

Analysing Website Communication of Green Hotels with Respect to the Use of Renewables. How can they Increase Competitiveness?

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Abstract

The significance of competitiveness has increased in the last decade; therefore, the application of adequate marketing tools has gained major emphasis in the hotel industry. Despite the increasing role of website communication in the hotel industry worldwide, there has been little interest in the relationship between renewable energy usage and hotel competitiveness from the viewpoint of website communication.

The aim of this study is to analyse how the different forms of the available renewable energy are utilised in Hungarian hotels. Moreover, the study explores to

what extent the utilisation of renewable energy is communicated at the hotel websites in the Hungarian hotels.

Following the right marketing strategy is a solution to stay competitive in the industry by means of attracting and retaining guests and distinguishing the hotel firm from their rivals. The hotel websites play an essential role in hotel marketing, the website content and the features are significant management decisions. As a result of the website content analysis, it can be stated that only 2 of the investigated 91 green certified hotels in Hungary communicate the utilisation of renewable energy and apply this fact as a competitive advantage on the hotel website. From the viewpoint of website communication, non-green hotels pay more attention to advertise and communicate their green attitude and renewable energy utilisation than the green certified hotels based on the research results.

Key words

Renewable energy; green hotel; hotel competitiveness; website content analysis



1. Introduction

The concept of sustainability has become a key issue in environmental management in the 21st century (DYLICK, T. – HOCKERTS, K. 2002). Challenges in energy management and planning are considered as major technical and economic problems by the society in regards to the global environmental crisis (MUNKÁCSY, B. 2013). The tourism industry is also faced by this problem, consuming natural resources, such as water and energy, and producing a significant amount of waste. CHAN, E. S. W. – WONG, S. C. K. (2006) stated that the lodging industry is the most environmentally harmful hospitality sector, and 75% of its environmental impact can be attributed to the exaggerated consumption of non-durable goods, energy and water, enhanced by emission released into the air, water and soil (BOHDANOWICZ, P. – MARTINAC, I. 2003).

The concept of sustainability has been adopted by most countries since the *Rio Earth Summit Conference* in 1992 (KIRK, D. 1998), for ex-

ample the *European Union* has also set targets for 2020 and 2050. The hospitality industry is responsible for 2% of the world's greenhouse emission, and therefore it plays a crucial role in contributing to the 2020 energy targets (TSOUTSOS, T. *et al.* 2013). However, while on the one hand, emission of tourism industry is harmful for the environment; on the other hand, it is one of the most dynamically developing sectors, and the development would be related to the utilisation of the newest forms of technology, including renewable energy sources. Renewable energy sources include, for example, solar energy and wind energy or alternative hydroelectric power (for example energy of sea currents and waves, high and low tide).

There is a strong correlation between the development of economy and the efficiency of available energy used (CHEN, Y. – CHEN, Y. 2012). As for the hospitality sector, architects, designers and environment-conscious managers now focus on creating more sustainable buildings and the implementation of renewable energy sources which can be regarded as a competitive advantage for the hotel. Hotel competitiveness is influenced by several factors, including location, price and physical environment which have been the subject, according to a number of studies (PHILLIPS, P. A. 1999; MOREY, R. C. – DITTMAN, D. A. 2003; BARROS, C. P. 2005; LOCKYER, T. 2005). Despite that all these factors are closely related to the energy consumption of the hotels, researchers have not investigated the relationship between the application of renewable energy and hotel competitiveness so far. It has already been stated that if a property is located in a low energy region, it is more complicated and complex to obtain energy which might be reflected as a conclusion in the prices of the services offered (KRARTIA, M. – HAJIAHB, A. 2011, TSOUTSOS, T. *et al.* 2013). If a hotel uses renewable energy, it is usually visible from outside, the roof or façade is covered with solar panels or solar cells, or the visitor can find smaller and larger wind turbines nearby. Renewable energy utilisation can enhance hotel competitiveness by several factors: on the one hand—the high cost of investment not taken into account—these are long-term savings, on the other hand, renewable energy can be regarded as a useful

element which can be part of the marketing communication, representing commitment to sustainable development and thirdly a factor which has a strengthening effect on the physical environment and the design of the hotel.

