locally and globally. At the same time, the very essence of tourism is based on the availability of a clean natural environment. The need for more effective environmental protection measures is being increasingly recognised by both travellers and industry. The successful implementation of more sustainable practices in the hotel industry is, however, highly dependent on the active support and cooperation of all stakeholders involved.

In this paper the development of Scandic's environmental program in Sweden will be presented, followed by a comparison of the level of environmental awareness and involvement in energy conservation activities pursued by Scandic and other Swedish hoteliers. Moreover, an analysis of energy consumption patterns resulting from the incorporation of the "Resource Hunt" program will be presented. The analysis is based on data reported in the Scandic Utility System (SUS) database. Finally, benefits resulting from environmental/energy education will be discussed.

Keywords: hotels, education, energy, Scandic, energy conservation

1. Introduction

Hotels typically represent only about 3–5% of a nation's building stock [1, 2, 3], yet they constitute one of the most important sectors of the travel and tourism industry, and provide accommodation to 40–50% of all domestic and international visitors [3, 4, 5]. On the European scale this translates to 160–200 million guests per year [6].

Hotels are designed to provide high levels of comfort and services to customers on a 24-hour-a-day, 7-day-a-week, year-round basis. The competition on the hotel market is fierce. To attract more customers and remain profitable, hotels are continuously trying to offer more diverse and better services, as well as a higher quality and quantity of entertainment. This is typically done with little concern for associated environmental or socio-economic impacts, leading to many forms of overexploitation (not only of energy and other resources).

Hotel facilities rank among the top five in terms of energy consumption in the commercial/service building sector (minor only to food service and sales, health care and certain types of offices) [2]. European hotels were estimated to use 39 TWh of energy in 2000 alone [7]. Taking into consideration that three-quarters of primary energy in Europe are derived from fossil resources, the sector's contribution to global environmental problems, particularly acid rains, global warming and climate change is not negligible. Assuming a worst case scenario where all the energy used in hotels would be based on coal and electricity as a primary energy source, hotels located in Europe would be responsible for the annual emission of 13.6 to 16.77 megatonnes of carbon dioxide (emission factors for coal taken from [8] and for electricity from [9]). There is no data available specifying the exact amount of energy consumed by Swedish hotels, however, in 2002 Swedish hospitality properties (hotels, restaurants, student dormitories) were estimated to consume 2.14 TWh of energy in the form of heating, cooling and electricity [10]. It is believed that a significant amount of the energy used in this sector is wasted, leaving ample room for ambitious measures of energy-efficiency and conservation.

The willingness and ability of hotel management to advocate and implement state-of-the-art environmentally responsible behaviour and practices is crucial for the incorporation of more sustainable hotel practices. Hotel corporations, representing 20-29 % of all hotels in Europe and as much as 70 % in North America [11, 12, 13], may play a very important role in changing the image and performance of the hotel sector. Nowadays, environmental responsibility is frequently a corporate issue, and various pro-ecological initiatives proposed by top management are increasingly implemented at various corporate levels. A central approach to promoting environmental concern has been successfully implemented by Scandic Hotels.

Scandic, now a member of Hilton International, is one of the largest hotel companies in Sweden and in Scandinavia. Currently there are almost 150 hotels bearing the Scandic logo in northern Europe. In 1993, the management of Scandic Hotels decided to focus more on environmental issues in order to become "one of the most environmentally friendly hotel chains". The "Environmental Dialogue" project was launched and internal training material based on The Natural Step's System terms was produced. Over time, a new goal was set – "to become the most resource-efficient hotel company" and Scandic aims to achieve this "whilst retaining or increasing comfort and customer benefit". The work continues and the results already achieved are highly encouraging.

2. The development of the Scandic environmental program

2.1 The Environmental Dialogue

Environmental concern became a fundamental part of the Scandic agenda in the early 1990s. A new Scandic environmental profile was developed on the basis of The Natural Step concept [14]. The Natural Step defines its basic concept in the following manner [15]:

“In a sustainable society, nature is not subject to systematically increasing...

