




## DETERMINATION OF MARKETING COMMUNICATION STRATEGIES OF HOTELS USING RENEWABLE ENERGY

### YENİLENEBİLİR ENERJİ KULLANAN OTELLERİN PAZARLAMA İLETİŞİMİ STRATEJİLERİNİN BELİRLENMESİ

Ayşegül BAYRAM\*   
H. Yelda ŞENER\*\*   
Ercan TAŞKIN\*\*\* 

#### Abstract

Clean energy sources obtained from nature have become important to protect nature. Tourism is one of the sectors which has been active in various fields and uses energy intensively. Efficient use of energy has become a vision for tourism enterprises as well as in other enterprises. Therefore, using renewable energy is also important for the tourism sector.

The purpose of this study is to identify the priorities and differences in marketing communication strategies that can be used in different country markets that prefer hotels with renewable energy. In line with this purpose of the study, the priority of Afyon İkbal Thermal Hotel&Spa in marketing communication strategies was analyzed by the TOPSIS method. Marketing communication strategies to be followed in the United States, United Kingdom, and the Netherlands, which were determined as the target market, were evaluated based on 8 criteria and 4 alternatives to convey the messages of the tourism business working under global environmental problems that highlight the renewable energy-based presentations. The criteria have been determined as cost, establishing corporate reputation, competitors' strategies, technological developments, the level of development of the target market, environmental awareness of consumers, consumer trends changing based on environment, and attitudes of agencies. Alternatives can be listed as advertisement, publicity, public relations, fair, and promotion. As a result of this evaluation, advertising has been identified as the primary tool in all three markets.

\* **Corresponding Author:** Science Expert, Tavşanlı Atatürk Anatolian High School, aysgl.ky@gmail.com, ORCID:<https://orcid.org/0000-0002-3659-4264>. This article is prepared from the author's master thesis.

\*\* Associate Professor, Kutahya Dumlupınar University, Faculty of Economics and Administrative Sciences, hyelda.sener@dpu.edu.tr, ORCID: <https://orcid.org/0000-0003-0240-4634>

\*\*\* Professor Doctor, Kutahya Dumlupınar University, Faculty of Economics and Administrative Sciences, ercan.taskin@dpu.edu.tr, ORCID: <https://orcid.org/0000-0001-8499-1013>

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## Öz

Doğayı korumak için yine doğadan elde edilen temiz enerji kaynakları önem kazanmıştır. Turizm, çeşitli alanlarda faaliyet gösteren ve enerjiyi yoğun kullanan sektörlerden biridir. Enerjinin verimli kullanılması diğer işletmelerde olduğu gibi turizm işletmeleri için de bir vizyon haline gelmiştir. Bu nedenle, yenilenebilir enerjinin kullanılması turizm sektörü için de önemlidir.

Bu çalışmanın amacı, yenilenebilir enerji kaynaklı otelleri tercih eden farklı ülke pazarlarında kullanılabilir pazarlama iletişim stratejilerindeki öncelikleri ve farklılıkları tespit etmektir. Araştırmanın amacı doğrultusunda Afyon İktisadi ve Sosyal Bilimler Enstitüsü'nün pazarlama iletişimi stratejilerindeki öncelik TOPSIS yöntemi ile analiz edilmiştir. Global çevresel problemler altında çalışan turizm işletmesinin yenilenebilir enerji kullanım özelliğini de ön plana çıkararak mesajlarını iletebilmesi amacıyla çoğunlukla yenilenebilir enerji kaynaklı otelleri tercih eden müşterilerin bulunduğu ABD, İngiltere ve Hollanda'da, pazarlama iletişim stratejileri; 8 kriter ve 4 alternatif ile değerlendirilmiştir. Kriterler; maliyet, kurumsal itibar sağlamak, rakiplerin stratejileri, teknolojik gelişmeler, hedef pazarın gelişmişlik düzeyi, tüketicilerin çevre duyarlılığı, çevreye yönelik değişen tüketici eğilimleri ve acentaların tutumu olarak belirlenmiştir. Alternatifler ise; reklam, halkla ilişkiler ve tanıtım, fuar ve promosyon olarak sıralanmıştır. Bu değerlendirme sonucunda; reklam, üç pazarda da öncelikli araç olarak tespit edilmiştir.

**Anahtar Kelimeler:** Pazarlama iletişim stratejileri, uluslararası pazarlar, yenilenebilir enerji, turizm, TOPSIS

**JEL Sınıflaması:** M14, M31, M37

## 1. Introduction

Renewable energy is any source of energy that is inexhaustible in nature. The authorities have turned to renewable energies to reduce environmental damage and to find the energy needed (Millan, 2019).

The fundamental property of renewable energy sources is that they can be introduced in renewable modes. Renewable energy sources that have different formation characteristics are wind, ocean/sea, solar, hydroelectric, hydrogen, geothermal, biomass, piezoelectric. The tourism sector is also turning to renewable energy. In the United Nations Environment Program, 2011, it was stated that renewable energy is significant for the sustainability of the tourism sector, 38% of tourists preferred eco-friendly hotels in a study carried out by Trip Advisor in 2007 on travelers around the world, and 34% of travellers agree to pay more for these hotels (Jebli, Youssef & Apergis, 2019: 4). As a type of energy that has low production costs and returns on investments in the short term (Külekcı, 2009: 89), Geothermal energy, which is especially used in tourism, enables hotel businesses to both save on costs and offer more qualified service towards customer expectations.

This paper aims to reveal the priority and difference in marketing communication strategies that can be applied in the foreign market, which mostly prefers renewable energy-based tourism businesses and can be applied in the target market, by being assessed within the scope of certain criteria. The study consists of four parts. In the first part, our problem, which questions the priority of the use of advertising, public relations, fair and promotion that are the elements of marketing communication, is explained based on the assessment criteria in the United States, United Kingdom, and Netherlands

markets that Afyon İkbal Thermal Hotel & Spa targets with its environmentally friendly policies. The second section describes the use of renewable energy and marketing communication strategies in tourism. The third section describes the analysis practices and research findings related to determining the priority in marketing communication strategies that Afyon İkbal Thermal Hotel will follow in different markets. The final section contains an assessment of the results obtained.