In this research, we were searching the ways and methods how the green hotels in *Hungary* apply the renewable energy opportunities provided, and how and to what extent this is communicated through their websites. Another aim was to investigate and to find the answer to how the effort for the use of renewable energy is related to the known factors of competitiveness in the Hungarian hotel industry.

2. Green approaches in the hotel industry

2.1. Green certifications and labels

Recently, environmental awareness has gained a significant market, and several certifications and labels are awarded representing the given accommodation's commitment to a consciously sustained environmental operation. The different definitions, *green hotel*, *eco-hotel*, *eco-friendly hotel*, *environment-friendly hotel*, etc. are sometimes confusing and not explained for the tourists/guests/consumers. Most of the hotels worldwide are available online and they are interested in representing their green approach to their future guests. On the basis of the eco-labels that certify hotels about their green practices, there are a little bit more than 50 active types of different certifications available in worldwide comparison. These certifications aim at distinguishing the different green attitudes, products and services, however, some brands create and establish their own green programs and labels. Standard- and green label issuing associations can be classified into several groups depending on the region (JUDY, L. *et al.* 2007; ZHANG, H. S. – LIU, Z. L. 2010). In *Hungary*, the *Hungarian Association of Hotels and Restaurants* (MSZÉSZ) is responsible for making the decisions and appointing each consecutive year the green hotels based on their criterion system. In the analysis, the websites of the certified green hotels appointed by the *Hungarian Associations of Hotels and Restaurants* are examined since 1995.

2.2. Green hotel definitions

In explaining the term 'green hotel', different definitions are available depending on the business or the field of industry (green practices, hotel programs etc.), and the academic literature. ENZ, C. A. – SIGUAW, J. A. (1999) stated that operating a green hotel is not only a good practice, but also a good business. Environmentally friendly hotel operations are the waves of the future. Some hotel owners are convinced that operating a hotel in an environment-friendly manner is the right thing to do, others will act in the same way simply because of the increasing governmental regulations (ERDOGAN, N. – BARIS, E. 2007).

According to LEE NI (2002), a green hotel is a hotel which provides facilities and services with the idea of environmental protection. For example, during the construction of a new hotel, try to use recycled material. A growing number of hotels join the green movements to reduce harmful impacts on the environment, and in doing so they eventually increase their profitability (for example cost savings and customer attraction/retention) (WOLFE, K. L. – SHANKLIN, C. W. 2001; PIZAM, A. 2009). WOLFE, K. L. – SHANKLIN, C. W. (2001) also indicated that 'green' refers to actions that decrease the negative impacts on our environment (for example recycling, eco-purchasing). Similarly, according to the definition of *Green Hotel Associations* (GHA, 2016), a green hotel is an eco-friendly lodging property that has implemented various green practices, sound and environmental-friendly programs to protect the environment and reduce operational costs. In particular in green hotels, the following items are quite commonly used, practiced and served: durable services, cotton towels and linens, donations to charity, well-educated staff about green practices, energy conservation, environmental cleaning, eco-friendly/organic foods, fresh air, water recycling/conservation, recycling bins, towel re-use program, etc. The *Green Hotels Association* defined a green hotel as "a hotel which saves water and energy in a constructive manner and reduces solid wastes to maintain our environment" (JUDY, L. *et al.* 2007, p. 467.). ERDOGAN, N. – BARIS, E. (2007) defined green hotel as "a hotel that evaluates surrounding ecological condition before starting construction

and tries not to aggravate impacts on environment” (ERDOGAN, N. – BARIS, E. 2007. p. 609).