1. *...concentrations of substances extracted from the Earth's crust* (use all mined materials efficiently, and systematically reduce dependence on fossil fuels);
2. *...concentrations of substances produced by society* (substitute persistent and unnatural compounds with ones that are normally abundant or break down more easily in nature, and use all substances produced by society efficiently);
3. *...degradation by physical means* (use only resources from well-managed ecosystems, and use both resources and land more efficiently);

and in that society...

4. *...human needs are met worldwide* (use all resources fairly and responsibly so that the needs of all people on whom we have an impact, and the future needs of people who are not yet born, stand the best chance of being met).”

During 1994, Roland Nilsson, the CEO of Scandic AB, worked together with Karl-Henrik Robert from The Natural Step and the environmental teams from both companies to develop the “Environmental Dialogue” training program for Scandic. The program focused on providing education in the area of environment, involving team members in various pro-ecological activities, and providing feedback on environmental performance of particular facilities and the entire chain. It contained the following four components: environmental guide, environmental meeting, an environmental program and an environmental barometer.

The environmental guide includes a description of the “Environmental Dialogue” process, the Scandic Environmental Policy and goals, as well as information on current activities and suggestions aimed at stimulating environmental concern. In 2001 a new interactive program was introduced and is currently available at the Scandic intranet platform, Kunskapsportalen. The opportunity of receiving environmental training is provided for all employees joining Scandic, and it is currently being incorporated at Hilton in the form of an “Eco-learning” program. The interactive environmental training, included in the “Get on Board” section, also termed “checkin@scandic”, includes information on personal and hotel-related dependence on natural resources as well as impacts created. It also poses a series of questions concerning personal attitude towards proper environmental behaviour, as well as recommendations on how to become more environmentally conscious. The training lasts for approximately 2 hours, but does not have to be performed at once. Every hotel is equipped with a computer dedicated solely to the purpose of training team members, enabling personnel to visit Kunskapsportalen at a time suitable to them.

To facilitate the understanding of issues covered in the training pack, several intermediate tests are included, while, at the conclusion of the training, a 10-minute test is given, and upon the successful completion of this test (which can be repeated as many times as necessary) team members will receive employment benefits. The training program is initiated with a short overview of the history of life on Earth and human dependence on natural resources, followed by the introduction and explanation of the Natural Step concepts. Thereafter, information is divided into categories dealing with energy, water, waste and chemicals, their consumption and conservation options. It includes an indication of the most environmentally-sound choices, as well as information about the suppliers' role in the overall environmental performance, followed by an explanation of eco-labels, as well as information on organic and eco-food. The concept of environmentally-sound transportation is also examined, together with the choices of building materials used at Scandic. Most of the issues are analysed from a

Scandic perspective and all Scandic-specific concepts are introduced and explained (i.e. 97% recyclable room, Scandic Environmental Construction Standard). Furthermore, relevant Scandic examples and success-stories are presented.

So far, 2100 out of 3200 Scandic team members have successfully completed the basic environmental training [16], and a total of 9000 Scandic and Hilton-related people have learned to think environmentally [17]. While new Scandic team members typically need time to become acquainted with the practice of environmental training, long-term employees generally treat this issue as part of the company's own culture. Nevertheless, the majority of Scandic employees are proud to work in a company that has clearly defined environmental goals and programs. For team members interested in expanding their environmental knowledge, complimentary courses are arranged at the Scandic Business School, approximately once a year. Furthermore, during the recent process of Swan-labelling of facilities, team members have received a considerable amount of knowledge on environmental protection.

An environmental meeting is arranged about one week after co-workers have received the environmental guide. Alternatively, the interactive environmental training is performed in a group. The meeting should ultimately result in the development of an environmental program – an improvement action plan for a particular hotel. The environmental meeting is also treated as a forum for the environmental coordinators from all Scandic hotels, who can regularly meet in order to discuss various issues.