## **2. Literature Review**

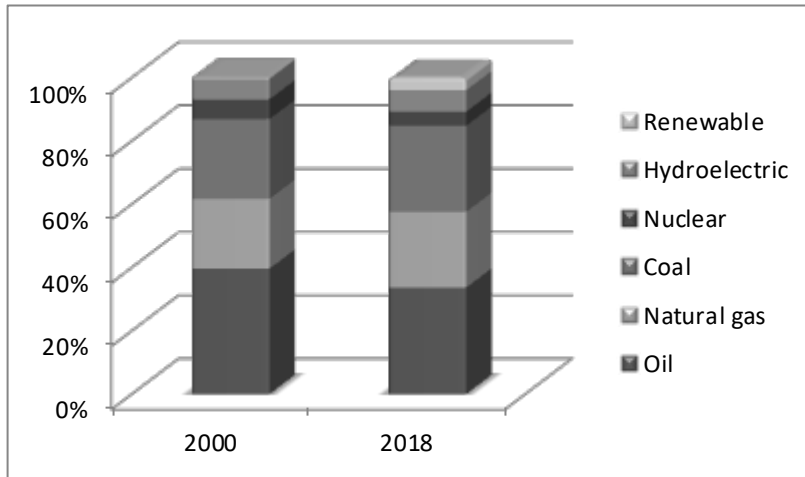
### **2.1. Renewable Energy in Tourism**

In parallel with the process of the industrial revolution, the need for energy increased too. This need brought about the threats of nuclear disasters and radioactive waste disposal and other environmental issues. As a response to this awareness, there has been a demand for “green” energy, and since the first oil crisis in 1973, the focus has been on renewable energy sources (Jacobsson & Johnson, 2000: 625). The climate change process, which started with the increase in the use of fossil fuels, has accelerated the search for a clean alternative by setting an example for the harmful consequences of fossil fuels with the Horizon oil disaster in the Gulf of Mexico (Aguilera, Manzano-Agugliaro, & Montoya, 2014: 511).

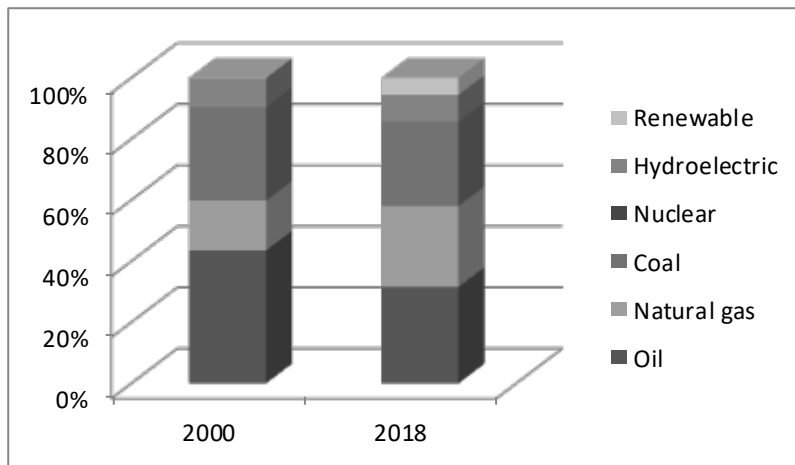
While energy-oriented living conditions cause depletion of the ozone layer, greenhouse gas emissions have a negative impact on life as well as the rapid consumption of fossil fuels due to intensive use encourages scientists to work on this matter. Renewable energy is any energy source that has no exhaustion limit (Millan, 2019). The main characteristic of renewable energy sources is that they can be extracted in a renewable mode (Hoogwijk, 2004: 16).

Many countries implement more environment-friendly energy-policy and the number of these sensitive countries is increasing day by day (“Renewable Energy Policies in a Time of Transition”, 2018). With the law it has issued in 2005, Turkey has become one of the countries that determines the official national policy on renewable energy (Kum, 2009: 219). Having adopted the Kyoto Protocol, Turkey focuses on development based on renewable energy. Increasing R&D, training, incentives regarding the widespread use of renewable energy resources provides efficiency in activities (Bayraç, 2010: 255).

When the trends in the world energy sector between 2000 and 2018 are examined, it is seen that the energy resources which are consumed are oil, natural gas, coal. As can be seen in Graphic 1, it is understood that renewable energy is gradually gaining importance. In Graphic 2, between 2000-2018, the ranking of energy resources of Turkey are seen. When this chart is examined; It is observed that while the oil and coal ratios are decreasing, the renewable energy source is gaining importance, rapidly. In this regard, the authorities provide support for the localization of the technology used, especially in renewable energy investments (KPMG, 2020).



**Graphic 1:** Consumed Energy Resources



**Graphic 2:** Energy Resources in Turkey

Investing in renewable energy offers both long-term economic advantages and contributes to sustainability activities (Altıntaş, Türk & Vayvay, 2016: 12).

Tourism is one of the largest industries in the world with a high number of visitors and employees. It is an industry which is highly related to clean and natural environment. Unfortunately, the need for energy and resources in the hotel industry is intense. These energy and resources are required for

space heating, lighting, central hot water, pool heating, cooking/cooling, among other typical energy uses such as laundries, ventilators, pumps, motors, elevators, ice machines and vending machines, spas and landscaping, and maintenance. Therefore, more efficient use of energy and resources is required (Bohdanowicz, Martinac, & Rezachek, 2001: 1; Csapó, 2013: 44-57).

Tourism enterprises should focus on renewable energy to increase efficiency in their activities and to ensure the efficiency of energy use, which is one of the sustainable tourism objectives (Gümüş & Örgenç, 2018: 73-82). Renewable energy sources come into prominence for the applicability of sustainable tourism, which is important in terms of protecting the environment and increasing the service quality (Blazevic, 2009: 31). For this purpose, the tourism sector, which is energy-intensive, tends towards environmental-friendly energy production and ensures the activity and commitment of tourists and gains competitive power (Giaoutzi, Dionelis & Stratigea, 2008: 17). In the tourism sector, the use of renewable energy sources within the scope of competitive strategies will support long-term economic development (Işık & Radulescu, 2017: 92). In this context, the relationship that can be established between tourism enterprises supported by renewable energy resources and the increase in the number of tourists visiting these enterprises gains importance. For the development of the tourism industry, it is required to encourage the use of renewable energy sources, train the workforce on this issue, and to improve the administrative processes. Additionally, the increase in the use of renewable energy in the tourism industry adds economic and environmental values to the country (Jebli, Youssef & Apergis, 2019: 15-17).