In conclusion, a green hotel’s goal is to introduce the idea of environmental protection into either hotel hardware or software in order to save energy and reduce waste. Software in hotel industry refers to the people who provide the service and the operational process; hardware on the other hand refers to the main facilities and constructions. The core spirit of green hotel aims at reducing environmental impacts and energy consumption while providing products and services to customers. Based on the above, a green hotel can be defined as a hotel, the managers of which save water and energy, reduce wastes and environmental impacts through the participation of staff and customers. A green hotel needs to promote the idea of environmental protection through operating recycling, separate waste collection (CHEN, Y. – CHEN, Y. 2012), and utilising solar energy, wind energy, biomass energy, hydro power. For example, hotels can plant real flowers and plants and provide related ecological travel options for their customers.

2.3. Green hotels and consumer behaviour

To achieve general and environmental competitiveness on the global tourism market, the hotels must increase their performance to satisfy environmental requirements. Environmental protection continually attracts public attention (CHAN, E. S. W. – WONG, S. C. K. 2006), and people gradually recognise the environmental damage caused by business (MANAKTOLA, K. – JAUHARI, V. 2007). The increasing public concern stimulates the implementation of environmentally responsible management in the hotel industry, too (WOLFE, K. L. – SHANKLIN, C. W. 2001).

More and more customers prefer green products/services and environmentally responsible companies that meet the green requirements of the customers, as exemplified, for example, in their willingness to pay for eco-friendly products/services (VANDERMERWE, S. – OLIFF, M. D. 1990; ROBERTS, J. A. 1996; CHEN, Y. – CHEN, Y. 2012). This green consumerism has brought about modifications in purchasing methods, manufacturing processes, and operation procedures, includ-

ing ecologically conscious decisions in various business segments (D'SOUZA, C. – TAGHIAN, M. 2005; CHEN, Y. – CHEN, Y. 2012).

Consumers make product choices based on which combination of product attributes best meets their needs according to dimensions of value, cost and prior satisfaction (KOTLER, P. 1997). Tourism is identified as one of the most promising growth sectors in world economy. Therefore, tourism firms need to be more innovative in the future. As with many other products, hotel products have become more segmented by the market and there has been recent innovations in design which have changed the external and internal appearance of the hotels (DURNA, U. – BABUR, S. 2011). Interesting hotels in ship, plane, fish, ball, castle, or jail designs have appeared in different tourist destinations of the world. Also, findings in psychology confirm the role of hoteliers and hotel designers; psychologists have determined that the physical environment has an effect on human behavior and this branch of psychology has become known as environmental psychology (COUNTRYMAN, C. C. – JANG, S. S. 2006). Using the premise of environmental psychology, KOTLER, P. (1997) determined that physical environment influences the behavior of individuals in consumer settings. In a study conducted by DUBE, L. – RENAGHAN, L. M. (2000) about the top ten attributes determining the price selection of hotels, respondents ranked physical aspects and room design of the hotel as the third and fourth determinants of their decision.

2.4. Green labels in the hotel industry

The development of eco-labels provides information on the sustainable initiatives of the hotels and supports the consumers or the future guests in decision-making. Several types of effort can be made by the hotel management industry through the application of the best available practices and technological innovations without decreasing the comfort and convenience of the tourists. The hotel industry is conscious of this new trend and has set new policies (BARROS, C. P. 2005, CEROVIC, L. – DRPIC, D. 2014). Various guides are designed to be practical tools for daily implementation. As consumers become more willing to

pay extra for green products (KAPELIANIS, D. – STRACHAN, S. 1996, LAROCHE, M. *et al.* 2001), it is anticipated that a green image will play an increasingly critical role in their decision-making process and purchase intentions (PRENDERGAST, G. – MAN, H. W. 2002).

2.5. Green practices as a form of competitive advantage

The hotel industry has always been open for the new innovations that influence their performance in a positive way. The green practices and the implementation of green technologies represent a new developmental paradigm in tourism and hospitality industry, providing possibilities to minimise harmful effects to the environment, which is a basic precondition in the modern development of tourism (CEROVIC, L. – DRPIC, D. 2014).