The environmental program is displayed in every hotel in an area accessible to team members only. It divides activities into three categories: those already accomplished, those in progress / or at the research stage, and those requiring significant capital investment and consequently included in the long-term planning. To facilitate the process, a specific deadline is set and a person responsible for the incorporation and completion of each activity is designated. The action plan is constantly updated to ensure continuous improvement of performance. The presence of individual hotel environmental programs proved to be of significant assistance during the eco-labelling of hotels, as this was one of the requirements stated by the Nordic Swan eco-certificate.

The environmental barometer was developed as a semi-annual or annual publication containing status reports from every hotel, summarizing how particular facilities have succeeded in meeting the goals set in the environmental program. It is not used currently since the hotels are assessed according to the Nordic Swan criteria.

2.2 Resource use efficiency and benchmarking

In order to assess the environmental performance of Scandic hotels in a more detailed and uniform manner, the Environmental Index benchmarking tool was developed in 1995. Approximately 60 environmental measures were identified in 9 areas, defining how specific operations at Scandic should be carried out, based on an ideal case scenario. The environmental index has been deactivated when the majority of Scandic facilities became eco-labelled and currently the Nordic Swan criteria are used.

The next step undertaken by Scandic aimed at focusing more on the resource use efficiency. In 1997 the "Resource Hunt" program was implemented. A specific and detailed action plan within the "Resource Hunt" program has been developed by each hotel. It divides activities into those immediately incorporated, those requiring further investigation, and/or capital investment, and those proposed to become a corporate target. A computer database, the Scandic Utility System – SUS, was developed and incorporated to allow for the monitoring of resource consumption, and is presented further on in this paper. Although the "Resource Hunt" program includes an employee reward system, where financial rewards are transferred to a special fund at the hotel and allocated for various activities designated for use by hotel team members, its success at any particular hotel is highly dependent on the commitment of individual team members or environmental groups responsible for the incorporation of an action plan. A new version of the database is currently being introduced (Hilton Environmental Reporting - HER).

The Scandic environmental department has further developed the Best in the Class system (BINC) based on SUS, and measuring 18 key indicators over time-intervals of different length. The results achieved are displayed in the team members' access areas at each facility.

2.3 Supply-chain involvement and certification

The decision to take the environmental message outside the company by involving Scandic suppliers in the company's environmental program followed, accompanied by the commitment to purchase products with a low (lifecycle) environmental impact. Since the end of the 1990s all new suppliers have been expected to document their corporate environmental policies, and required to sign the Scandic's Supplier Declaration. Starting in 2004, all Scandic suppliers are requested to sign the Declaration [16]. Already since 2000, most of Scandic hotels in Sweden have been powered by hydro-based electricity. In January 2004 an official contract was signed with Vattenfall (one of the main energy companies in Sweden), and currently all Swedish Scandic facilities are supplied with the "green" electricity (originating from wind- or hydro-plants), and thereby further endorsing the environmental friendliness of the chain [18]. In several cases, Scandic successfully persuaded producers and suppliers to make their products more environmentally-sound (low-energy lamps from Auralight and Ahlsell) [16, 19].

Scandic has also recognized the continuous retrofitting of its facilities as an excellent opportunity for further improvement of its buildings' performance and reducing environmental impacts. The concept of eco-room (a 97% recyclable hotel room), was introduced in 1995. Materials used to construct these rooms are 97% recyclable and include wooden furniture and floors, pure cotton or wool textiles, and limited amount of fittings made of chrome, metal or plastic [15]. At present, Scandic stock includes more than 10 000 eco-rooms, and 7 environmental hotels [18].