The relative importance of the end uses of the different energies used in the tourism industry is explained below:

- Area air conditioning (heating/cooling, air conditioning, ventilation) is the largest user of energy in hotels and accounts for about half of total consumption. It is therefore widely accepted that outdoor weather conditions and floor areas are the main factors among those affecting energy use in hotels. Indoor temperature levels also greatly affect the amount of energy consumed in a building.
- Hot water is the second largest energy use area, usually accounting for 15 percent of total energy demand.
- Lighting can range from 12 to 18 percent to 40 percent of a hotel's total energy consumption, depending on the organization category.
- The most commonly used services such as food and laundry have an important place in energy consumption.
- Sports and health facilities are places with high energy consumption (Hotel Energy Solutions, 2011).

In this context, in the tourism sector; Inclination to the use of renewable energy is sought after to make management and investment decisions, to enable information and experience sharing among

stakeholders, to build net with the aim to create and spread awareness in terms of usage benefits. (Marunda, Sai, & Muchenje, 2013: 476-477).

Nowadays, customers want more greener hotels without giving up luxury. Customers expect much more value from a free breakfast and the free Wi-Fi which they can reach in tourism establishments. It is not possible to attract the attention of eco-conscious customers. More than that, green references are needed. Additionally, like other industries, the hotel industry has been forced to develop rapidly over the past few years to respond to this change in consumer attitudes (“What can hotels do to become more sustainable?”, 2016).

It offers great opportunities for hotel businesses to use renewable energy, to achieve energy, to achieve energy efficiency and operational costs. About 40% of the energy used by hotels is supplied from electricity, 60% supplied from natural gas and petroleum fuels and is used in various fields. All specified areas of use are places where energy efficiency can be increased, and renewable energies can be easily used by using proven technologies. Human life quality and efficiency are based on safe, affordable, sustainable energy. Hotel businesses can create value by consuming energy more efficiently and increasing the use of renewable energy technologies (Hotel Energy Solutions, 2011).

Renewable energy sources are used for the generation of electricity, heating, cooling purposes in hotels. Solar-PV technology can be used for generating power that can be fed to the network, balancing electricity consumption. Solar energy is widely used for hot water production, space heating, and cooling. In addition to this, solid biomass energy such as wood pellets and sawdust can also be used for field heating and hot water production. High-efficiency heat pumps and low enthalpy geothermal energy are used for space heating for hotels. Large hotels with restaurants can recycle fried vegetable oils for use in biodiesel production (Vourdoubas, 2016: 82).

Hotels with renewable energy sources serve sustainable tourism. Applications include energy-saving enhancements, eco-friendly products, signs, and even measures such as limiting the number of visitors (Seidel, 2019).

According to UNWTO: In this context, hotels should use environmental resources in the most appropriate way and help protect basic ecosystems and biodiversity. In this way, hotels help protect natural heritage and biodiversity by optimally utilizing environmental resources, a key element in the development of tourism, and by supporting basic ecological processes. Hotels all around the world strive to be more environment friendly. There are many options to minimize their impact on the environment, such as using less water, constructing their building with sustainable materials (The United Nations World Tourism Organization [UNWTO], 2020).

The use of renewable energy in hotel businesses; provides long-term stability in the energy supply of hotels and other touristic businesses. In addition to this, it reduces energy consumption costs such as water consumption and/or heating. Additionally, hotel guests develop positive attitudes within the scope of sustainable activities, and brand image is strengthened. Another of the most important benefits is ecological sensitivity increases among all stakeholders of hotel businesses

such as entrepreneurs, employees, local communities. Investments in innovative and environment-friendly technologies accelerate, and natural resources are protected. On the other hand, lack of training in hotel and destination management, insufficient use of renewable energy sources, and insufficient awareness of sustainability are the weak sides in terms of the use of renewable energy in hotel businesses. The first opportunity in using renewable energy in hotel businesses is encouraging investments. Evaluating renewable energy sources and innovations within the scope of marketing and development strategies is important in terms of seizing opportunities. It is valuable to increase awareness of the use of renewable energy resources among businesses and all stakeholders and to develop cooperation, and to encourage sustainable activities for the benefit of society.

Additionally, it enables hotels to differentiate and increase brand values with their renewable energy-based presentations. The lack of understanding of the necessity of using renewable energy in hotel businesses, the costly and time-consuming investments, the lack of environmental awareness of the customers, low financial support, the lack of training of the hotel staff on sustainable activity and renewable energy; are listed as threats (Cerovic, Drpic & Milojica 2014: 134-135).

The Star Island Hotel in Eleuthera, Bahamas, has solar panels for reliable energy that can power the facility during the hurricane season. Located in Haukadalur, Iceland, Hotel Geysir heats its water using a local geothermal system, which makes use of the powerful geysers found in the area. Garonga Safari Camp in Limpopo, South Africa, meets 30 percent of its electricity needs with solar power (“10 Stunning Hotels from Around the World That Run on Renewable Energy”, 2019).

Hilton hotels in many parts of the world are environmentally sensitive with different environmental systems depending on the geographical conditions in which they are located and are committed to cutting their environmental footprint by half by 2030. Hilton San Francisco Union Square has got to separate organic waste according to city regulations. Under the leadership of the hotel's Community Projects Manager, a culture of food waste prevention is being created among employees. Hotel employees work diligently to prevent and reduce food waste through smart buying, careful preparation, food donations, and composting. In some areas, Hilton discontinued using plastic and reduced the consumption of waste, electricity, water. Hilton Worldwide fortifies its commitment to Responsibly Sourcing Seafood by collaborating with the World Wildlife Fund (“Environmental impact”, 2019).

Sehr-i Nuh Hotel in Sirnak city meets the energy it needs with the energy panels installed on the land of the hotel (Talesun, 2015). The Iber Hotel Sarigerme Park in Muğla Sarigerme uses solar energy for cooling, heating, laundry. Geothermal energy is consumed in many thermal hotels in Turkey. The Afjet Geothermal Facilities in Afyon and a geothermal hotel project belonging to the Municipality of Seferihisar, Izmir are examples. The Sheraton Hotel, which operates in Adana, serves as a green building, green tourism, and green star hotel and the number of hotels bearing green star is steadily growing in Turkey (“Turizm Tesislerine Yenilenebilir Enerji Fırsatları”, 2015).

Laguna Lodge Hotel in Guatemala, North America, meets food, water, and renewable energy using local ingredients (“Laguna Lodge Hotel in Guatemala”, 2019). Tourism enterprises that serve the

customers who are environmentally conscious, are doing many environment-friendly practices to obtain green stars, white stars, blue flags, as well as using renewable energy. Being environment-friendly adds value to their brands and provides energy savings.