The 'green' hotel business is a growing niche because not only do these establishments distinguish themselves from the similar non-green hotels, but they also fulfil a need in the market for less environmentally damaging hotels. Marketers in the hotel industry are striving to increase their firm's competitiveness (for example earning recognition and increasing customer retention) through the greening of their firms, thereby eventually enhancing their hotel firms' profits (MANAK-TOLA, K. – JAUHARI, V. 2007).

Being green is a competitive advantage not just for the hotels but for many companies. Being green on the other hand has different perspectives from the viewpoint of the companies, guests and governments, depending on the location of the hotel and the surrounding community. The word 'green' means being environmentally responsible or sustainable with the aim to minimise environmental impacts in purchasing, operations and management. In this way, the health and well-being of the guests and the staff is enhanced, reducing waste, toxicity and overall costs.

A green hotel does not only mean compromising on guest satisfaction or the performance of products and services. Any environmentally responsible product or service must work well or it is of no value, so guests should be as satisfied with the green features in a hotel as with

more conventional ones. Being green is often associated with the incorrect assumption that green products are necessarily more expensive. Many environmentally responsible products and procedures, in contrast, can be purchased or applied quite economically, especially if cost is considered over the full life cycle. The competition of the hotels has created an energy-spending environment, on the supply side with providing more and more for their guests, and this type of attitude has resulted in a careless behaviour also on the demand side. The end of the energy-fullness times and the fear of facing by the end of non-renewing energy sources forced the hotel industry for acting.

A great number of hoteliers have adopted the green hotel label also as a marketing ploy to attract customers (PIZAM, A. 2009). MANAKTOLA, K. – JAUHARI, V. (2007) indicated that by marketing its green activity, a hotel can increase competitiveness by positioning itself distinctively in the competitive arena. Improved public relations, a better relationship with the local community and greatest financial and marketing advantages can also be the benefits obtained through hotel environmental management (KIRK, D. 1998).

3. Hotel competitiveness

3.1. Definition of hotel competitiveness

BARROS, C. P. (2005) stated that the competitiveness of a country derives from the performance of its enterprises, among others the hotels that contribute to the community's economic, social and cultural development. According to TSAI, H. *et al.* (2009), productivity is a key element of hotel competitiveness. IONCICA, M. *et al.* (2009) marked that the concept of competitiveness is subdivided on two sub-concepts: comparative advantage and competitive advantage which can be investigated in the case of hotel industry as well.

From the viewpoint of the competitive advantage-based view, economics and ecology are compatible, and superior environmental performance leads to above-average industry profits (RUSSO, M. V. – FOUTS, P. A. 1997). Based on this concept, corporations with proactive environmental programs have a competitive advantage because their bet-

ter reputation resonates favourably with stakeholder groups such as customers, employees, and the public in general. Other factors that contribute to the competitive advantage based on environmental sustainability are developed technology (GROENEWEGEN, P. – VERGRAGT, P. 1991) and sharper political point to influence public policy.

3.2. Hotel competitiveness indicators

A hotel competitiveness indicator expresses the extent to which the hotel is able to provide services which are available for sale while providing satisfaction for the guests, employees and management/ownership at the same time (JUHÁSZ, L. 2010). According to this statement, the various dimensions: leadership performance, environmental output, internal capabilities and performance output are highlighted. A conclusion is drawn, that reaching high business profit does not mean full competitive advantage on the market. If the guest wishes are guaranteed and the guest satisfaction is high without adequate revenue this fact is still not enough for a firm to possess competitive advantage on the market. Special indicators (GESPER⁶, GOP⁷-level, GOPPAR⁸, REVPAR⁹, TREVPAR¹⁰-results, etc.) are in use for the ability to increase in profitability, guest segments, harmony of specialisation, level of personal cost and the profitability of the invested capital all contribute to the competitiveness of a hotel.