In a further step Scandic developed its own Environmental Construction Standard, listing materials, which may not be used in their facilities, and specifying acceptable alternatives [15]. The basic concept of any project should be the 4R's rule: reuse - renovate - recycle - reconstruct, while all materials and products used should be well documented. Furthermore, all materials and equipment should be resource-efficient and sustainable in a lifecycle perspective. Materials containing or suspected of emitting potentially harmful substances must not be used. On the other hand, eco-labelled materials should always be given a purchase priority. More specifically, no PVC is allowed to be used in Scandic hotels, while only windows with U-value lower than $1.5 \text{ W/m}^2\text{K}$ should be installed during refurbishment or new construction. Demand-controlled heating, ventilation and air-conditioning systems should be incorporated and equipped with energy recovery at every air handling unit. CFC- and HCFC-based refrigerants must not be used at all. Electricity should not be used for heating purposes, with the exception of direct electric floor heating in bathrooms. Whenever possible, lighting should be demand-controlled and based on Compact Fluorescent Lamps, while hotel rooms should be equipped with main electricity switches or master key cards. Only low energy equipment is allowed, including TV sets of maximum 5 W power and minibars with the maximum energy consumption value equal to 1.2 kWh/day. Synthetic flooring, furniture and textiles, as well as exotic wood types are "checked out", while the use of local, and preferably, eco-labelled wood, furniture, textiles and paper is encouraged.

At the beginning of the millennium, there was a common feeling among Scandic team members that in the aftermath of the intense pro-ecological efforts of the mid-1990s, environmental issues were not receiving enough attention. In an effort to bring environmental efforts back into focus of team members and customers, corporate management decided to eco-certify all of their Swedish facilities with a Nordic Swan eco-label by the end of 2004 [17]. This decision was highly appreciated by Scandic team members, and 48 Scandic and two Hilton facilities in Sweden are currently Nordic Swan-labelled [20]. Furthermore, all Norwegian Scandic hotels are expected to be Swan-labelled by the end of 2005 [21].

A network of environmental coordinators has been created to facilitate the dissemination of information, the general process of environmental education, as well as participation in

various activities. Feedback on facility performance is continuously provided through various publications, as well as by the Scandic intranet. The environmental performance is further communicated to guests and the general public.

3. Managers' survey

The results of an independent survey performed among Scandic managers and other Swedish hoteliers in the autumn of 2002 and spring/summer of 2003 further confirmed the benefits of corporate pro-ecological policy and environmental education. The study has been described in more detail elsewhere [22, 23]. For the purpose of this comparison, Scandic respondents were excluded from the total sample, leaving a total of 177 hotels in the Swedish and 49 facilities in the Scandic sample.. The response rates obtained in the study are 20.1% and 75.3% for Sweden in general and among Scandic hoteliers, respectively. All Scandic respondents and 77.4% of Swedish respondents in the survey emphasized that environmental protection has been essential for the performance and further development of the tourism industry. The results of Scandic corporate efforts in promoting environmental awareness are further apparent as more than 79% of respondents declared having some knowledge of activities aimed at developing "greener" hotels (75% listed at least one improvement possibility), as compared to 62.7% (respectively 57.6%) in the Swedish sample. All Scandic hoteliers further declared to be involved in some type of environment-oriented activity, as compared to 91.5% among Swedish hoteliers.

All Scandic respondents declared being involved in energy saving measures (mainly energy-efficient lighting, Figure 1), as compared to 84.2% among Swedish hoteliers in general.

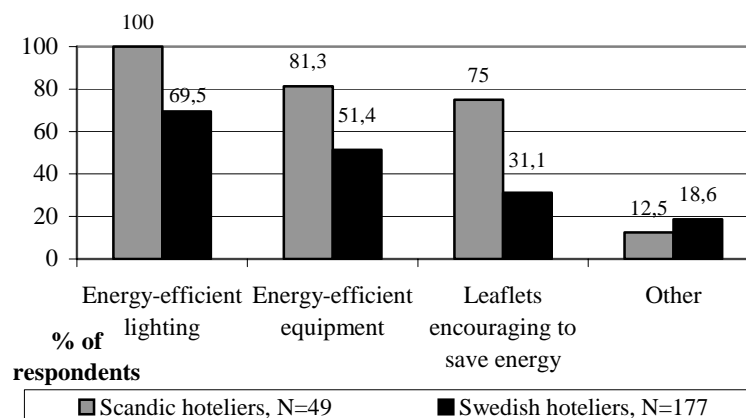


Figure 1. Energy-oriented initiatives at Scandic hotels and other Swedish hotels.