## **2.2. Evaluation of Marketing Communication in Terms of the Tourism Sector**

Tourism, which is called the smokeless industry, not only introduces a region but also contributes substantially to the economy of that region. Tourism is a collection of activities that vary according to location, prioritizes the needs of consumers, and arises from actions of people getting away from their place of residence for a certain period of time, based on reasons such as relaxing, having fun, visiting, and health purposes. Tourism has many features in its structure. The characteristics of tourism centers provide a variety of tourism products such as coastal tourism, winter tourism, cultural tourism, health tourism and are offered to people from various parts of the world. It is impossible to attract tourists to those regions without introducing the beautiful features of the tourist regions. In the intense competitive environment, marketing communication strategies are more important for the tourism sector to present the messages regarding the commitments made more effectively. (Amin & Priansah, 2019: 160-166).

Today, the tourism sector can be considered as organizational behavior as it can affect the development of a local economy. Organizational behavior should be creating an appropriate combination for the presentation of the right tourism products to the right target market (Liu & Ning, 2014: 1-2). Tourism product needs to be either interesting places or the location of the facilities should create a good image for the tourists, and the availability of the services provided, the easy accessibility, and the creation of awareness are also other essentials (Kaur, 2014: 1-2).

Communication and satisfaction with the target market or existing market, which is desired to be achieved in both national and international markets, is quite important. The role of marketing mix in tourism is to attract customers or tourists to the destination and product that the tourism company wants to sell (“Tourism Marketing and Its Importance Learn”, 2019).

Tourism marketing is an effort to communicate products/ services of National/International Tourism and all related sectors to the target market or potential group with different strategies according to changes. Briefly, tourism marketing is a marketing strategy that uses specific marketing plans and techniques to offer to customers tourism products such as destinations, hotels, transportation (Kulakova, 2019). Tourism marketing activities are quite diversified and aim the target customer (Jönsson, 2005; Sofronov, 2019: 115-122; Pektaş, 2018: 187-196).

The objectives of tourism marketing can be divided into three groups: the first is the marketing goals of the enterprise, the second is the national level tourism marketing goals, and the third is the social goals in tourism marketing. The main goal behind every marketing strategy should be customer satisfaction. Selected marketing strategies depend on various components such as sense of quality, innovation, brand building, market expansion, focus, product development, social



responsibility (“Marketing Concept”, 2016). Activities should be started with appropriate marketing communication strategies to achieve determined targets in tourism marketing.

Rapidly changing world standards have changed the lives of consumers and increased their expectations. The number of businesses that try to meet the changing and increasing demands and needs of consumers has increased and this has brought along intense competition. The tourism sector is also one of the most important industries which experiences distinct change (Canseven & Genç, 2016: 44-56).

Like many things that change over time, also tourism itself is diversified according to its geographical locations, number of people and the purposes of travel. Because of this diversity, tourism enterprises must carefully determine the marketing communication strategies that they will develop in accordance with the target market.

### **3. Methodology**

Tourism businesses that can differentiate their brands by using renewable energy resources provide cost savings and competitive advantage when they correctly determine their marketing communication strategies for target markets.

Afyonkarahisar is a city with high appeal for thermal tourism with its moderate geothermal resources. In this area Ömer-Gecek Geothermal Energy Field, Sandıklı-Hüdai Geothermal Energy Field, Bolvadin-Heybeli Geothermal Energy Field, Gazlıgöl Geothermal Energy Field, and many thermal hotels are in service (Kervankıran, 2012: 108-126). Afyon İkbal Thermal Hotel & SPA, which has been operating in this city for many years, is ranked 3<sup>rd</sup> in the “Best Destination Spa Resort” in the “Best Hotels of the World” category of the “Readers’ Travel Awards 2020” of Conde Nast Traveler magazine, and is a strong brand that ranked 4<sup>th</sup> in the “Best Spa Resort” (“Afyonkarahisar İkbal Thermal Hotel entered the ‘Best Hotels in the World’ list”, 2020) which has been serving many guests from Turkey and abroad. The correct marketing communication strategies to be followed by Afyon İkbal Thermal Hotel & Spa, which uses renewable energy and is among the best hotels in the world, will increase its competitiveness and set a good example for other tourism businesses. The aim of this study is to determine the priority in advertising, public relations, exhibition, and promotional activities within the scope of marketing communication decisions of Afyon İkbal Thermal Hotel&Spa for the United States, United Kingdom, and Netherlands markets, which prefer hotels mostly of renewable energy source. Thus, the priorities in the marketing communication practices of Afyon İkbal thermal Hotel&Spa, the criteria that lead to these priority applications in these countries will be evaluated, and the differences will be determined. The company will be able to communicate more effectively with its target group by determining the priority for the advertising, public relations, fair and promotional activities that will be followed by Afyon İkbal Thermal Hotel&Spa in the United States, United Kingdom, and Netherlands markets.

The never-stopping speed of technology has increased the need for energy, but intensive energy use has not always produced positive results. The most commonly used fossil fuels for energy have caused global warming. For this reason, scientists turned to alternative clean energy and benefited from the inexhaustible energy of natural phenomena that are a part of nature. Renewable energy sources have become important for people who care about their environment. Thus, the expectations of consumers who have become environmentally sensitive have changed in this direction. Customers prefer businesses that are environment-friendly, that are less polluting, that can control waste management, use renewable resources more in production, and whose products are more reliable (Karaca, 2013: 109-110).

The tourism sector, where energy is heavily used, has also affected the consumer profile while reducing its harmful effects on the environment by switching to this clean energy use. Consumer demands and needs that have become environmentally sensitive have also become important for the agencies that mediate the customer in tourism. The agencies directed the environmental demands of the target customers with the environmental attitudes of their businesses. In this study, the use of renewable energy was taken into consideration when determining the criteria affecting the marketing communication decisions of energy-intensive tourism enterprises in today's conditions of global environmental problems. Accordingly, in addition to the evaluation criteria for marketing communication in the literature, environmental awareness of target consumers, consumer trends changing based on the environment, and attitude of agencies were added. The importance of this study is that it guides all tourism businesses that differ in energy use, such as Afyon İkbal Thermal Hotel & Spa, to determine the right communication strategies with their customers who prefer renewable energy-based services and add new ones to the criteria in the literature in evaluating marketing communication strategies.