The *Hotel Competitiveness Monitor* (as defined by JUHÁSZ, L. 2010) includes various factors and indicators contributing to the level of hotel competitiveness (*Figure 1*). These four main dimensions are leadership performance, environmental output, internal capabilities and performance output. Sustainability is present in the dimension of environmental output, but the indicators of green attitude and environmentally friendly approach can be observed in all dimensions.

⁶ Guest Night Per Revenue

⁷ Gross-Operating Profit – result of the business activity

⁸ Gross Operating Profit Per Available Rooms

⁹ Revenue Per Available Room

¹⁰ Total Revenue Per Available Room

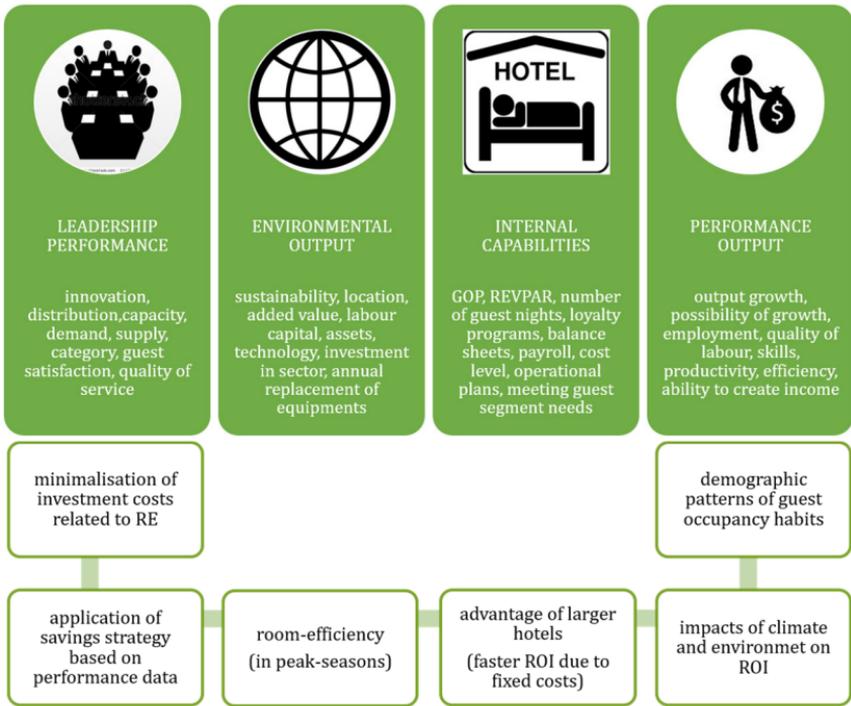


Figure 1 – Hotel Competitiveness and Renewable Energy Monitor

Source: based on JUHÁSZ, L. (2010) and JUHÁSZ-DÓRA, K. (2015)

Edited by JUHÁSZ-DÓRA, K. (2016)

Based on this monitor, a hotel utilising any form of renewable energy can be competitive, if the investment costs related to renewable energy are minimised. The implementation of renewable energy sources can be regarded long-term savings, if the high cost of investment is not taken into account. The hotel performance must be recorded before and after the utilisation, and future forecasting has to be made regarding the expected results. After implementation, these recorded results have to be analysed with respect to the analysis of room efficiency and seasonality of the hotel for example. A number of facts can be stated regarding the utilisation of renewable energy by hotels. Hotels possessing more rooms have the advantage that due to the fixed

costs, the return on investment is faster than in the case of hotels possessing less rooms. Moreover, the climate and the environment in which the hotel property is located has an impact on the return on investment and, as a consequence, affects hotel competitiveness as well. The demographic pattern of the guest occupancy habits also influences the competitiveness of a hotel based on the indicators of the hotel competitiveness monitor. Furthermore, financial support from the *European Union*, governmental or institutional funds, personal impulse of the management, the attitude of the property owner towards sustainability also have an effect on the implementation of renewable energy, therefore it has a long-term impact on the competitiveness of a hotel.