Such a high rate of positive responses among Scandic managers can be attributed to corporate policy on energy saving and energy-efficiency, and, as will be shown later, actually contributes to significant energy savings.

4. Scandic Utility System Database

4.1 The history of SUS

Since 1997 the company has been working with energy, water and waste issues under the umbrella of the "Resource Hunt" program. A measurement system called SUS (Scandic Utility System), has been developed and incorporated to help in keeping track of resource usage and its variation over time. Currently a new, more sophisticated, version of SUS, namely Hilton Environmental Reporting (HER), is being incorporated in all Scandic and Hilton establishments. It is available via Hilton intranet but can only be accessed by authorised team members.

Within SUS Scandic hotels were required to send monthly reports documenting the consumption of electricity for appliances and heating, energy in the form of district heating

and cooling, fuels for heating and other purposes (oil, propane/butane, town gas, LPG), water and unsorted waste, as well as a number of other key parameters (property area, number of guestnights, turnover). Being located between 56° and 68° northern latitude, Sweden encompasses a number of different (northern) climate zones. In order to compare the heating energy consumption of hotels in various climatic zones, heating degree days are used and included in the database.

In HER, two levels of reporting are used [24]. First, a hotel profile form is created for each facility, which includes basic facility information such as brand, city, floor area, number of floors and rooms of various types, restaurants and kitchens, as well as additional services (health club, pool, jacuzzi, etc.), mechanical systems (air conditioning, CHP units, cooling towers, solar energy systems), as well as a list of central suppliers, including those environmentally approved. The second level of reporting needs to be performed on a monthly basis, and covers all the issues previously reported to SUS, including a few additional areas. The new additions to the database include information on the energy mix used to generate electricity, district heating and cooling, as well as the types of fuels utilised by the vehicle fleet. As Hilton hotels are located in many climatic zones worldwide, heating as well as cooling degree days need to be reported, where applicable. Types and amounts of refrigerants used need to be documented, while waste generated is reported as unsorted, sorted and hazardous. In addition, monthly expenses relevant to resource consumption and engineering expenses need to be included in the report.

4.2 Limitations

The SUS database has suffered from a number of limitations. Some of those have been overcome with time, others remain.

Initially, some team members responsible for resource use reporting encountered difficulties in understanding what exactly should be reported, and had problems with handling different types of energy units. While most of these problems can be solved by additional education and through experience, these difficulties are likely to recur whenever a new employee is appointed to the task of HER reporting. Also, some hotels keep reporting their monthly electricity consumption as being between 0.9 and 1.1 MWh, whereas their real consumption is likely to be much higher based on their size and the climate they are located in. Spelling or typing errors also do happen, sometimes resulting in the reported monthly resource use being off track by at least one order of magnitude.

Often, reports for single or multiple months are missing from the database. Some hotels do not report at all, which may be a result of the existing ownership/management situation. Sometimes Scandic rents buildings at fixed or flexible rates, and its staff may not have access to meters located in the building. In other cases, buildings may house more than just a Scandic hotel. There may still exist only a single central meter, with individual costs distributed based on some formula relevant to assumed usage, while values reported to SUS may include more than what has actually been consumed at the facility.

Some hotels report identical values every month, which makes it very difficult to correlate the data collected with weather oscillations or variations in occupancy rates. This problem is typically encountered with the reporting of the amounts of unsorted waste generated, but also as regards the utilization of electricity, district heating or fuels. To further complicate issues, meter readings may be collected on different days every month, further affecting the comparability of monthly data. The Nordic Swan team is currently assessing the credibility and value of the various types of data collected, as well as their compliance with relevant limit values.

Over the years, both the reporting skills and SUS itself have been improved. Nevertheless, there still remains room for improvement. The newly developed and currently implemented Hilton Environmental Reporting scheme is much more comprehensive, and is believed to allow for the establishment of a reliable benchmark for all Hilton hotels.