The data obtained from the discussion made with the management of the hotel was analyzed by TOPSIS method with intent to determine the decisions regarding the prioritization of the marketing communication strategies to be developed for the hotel customers who prefer hotels using renewable energy. TOPSIS gives decision-makers the opportunity to evaluate the most appropriate alternative by trying to consider all variables related to business activities. In this way, businesses achieve success by transferring their resources to priority activities in the most rational way. In this study, the priorities of the marketing communication strategies to be applied by Afyon İkbal Thermal Hotel & Spa for each foreign market its targets are determined, and the company's resource transfer is made rationally, and the opportunity to communicate with customers and convey messages in accordance with the sector structure in the markets is enabled.

In this study, marketing communication strategies in the United States, United Kingdom and Netherlands, determined as the target market by Afyon İkbal Thermal Hotel & Spa marketing manager, are evaluated based on eight criteria and four alternatives. It was a significant factor that the British preferred Turkey as their second choice ("Türkiye Turizmi, Rotayı Yükselişe Çevirdi", 2020) in 2019 for tourism purpose, and that Netherlands tourists find Turkey appealing in terms of health tourism in determining Turkey as target market ("Sağlık Turizminde Türkiye'nin Yeni

Umudu: Hollanda”, 2014). Additionally, it is an important opportunity in terms of Turkey’s health tourism that some private insurance companies based in the Netherlands decided to cover the cost of the patients, who will be sent to Turkey for thermal treatment (“Sağlık Turizminde Türkiye’nin Yeni Gözdesi Hollanda”, 2014). US is one of the countries that prefer Turkey especially for health tourism (“Türkiye’nin Termal Tesislerine 2018’de 3 Milyon Ziyaretçi”, 2019). When both these features and the company’s portfolio are reviewed, the said three markets have been identified as target markets.

Criteria were determined as cost, corporate reputation, competitors’ strategies, technological developments, development level of target market, consumers’ environmental awareness, consumer tendencies changing based on environment, and attitude of agencies. The alternatives are advertising, public relations, fair and promotion. In consultation with the marketing manager of Afyon İkbâl Thermal Hotel, the cost used in different studies, providing corporate reputation, competitors’ strategies, technological developments criteria (Larry, 2008; Ekinçi & Şener, 2019: 110-126) were determined as suitable criteria for this study. Furthermore, following the discussions with the decision-maker, environmental awareness (Jebli, Youssef & Apergis, 2019: 4), which is important for tourism businesses, is taken into consideration in terms of being able to direct marketing communication strategies in markets where the use of renewable energy is widespread, and the environmental awareness of consumers, changing consumer trends based on environment and agencies’ attitude criteria were also added to the study.

TOPSIS is one of the multi-criteria decision-making methods, and the basis of the application is the determination of relative proximity values to the ideal solution after initially forming a decision matrix (İlgaz, 2018: 593). TOPSIS, first proposed by Hwang and Yoon in 1981, is the technique of determining the priority of preferences in order of similarity to the ideal solution (Behera, 2019: 13). TOPSIS, which is one of the multiple decision making-methods, is an important method used to evaluate the performance of companies in the global world where there is intense competition. The basis of TOPSIS is the positive and negative ideal solution. In other words, alternatives must be sorted according to ideal solutions (İlgaz, 2018: 593). The selected alternative is expected to be the shortest distance to the positive ideal solution and the farthest distance to the negative ideal solution. The positive ideal solution provides maximum benefit while keeping costs to a minimum. The negative ideal solution means higher cost and lowest benefit (Kim, 2016: 189).

TOPSIS method has range of application in many sectors such as banking (Eyüpoğlu, 2016: 220-236; Oral, 2016: 448-455; Roy & Das: 2018: 24-29), insurance (Acar, 2019: 136-162), food (Aytekin & Sakarya, 2013: 30-47; Bülbül & Köse, 2011: 71-97; Konuk, 2018: 382-390), automotive (Azizi, Aikhuele & Souleman, 2015: 159-164; Demir & Polat, 2018: 3563 – 3578; Tezcan, 2019: 87-101; Yıldırım & Kocamış, 2016: 146-153), textile (Konak et al., 2018: 11-44; Ayvaz & Kuşakçı, 2016 : 70-79; Karğın, 2010: 195-216), tourism (İlban & Yıldırım, 2017: 1-16; Önder, Yıldırım & Özdemir, 2013: 1-15; Özçelik & Kandemir, 2015: 97-114; Huang & Peng, 2012: 456-465; Sezgin & Tokay, 2016: 1-10), energy (Kuvat & Güler, 2020: 37-48; Kaya & Kahraman, 2011: 6577-6585; Ergüden & Çatioğlu, 2016: 201-221; Derse & Yontar, 2020: 389-410; Babatunde & Ighravwe, 2018: 2-18; Boran, Boran &

Menlik, 2011: 81-90; Suharevska & Blumberga, 2019 : 47-63; Ilbahar, Cebi & Kahraman 2019: 18-33; Ighravwe & Babatunde, 2018: 1-20).

The solution process of TOPSIS method consists of 6 steps. The steps of the TOPSIS method are described below:

**Step 1:** Creating of Decision Matrix (A)

Matrix A is the initial matrix created by the decision-maker. The representation of the decision matrix as follows:

$$A_{ij} = \begin{bmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{bmatrix} \quad (1)$$

In  $A_{ij}$  matrix, m expresses the number of decision points, n expresses evaluation factor (Ertuğrul & Özçil, 2014:271).

**Step 2:** Creating of Standard Decision Matrix (R) / Normalized Matrix

After the initial Decision Matrix is created, the squares of all  $X_{ij}$  values ( $X_{11}, X_{21}, X_{31} \dots X_{m1}$ ) are taken, and then the column totals consist of the sum of the squares of the X values. All  $X_{ij}$  values are divided by the square root of the sum of the columns in which they are located. This process is called normalization process.