4. Research methodology

The aim of this study is to investigate how green hotels in *Hungary* utilise and apply the available renewable energy opportunities provided, and how and to which extent it is communicated via the hotel websites. The novelty of this paper is the application of the method content analysis of the hotel websites. The main focus is to reveal to which extent the utilisation of renewable energy can be a competitive advantage for Hungarian hotels.

The rapid development of the internet usage has dramatically changed the world which also has an effect on the tourism industry. In the early decades of the 21st century, the role of online marketing is emerging and website communication is increasing which also have an impact on the lodging industry, due to the changing lifestyle of the customers (LIAO, C. P. – SHIH, M. L. 2006; ANDERSON, C. 2012). A hotel website plays an essential role in property marketing, the content of the website and the presented features are significant management considerations. The management and owners of the hotel properties try to find out which decisions result in long-term success and competitive position in the hotel market. A website offers a business possibility, not only a platform to promote products or services, but also another platform to generate revenue by attracting more customers

(CHIOU, W. *et al.* 2010). Therefore, the effective website evaluation has become a point of concern for business practitioners and academic researchers. Academic researchers have long advocated the importance of assessing website effectiveness. LU, M. – YEUNG, W. L. (1998) were pioneers in this field, proposing a framework for evaluating website performance, in which the usefulness of a website is estimated, based on its functionality and usability. As a newly emerging research area, website analysis and evaluation has no global definition or framework yet (TING, P. *et al.* 2013).

The utilisation of renewable energy can be regarded as a competitive advantage, but several hotels do not take into account this opportunity as a marketing tool. The presence of renewable energy application in the marketing communication activity, on one hand, is a competitive advantage, and on the other hand it demonstrates an environment-conscious attitude and is also a long-term economic decision.

The applied research method of this study is website content analysis. First, the hotel websites were analysed, and then secondary data were collected. The online webpage of the *Hungarian Association of Hotels and Restaurants* were analysed in May 2015. The investigated period was every second year between 1995 and 2015, because in *Hungary* green hotels are classified in every second year. The sample number altogether is 91 hotels of *Hungary* which have been appointed green hotels in the last decade by the *Association of Hungarian Hotels and Restaurants*. The *Hungarian Association of Hotels and Restaurants* launched activities to protect the environment to encourage domestic hotels since 1993. The first competition was organised in 1994 by the Association, and since then in every two years some new hotels are appointed as green hotels. The successful candidates have obtained a two-year right to boast with the 'Green Hotel' logo. The sample number was reduced from 101 hotels due to the fact that some hotels of this sample have been purchased or become under the operation of a management company or have been closed during the last decade.

Website content analysis involves choosing certain concepts for examination and analysing their presence at the studied websites. The

data coding technique we applied includes three steps: firstly, analysis of photos and videos that indicate applications of renewable energy at the hotel website. Secondly, presence of logo or any other type of indication of the financial supporters for the investment in the renewable energy project. Thirdly, by analysing the website content, searching for the words 'renewable energy', 'alternative energy', 'geothermal energy', 'solar collector', 'biomass', 'heat pump' (also in English and in Hungarian language) at the hotel websites (*Figure 2*).