In order to avoid some of the problems faced by SUS, a number of innovative solutions were incorporated into HER. First, an automatically generated e-mail message reminds key team members of upcoming report deadlines and provides a direct link to the electronic report form. Next, when a form for a new month is created, the latest reported values are automatically filled in, to reduce the risk of incorrectly entered data. To safeguard the validity of the information collected, a double-check process has been introduced, with the general manager of each facility being responsible for accepting and signing all forms before these are submitted to the central system. For additional safety, in Sweden the environmental coordinator at the company headquarters performs periodical checks on the data submitted.

4.3 Results

For the purpose of this analysis, only hotels providing complete monthly reports on energy-related data and number of guestnights were selected [25]. Hotels missing at least one monthly report in any category were rejected, as were those reporting identical values for electricity, district heating or fuel use for each month. Also, if the magnitude of values reported was in disagreement with common sense (e.g., utilization of 1.1 MWh electricity/month in a 10 000 m² property, or the amount of district heating for 11 months reported as double-digit, while a single summer month showed a triple-digit value, i.e. several times the average consumption) the data were adjusted and used.

Due to the limitations mentioned above, this analysis does not include the entire Swedish branch of Scandic hotels, since some facilities still do not report to SUS. Also, a number of hotels were rejected in each annual sample due to incomplete or unrepresentative data (Table 1). Nevertheless, the authors will attempt to interpret the trends indicated by the analysis.

Table 1. Statistics for hotels analysed.

| Year | Properly reporting hotels | Non-reporting hotels | Rejected hotels |
|------|---------------------------|----------------------|-----------------|
| 1996 | 44 | 1 | 5 |
| 1997 | 45 | 1 | 4 |
| 1998 | 46 | 0 | 6 |
| 1999 | 42 | 2 | 12 |
| 2000 | 46 | 3 | 14 |
| 2001 | 48 | 6 | 13 |
| 2002 | 43 | 6 | 19 |
| 2003 | 47 | 6 | 16 |

The total area of Scandic-operated properties has been fluctuating over the years following sales and acquisitions, as well as due to the refurbishment and modernisation of facilities. In a 10-year perspective, however, a trend of increasing area is evident, as indicated in Figure 2 (it has to be kept in mind that this analysis does not cover all Scandic facilities). As can be seen from Figure 2, the changes in the consumption in the Scandic chain of electricity and heating energy (space heating and domestic hot water production – DHW), is related to the fluctuations in the total area.

If the energy consumption is analysed as a function of occupancy, it can be seen that the number of guests accommodated seems to have little influence on the total energy used by the chain (Figure 3).

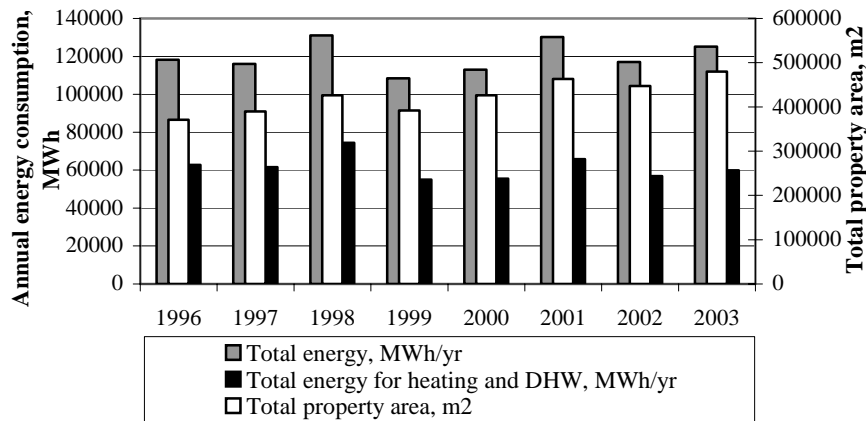


Figure 2. Consumption at Scandic facilities of total energy and energy for space heating and domestic hot water generation related to total property area.