The formula used for Standard Decision Matrix/Normalized Matrix:

$$r_{ij} = \frac{a_{ij}}{\sqrt{\sum_{k=1}^m a_{kj}^2}} \quad (2)$$

R-Matrix is obtained as follows:

$$R_{ij} = \begin{bmatrix} r_{11} & r_{12} & \dots & r_{1n} \\ r_{21} & r_{22} & \dots & r_{2n} \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ r_{m1} & r_{m2} & \dots & r_{mn} \end{bmatrix}$$

**Step 3:** Creating of Weighted Standard Decision Matrix (V) First off, weighted values ( $w_i$ ) related to normalized matrix are determined. The important point here is that  $w_{ij}$  totals must be equal to 1. ( $\sum_{i=1}^n w_i = 1$ )

Then the n values generated by the normalized matrix are multiplied by the weights of  $w_{ij}$ , and the weighted normalized matrix (V matrix) is obtained. In other words, the elements of the R-matrix in its each column are multiplied by value  $v_{ij}$  to create the V matrix. V matrix is given below (Cevzici & Kayacan, 2019:337).

$$V_{ij} = \begin{bmatrix} w_1 r_{11} & w_2 r_{12} & \dots & w_n r_{1n} \\ w_1 r_{21} & w_2 r_{22} & \dots & w_n r_{2n} \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ w_1 r_{m1} & w_2 r_{m2} & \dots & w_n r_{mn} \end{bmatrix}$$

**Step 4:** Creating of Positive Ideal ( $A^*$ ) And Negative Ideal Solutions ( $A^-$ )

The TOPSIS method assumes that each evaluation factor has a monotonous increasing or decreasing trend. The largest values of each column of the weighted normalized matrix in the V matrix (the smallest if the relevant evaluation factor is minimization directed, then the smallest) are selected with intent to create the ideal solution set. Finding the ideal solution set is shown in the formula below.

$$A^+ = \left\{ (\max_i v_{ij} | j \in J), (\min_i v_{ij} | j \in J') \right\} \quad (3)$$

Finding the negative ideal solution set is shown in the formula below.

$$A^- = \left\{ \left( \min_i v_{ij} \mid j \in J \right), \left( \max_i v_{ij} \mid j \in J' \right) \right\} \quad (4)$$

Among the alternatives, the maximum value for the benefit criterion and the minimum value for the cost criterion are required. For this reason,  $A^+$  shows the most preferred alternative and  $A^-$  shows the least preferred alternative (Ilgaz, 2018).

#### Step 5: Calculation of Separation Measures

In the TOPSIS method, the Euclidian Distance Approach is used to find deviations from the ideal and negative ideal solution set of the evaluation factor value for each decision point. The deviation values for the decision points obtained here are called Ideal Discrimination ( $S_i^+$ ) and Negative Ideal Discrimination ( $S_i^-$ ) Measure.

$$S_i^+ = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^+)^2} \quad (5)$$

$$S_i^- = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^-)^2} \quad (6)$$

The ( $S_i^+$ ) and ( $S_i^-$ ) values will naturally be as much as the number of decision points.

#### Step 6: Calculation of Relative Closeness to the Ideal Solution

In calculating the relative proximity ( $C_i^+$ ) of each decision point to the ideal solution, ideal and negative ideal separation measures are used. The criterion used here is the share of the negative ideal separation measure within the total separation measure. It is shown in the formula below.

$$C_i^+ = \frac{S_i^-}{S_i^- + S_i^+} \quad (7)$$

Here  $C_i^+$  value takes value in its value range of  $0 \leq C_i^+ \leq 1$  and shows the absolute closeness of the relevant decision point to the ideal solution and shows the  $C_i^+ = 0$  relative decision point to the negative ideal solution (Uygurtürk & Korkmaz, 2012:104).

## 4. Research Findings

In this study, Afyon İkbal Termal Otel&Spa's priority in advertising, public relations, fair and promotional activities within the scope of marketing communication efforts in the United States, United Kingdom, and Netherlands were analyzed by TOPSIS method.

#### Step 1: Creating of Decision Matrix (A)

The creation of the decision matrix is the first step for the TOPSIS method. Decision matrix rows have decision points to rank superiorities, and columns have assessment factors to assist decision-making. In this study, there are 4 decision points (advertising, public relations, fair, promotion) and eight evaluation factors (cost, providing corporate reputation, competitor strategies, technological developments, socio-economic development level of the target market, environmental awareness of consumers, changing consumer trends towards the environment, the attitude of agencies).

Initially, the decision matrix for the TOPSIS method (4x8) was prepared. The decision matrices, which belong to the United States, United Kingdom, and Netherlands markets that also constitute the subject matter of this study, are shown in Table 1, Table 2, and Table 3 after obtaining data by discussing with the Afyon İkbal Termal Otel&Spa officials.

**Table 1:** US Market Decision Matrix

	Cost	Providing Corporate	Competitor Strategies	Technological Innovations	Socio - Economic Development Level of The Target Market	Environmental Awareness of Consumer	Changing Consumer Trends Towards The Environment	Attitude of Agencies
<b>Advertising</b>	90	90	95	100	60	90	95	80
<b>Public Relations</b>	75	85	90	90	50	85	90	55
<b>Fair</b>	70	80	70	80	80	70	70	60
<b>Promotion</b>	80	70	60	60	70	60	75	50

**Table 2:** UK Market Decision Matrix

	Cost	Providing Corporate	Competitor Strategies	Technological Innovations	Socio - Economic Development Level of The Target Market	Environmental Awareness of Consumers	Changing Consumer Trends Towards The Environment	Attitude of Agencies
<b>Advertising</b>	70	90	75	100	90	80	100	70
<b>Public Relations</b>	80	100	50	90	85	70	90	60
<b>Fair</b>	75	80	70	80	80	75	70	80
<b>Promotion</b>	60	70	60	70	70	50	80	65

**Table 3:** Netherlands Market Decision Matrix

	Cost	Providing Corporate	Competitor Strategies	Technological Innovations	Socio - Economic Development Level of The Target Market	Environmental Awareness of Consumers	Changing Consumer Trends Towards The Environment	Attitude of Agencies
<b>Advertising</b>	75	90	70	100	80	70	100	70
<b>Public Relations</b>	80	100	50	90	90	50	90	80
<b>Fair</b>	70	80	75	70	85	60	70	50
<b>Promotion</b>	60	70	80	80	70	80	80	60

**Step 2: Creating of Standard Decision Matrix (R)**

The standard decision matrix for each market is found by dividing the square root of the sum of the column value of each criterion in the columns of the decision matrix created in the first step. Standard decision matrices for the United States, United Kingdom, and Netherlands markets are shown in Table 4 to Table 6.