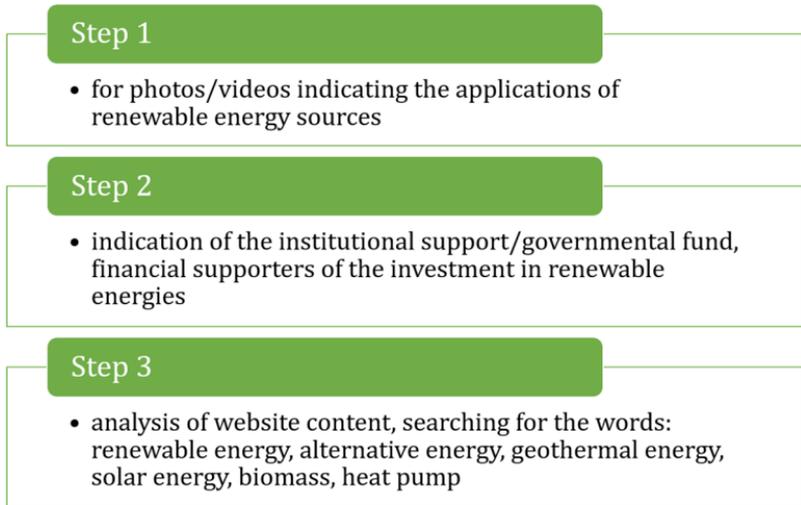


Figure 2 – Applied research method: Hotel Website Content Analysis

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Due to the globalisation and the change in the consumer habits, global trends can be experienced also in the hotel room sales technique. The internet use and technological developments have greater influence on the hotel market than ever, and most of the hotel rooms are sold through online booking (ANDERSON, C. 2012). Therefore, from the viewpoint of competitiveness, the website is regarded as a significant online marketing tool that a hotel can boast with, and which is available for the future customers and also for the competitors.

5. Research results

The authors investigated whether the Hungarian green hotels that apply renewable energy utilise this fact as a competitive advantage and present it at their website as a marketing tool (*Table 1*).

Table 1 – Selected green hotels in Hungary applying various forms of renewable energy based on the website evaluation in Hungary

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Name of the hotel ----- Location	Form of RE utilised	Notification on the website (Yes/No)	Year of implemen- tation	Number of rooms	Category/ Hotelstars Union	Year of green hotel classification
Airport Hotel Stáció ----- Vecsés	Geothermal energy, solar collectors	No	2010	75	4*	2011
Art Hotel Szeged ----- Szeged	Solar collectors, geothermal energy	Yes	2014	71	4*	2015
Danubius Hotel Helia ----- Budapest	Solar collectors	No	2000	262	4*	1999
Hotel Silvanus ----- Visegrád	Heat pump, solar collectors	Yes	2003	151	4*	1999
Hunguest Grandhotel Galya ----- Galyatető	Biomass	Yes	2013	129	4*	N/A
Zichy Park Hotel ----- Bikács	Heat pump, solar collectors	No	2008	47	4*	2007

Based on the studied 91 green hotels in *Hungary*, it can be concluded that only six of them utilise any form of renewable energy, and only two of them, the *Art Hotel Szeged* and *Hotel Silvanus*, present this fact as a form of competitive advantage, also by communicating this fact at the hotel website. *Art Hotel Szeged* and *Hotel Silvanus* take a competitive advantage of the utilisation of renewable energy in a way that the

photo of the solar collectors is displayed at the website. The application of the form of renewable energy is a long-term investment, it is a design-architectural solution, moreover it can also be regarded as a competitive advantage for the environment-conscious future guests.

As we found through the website analysis that most of the certified green hotels do not apply any forms of renewable energy (*Table 2*), we tried to find the reasons why. If the solar hours are compared and checked against which hotels apply this energy-saving method, these solutions, the utilisation of solar energy are only applied when the hotel management/ownership receives any form of support from the Hungarian municipalities. It is an interesting finding that these assets communicate the utilisation of renewable energy, because they have to return the support received.