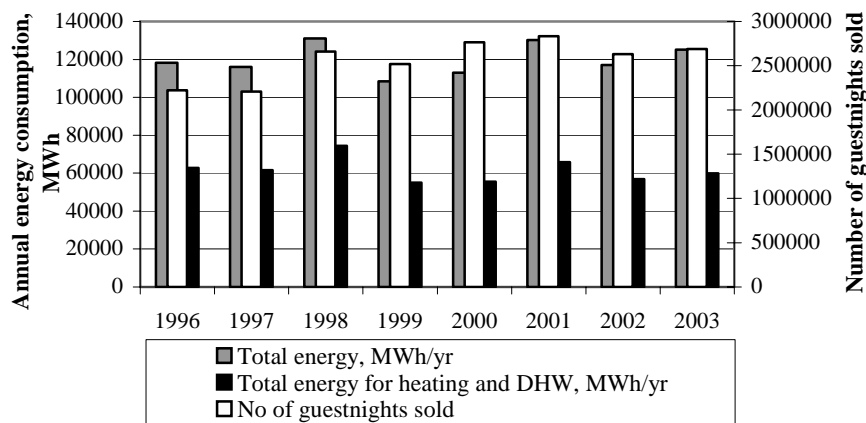


Figure 3. Consumption at Scandic facilities of total energy and energy for heating and domestic hot water generation related to occupancy (expressed as number of guestnights).

The correlation coefficients for the annual variations of (total energy used versus property area), (total energy used for space heating and DHW generation versus property area), and (total energy utilization versus number of guestnights sold) are relatively high. They range from 0.43 to 0.74 for the total energy used in relation to the property area, 0.11 – 0.43 for heating energy to area, and 0.35 – 0.62 for total energy vs. guestnights sold. This indicates that both property area and the amount of guests served have an impact on the overall energy consumption at a facility. Correlation factors are relatively high for the year 1996 (0.64, 0.24, and 0.57 respectively). In 1997 they drop to 0.43, 0.11 and 0.35 respectively, showing a rising tendency in subsequent years, Table 2.

The results shown in Table 2 indicate that the energy management at individual Scandic facilities has improved over time. Relatively low correlation coefficients for the variations of heating energy demand to property area are most likely due to the heating demand being more dependent on climatic conditions than on property area alone. Further investigation will include an analysis of the heating demand variation as a function of climatic variations. It is also intended that further investigation will separately report the amounts of energy used for domestic hot water generation and space heating.

Table 2. Correlation coefficient, R^2 , for 1996-2003.

| Year | Total energy vs. property area | Total energy for space heating and DHW generation vs. property area | Total energy vs. number of guestnights sold |
|------|--------------------------------|---|---|
| 1996 | 0.648 | 0.246 | 0.579 |
| 1997 | 0.431 | 0.113 | 0.355 |
| 1998 | 0.578 | 0.174 | 0.486 |
| 1999 | 0.619 | 0.230 | 0.529 |
| 2000 | 0.617 | 0.290 | 0.526 |
| 2001 | 0.694 | 0.421 | 0.620 |
| 2002 | 0.744 | 0.415 | 0.601 |
| 2003 | 0.742 | 0.432 | 0.603 |

Over time, energy saving efforts, as well as increased energy utilization efficiency have lead to a gradual decrease in total energy consumed per unit property area (see Figure 4), although the overall energy utilization in 2001 was unusually high.

It is worth mentioning that during the first two years of the “Resource Hunt” program most of the savings achieved can be entirely attributed to education and behavioral changes among the hotel team members. Technical improvements were incorporated later.

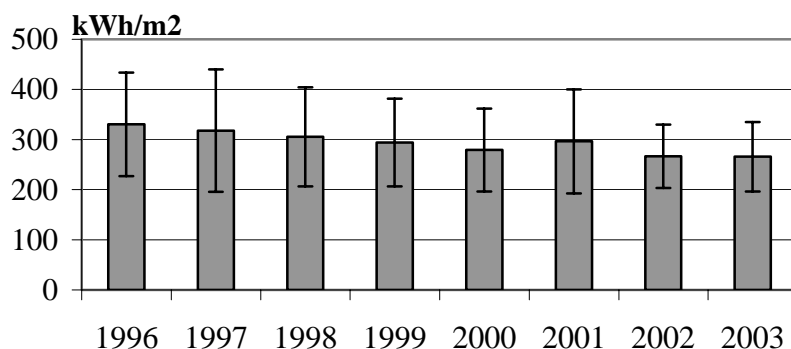


Figure 4. Variations of Energy Use Index – total energy consumption per floor area, mean value and standard deviation, kWh/m².