**Table 4: US Market Normalized Decision Matrix**

	Cost	Providing Corporate	Competitor Strategies	Technological Innovations	Socio – Economic Development Level of The Target Market	Environmental Awareness of Consumers	Changing Consumer Trends Towards The Environment	Attitude of Agencies
<b>Advertising</b>	0,569	0,552	0,593	0,597	0,455	0,583	0,571	0,642
<b>Public Relations</b>	0,474	0,521	0,562	0,537	0,379	0,551	0,541	0,441
<b>Fair</b>	0,442	0,490	0,437	0,477	0,606	0,454	0,421	0,482
<b>Promotion</b>	0,506	0,429	0,375	0,358	0,531	0,389	0,451	0,401

**Table 5: UK Market Normalized Decision Matrix**

	Cost	Providing Corporate	Competitor Strategies	Technological Innovations	Socio – Economic Development Level of The Target Market	Environmental Awareness of Consumers	Changing Consumer Trends Towards The Environment	Attitude of Agencies
<b>Advertising</b>	0,489	0,525	0,582	0,583	0,552	0,574	0,583	0,506
<b>Public Relations</b>	0,558	0,583	0,388	0,525	0,521	0,502	0,525	0,434
<b>Fair</b>	0,524	0,467	0,543	0,467	0,490	0,538	0,408	0,578
<b>Promotion</b>	0,419	0,408	0,465	0,408	0,429	0,359	0,467	0,470

**Table 6: Netherlands Market Normalized Decision Matrix**

	Cost	Providing Corporate	Competitor Strategies	Technological Innovations	Socio – Economic Development Level of The Target Market	Environmental Awareness of Consumers	Changing Consumer Trends Towards The Environment	Attitude of Agencies
<b>Advertising</b>	0,524	0,525	0,502	0,583	0,490	0,531	0,583	0,531
<b>Public Relations</b>	0,558	0,583	0,359	0,525	0,552	0,379	0,525	0,606
<b>Fair</b>	0,489	0,467	0,538	0,408	0,521	0,455	0,408	0,379
<b>Promotion</b>	0,419	0,408	0,574	0,467	0,429	0,606	0,467	0,455

**Step 3: Creating of Weighted Standard Decision Matrix (V)**

Here, firstly, the weight values ( $W_i$ ) for the normalized matrix are determined with the aid of the AHP method. Normalized values calculated earlier are multiplied by weight values, and weighted normalized values are obtained. The matrices of these values are given in Table 7 through Table 9.



**Table 7:** US Weighted Normalized Decision Matrix (V)

Weighted	0,11	0,11	0,11	0,27	0,05	0,05	0,27	0,03
	Cost	Providing Corporate	Competitor Strategies	Technological Innovations	Socio – Economic Development Level of The Target Market	Environmental Awareness of Consumers	Changing Consumer Trends Towards The Environment	Attitude of Agencies
<b>Advertising</b>	0,063	0,061	0,065	0,161	0,023	0,029	0,154	0,019
<b>Public Relations</b>	0,052	0,057	0,062	0,145	0,019	0,028	0,146	0,013
<b>Fair</b>	0,049	0,054	0,048	0,129	0,030	0,023	0,114	0,014
<b>Promotion</b>	0,056	0,047	0,041	0,097	0,027	0,019	0,122	0,012

**Table 8:** UK Weighted Normalized Decision Matrix (V)

Weight	0,06	0,06	0,15	0,34	0,03	0,15	0,15	0,06
	Cost	Providing Corporate	Competitor Strategies	Technological Innovations	Socio – Economic Development Level of The Target Market	Environmental Awareness of Consumers	Changing Consumer Trends Towards The Environment	Attitude of Agencies
<b>Advertising</b>	0,029	0,031	0,087	0,198	0,017	0,086	0,087	0,030
<b>Public Relation</b>	0,034	0,035	0,058	0,178	0,016	0,075	0,079	0,026
<b>Fair</b>	0,031	0,028	0,081	0,157	0,015	0,081	0,061	0,035
<b>Promotion</b>	0,025	0,024	0,070	0,139	0,013	0,054	0,070	0,028

**Table 9:** Weighted Normalized Decision Matrix (V) for the Netherlands

Weighted	0,12	0,12	0,12	0,27	0,03	0,03	0,06	0,27
	Cost	Providing Corporate	Competitor Strategies	Technological Innovations	Socio – Economic Development Level of The Target Market	Environmental Awareness of Consumers	Changing Consumer Trends Towards The Environment	Attitude of Agencies
<b>Advertising</b>	0,063	0,063	0,060	0,157	0,015	0,016	0,035	0,143
<b>Public Relations</b>	0,067	0,070	0,043	0,142	0,017	0,011	0,031	0,164
<b>Fair</b>	0,059	0,056	0,065	0,110	0,016	0,014	0,024	0,102
<b>Promotion</b>	0,050	0,049	0,069	0,126	0,013	0,018	0,028	0,123

**Step 4:** Creating of Ideal (A<sup>+</sup>) and Negative Ideal Solutions (A<sup>-</sup>)

In the fourth step, the largest value in each column is taken for the V matrix for ideal (A<sup>+</sup>), while the smallest value is selected for Negative Ideal (A<sup>-</sup>). Selected solution sets are given between Table 10 and Table 12.

**Table 10:** Creating of the US Market Ideal (A<sup>+</sup>) and Negative Ideal (A<sup>-</sup>)Solution

<b>Ideal Solution Values</b>	0,063	0,061	0,065	0,161	0,030	0,029	0,154	0,019
<b>Negative Ideal Solution Values</b>	0,049	0,047	0,041	0,097	0,019	0,019	0,114	0,012

**Table 11:** UK Ideal (A<sup>+</sup>) and Negative Ideal (A<sup>-</sup>)

<b>Ideal Solution Values</b>	0,034	0,035	0,087	0,198	0,017	0,086	0,087	0,035
<b>Negative Ideal Solution Values</b>	0,025	0,024	0,058	0,139	0,013	0,054	0,061	0,026

**Table 12.** Netherlands Ideal (A<sup>+</sup>) and Negative Ideal (A<sup>-</sup>)

<b>Ideal Solution Values</b>	0,067	0,070	0,069	0,157	0,017	0,018	0,035	0,164
<b>Negative Ideal Solution Values</b>	0,050	0,049	0,043	0,110	0,013	0,011	0,024	0,102

**Step 5:** Calculation of Separation Measures

Calculation of the distance (S<sup>+</sup>) of each alternative from the positive ideal solution and the distance (S<sup>-</sup>) from the negative ideal solution are as follows.