Table 2 – Hotels without green certification applying forms of renewable energy based on the website content analysis in Hungary

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Name of the hotel	Form of RE utilised	Notification on the website (Yes/No)	Year of implementation	Number of rooms (r) and apartments (a)	Category/Hotelstars Union	Green hotel (Yes/No)
Location						
Augusztia Apartman Hotel and Youth Hostel	Solar collectors	Yes	2013	262 (r)	3*	No
Debrecen						
Aqua-Lux Wellness Hotel	Solar collectors Geothermic energy (heating with thermal water)	No	2013	17 (r) 16 (a)	4*	No
Cserkeszölő						

Arany Bárány Hotel ----- Zalaegerszeg	Solar collec- tors	Yes	2012	54 (r)	3*	No
Balaton Hotel Siófok ----- Siófok	Solar collec- tors	Yes	2013	120 (r) 12 (a)	4*	No
Erdőspuszta Club Hotel ----- Debrecen	Geothermic energy	No	2013	29 (r)	4*	No
Hotel Kapitány Wellness és Kon- ferencia Hotel ----- Sümeg	Solar collec- tors	No	2012	154 (r)	4*	No
Medves Hotel ----- Salgótarján	Heat pump, biomass, solar collectors	Yes	2012	50 (r)	2*	No
Tó Wellness Hotel Bánk ----- Bánk	Heat pump, solar collectors	Yes	2011	58 (r)	4*	No
Vinum Hotel ----- Kiskőrös	Solar collec- tors	Yes	2014	27 (r)	4*	No
Zenit Wellness Hotel Balaton ----- Vonyarcvashegy	Heat pump, solar collectors	No	2011	35 (r)	4*	No

In regards to the hotels without certification, several indicate the application of renewable energy on their website as a form of competitive advantage. One assumption is that the not certified hotels aim at representing their attitude towards sustainability; even though they are not certified or classified, they aim to express their attitude towards sustainability.

Another interesting fact is that most of the green hotels do not represent the renewable energy utilised on their website. Possibly, some hotels already holding the green certification aware of their competitive advantage on the market, and they do not need to present

their green-attitude towards the hotel market and the future guests any more.

6. Conclusions

Since the onset of the internet in the early 1990s, the potential of the *World Wide Web* in the field of business has also been recognised. The rapid development of the internet has dramatically changed tourism, and also hotel industry. The internet can serve as a marketing tool in the hotel industry, the hotel website being a platform where future customers, competitors and other participants of the tourism market can receive information about the hotel firm. Therefore, the continuous improvement and adequate choice for the website features is an important decision of the hotel management. Due to changes in consumer behaviour, competitiveness via the internet has become an important factor; therefore, hotel websites have an important role in the decision-making of customers.

The aim of this study was to analyse the hotel websites from the viewpoint of renewable energy utilisation in the Hungarian green hotels in the last decade. The study explored to which extent the utilisation of renewable energy is communicated at the hotel websites of the investigated certified hotels by means of website content analysis. The investigated period is every second year between 1995 and 2015. 91 appointed Hungarian green hotels were studied (of which 54 are located in *Budapest* and 37 countryside). The research method was website content analysis (*Figure 2*), the authors were searching for videos, photos, logos and also some expressions in the hotel description related to the utilisation of renewable energy.

In the long term, the use of renewable energy can be regarded as a competitive factor for the hotel assets: in *Hungary*, we found that mostly solar cells are applied in the case of thermal complexes and hotels. Only one green hotel, the *Silvanus Hotel Visegrád* represents the utilisation of renewable energy at its website. It was an interesting result, that from the viewpoint of website communication, non-green hotels

pay more attention to advertise and communicate their green attitude and renewable energy utilisation than the green certified hotels.

It is obvious that in the future more emphasis should be put on the institutional, governmental support of renewable energy in hotel industry because it utilises a large amount of energy. The management of the hotel companies, hotel associations and the government of the country should collaborate, and create concepts to find the best ways how to obtain the forms of innovative solutions in hotel industry.

Based on the research results and the review of the related literature, it can be confirmed, that the application of renewable energy is significant from the viewpoint of hotel competitiveness. In the future, the authors aim at finding the reasons why the hotels applying forms of renewable energy do not use this fact as a competitive advantage. Another research aim is to increase the number of analysed hotels, widen the research database, and include not only certified green hotels, moreover check the attitude of the hotel management and owners towards green solutions and the utilisation of renewable energy in the hotel assets.

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