With regard to the energy consumption per guestnight, the downward trend, though present, is less evident. Values have not changed significantly since 1999 (see Figure 5).

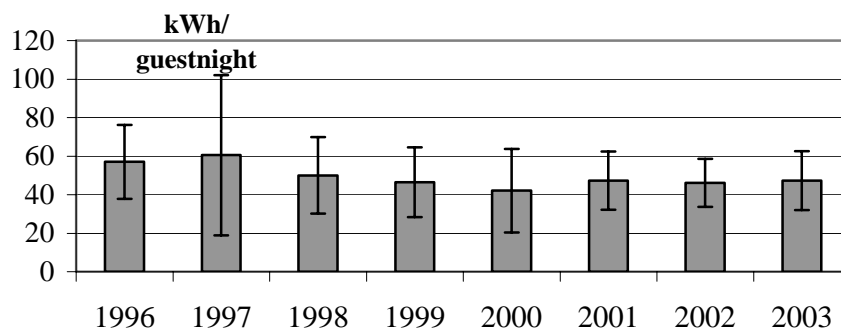


Figure 5. Energy consumption as related to the number of guestnights, mean value and standard deviation, kWh/guestnight.

The above analysis shows that Scandic corporate efforts in promoting, incorporating and enforcing energy efficiency and energy conservation have paid off. Though the hotel sample for which the data was collected does not include every single Scandic facility, it is reasonable to assume that the above conclusions may be extrapolated for the whole chain. It can also be assumed that the general trends established here would be valid for the entire chain. Similar downward trends were observed in the analyses of water consumption and waste generation patterns at Scandic, and have been presented elsewhere [26].

5. Conclusion

A decade of ecological education and training, as well as many environmental initiatives have all significantly improved the knowledge of Scandic team members and management on the environmental impacts of chain operations, as well as on appropriate strategies of environmental control and prevention. Over the same period, the environmental awareness among company employees has improved substantially. The incorporation of various efficiency and conservation measures into daily hotel operations has further resulted in a significant decrease in resource consumption, as evident from the information provided by the SUS database.

After the first 24 months of implementing the “Resource Hunt” program in the Scandic Nordic facilities, a 23%-reduction (on a kWh/guestroom-used basis) in energy consumption was achieved [27]. Between 1996 and 2003, the energy consumption in the Swedish Scandic branch was reduced by approximately 15% on a kWh/m² basis (with 1996 as the reference year), and approximately 12% on a kWh/guestnight basis. It is estimated that the “Resource Hunt” program generated direct financial benefits in excess of 6 MSEK (USD 800 000) in 1997 alone [14].

During the more recent Nordic Swan labelling process, the SUS database proved to be an invaluable source of data covering a number of consecutive years. Such information is necessary to estimate the degree of compliance with Nordic Swan requirements with regard to the consumption of energy, water and chemicals, as well as waste generation. While it is expected that Nordic Swan certification will stimulate additional improvements in performance, these effects may take some time to show.

Scandic’s strong environmental commitment has already earned the chain global brand recognition. Scandic’s competitive advantage is bound to increase even more, once Scandic has achieved its goal of becoming the first international hotel chain to eco-certify all of its facilities with a label awarded by an independent cognizant authority.

Scandic’s environmental program has substantially improved the quality of the employees’ working environment. It has also stimulated a couple of thousand staff to become more environmentally responsible. Scandic team members express pride in their environmental achievements, environmental training programs, the incorporation of pro-ecological measures in their daily working routines, as well as the KRAV- and SWAN-labelling of chain services.

In terms of environmental performance Scandic has gone a long way since the beginning of the 1990s and can now serve as a role model for Hilton and other hotel chains, convincingly showing that environmental commitment does make good business sense.

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