US Market (S<sup>+</sup>): {0,00758098; 0,025009337; 0,057312199; 0,078581524}

US Market (S<sup>-</sup>): {0,083146435; 0,06321262; 0,035720982; 0,013104813}

UK Market (S<sup>+</sup>): {0,006971945; 0,038827334; 0,048796532; 0,073675754}

UK Market (S<sup>-</sup>): {0,078833689; 0,050301094; 0,042295062; 0,014716482}

Netherlands Market (S<sup>+</sup>): {0,023836289; 0,031207968; 0,080116607; 0,058750738}

Netherlands Market (S<sup>-</sup>): {0,068498675; 0,074474672; 0,024397468; 0,037.321.6130}

**Step 6:** Calculation of Relative Closeness to the Ideal Solution

The relative proximity of each country to the ideal solution was calculated according to the equation. “C” values are given between Table 13 and Table 15.

Afyon İkbal Termal Otel&Spa’s importance ranking of environmentally sensitive marketing communications elements for the US market is determined as advertising, public relations, promotion, fair and promotion.

**Table 13:** “C” Values for US Market

	C+
<b>Advertising</b>	0,916
<b>Public Relation</b>	0,717
<b>Fair</b>	0,384
<b>Promotion</b>	0,143

The importance ranking of environmentally friendly marketing communication elements of Afyon İkbal Termal Otel&Spa in the UK market has been determined as advertisement, public relations, promotion, and fair.

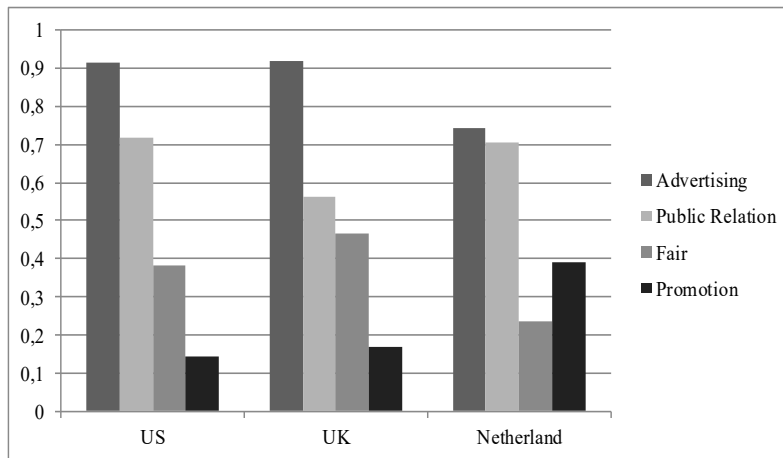
**Table 14: “C” Values for UK Market**

	C+
Advertising	0,919
Public Relation	0,564
Fair	0,464
Promotion	0,166

The importance ranking of environmentally friendly marketing communication elements of Afyon İkbal Thermal Otel&Spa in the Netherlands market has been determined as advertisement, public relations, promotion, and fair.

**Table 15: “C” Values for Netherlands Market**

	C+
Advertising	0,742
Public Relation	0,705
Fair	0,233
Promotion	0,388



**Graphic 3: Priority in Marketing Communication Elements for Country Markets**

When graphic 3 is reviewed, within the scope of the marketing communication decisions of Afyon İkbal Thermal Hotel&Spa, advertising should be focused primarily on the US and UK markets, which prefer mostly renewable energy-derived hotels. After advertising, public relations, fair and promotion respectively gain importance. On the other hand, advertising is the priority for the Netherlands market, but it is understood that public relations are almost as effective as advertising. In addition, promotional work also has a greater impact than fairs.

## 5. Conclusion

Pollution, which is one of the most important problems of the global world, is a result of the inefficient use of energy and continuous consumption. Alternative solutions have been produced and continue to be produced for this. Scientists who find the solution for nature in nature again offer renewable clean energy as an alternative. The use of renewable energy in all sectors with intensive energy consumption is both more economical and more environment-friendly. Businesses forestall their competitors by revealing their renewable energy differences in their marketing activities. Environmentally conscious consumers care about presentations bearing this feature. Renewable energy creates a great advantage also for tourism, which is one of the sectors with the highest energy consumption. Conscious customers enjoy being respectful to nature while vacationing.

In the study, the importance ranking of the marketing communication elements selected within the scope of the evaluation criteria of the environmentally sensitive Afyon İkbal Hotel, one of the important centers of thermal tourism, in the United States, United Kingdom, and Netherlands markets was analyzed using the TOPSIS method, and its priority was determined. The criteria in this application are determined as; cost, corporate reputation, competitors' strategies, technological developments, the level of development of the target market, environmental awareness of consumers, changing consumer trends towards the environment, and the attitude of agencies. Alternatives are advertising, public relations, promotion, fair, and promotion.

In this study, it has been determined that the marketing communication decisions to be applied for different country markets will present similar properties for the US and UK country markets but will differ for the Netherlands market. Afyon İkbal Thermal Hotel should firstly allocate resources for its advertising activities for the US market, and then use resources for public relations and promotional activities and fair and promotion. The UK country market of Afyon İkbal Thermal Hotel, which uses renewable energy, also showed similar characteristics with the US market in the evaluation. Advertising activities are prioritized. Public relations and promotion, fair and promotion rankings are determined the same for both markets. Advertising is also a priority for the Netherlands market of Afyon İkbal Thermal Hotel, but in public relations and promotion are significant as much as advertising. Other marketing communication activities of the Hotel, which has environmentally sensitive activities, are promotions and fair. With this priority ranking, Afyon İkbal Thermal Hotel will correctly promote itself in these three international markets and will be able to reach the target audience it wants.

In this study, the four most frequently used elements in tourism marketing communication, namely advertisement, public relations, fair, and promotion; were determined as an alternative. The evaluation of the data obtained after the meeting with the marketing management of Afyon İkbal Thermal Hotel is the other limitation of the study that the thermal hotel targets only for the United States, United Kingdom, and Netherlands market, which it targets with its environment-friendly policies. In addition, this study was conducted in Afyon İkbal Thermal Hotel, one of the leading hotels in thermal tourism. This is a guiding study, which draws attention to the criteria to be considered to

determine the correct marketing communication strategies for customers in foreign markets who prefer renewable energy-based tourism offers and allows observing differences. The addition of new environmental awareness criteria and the differences in the importance of these criteria based on the analysis showed that these criteria have positive effects in determining marketing communication strategies.

Considering the changing customer demands and needs to keep up with the rapidly changing world standards and the international market, it is necessary to catch change and turn it into an advantage. This study may require the evaluation of different criteria when applied for different country markets or different hotels.

### **Contribution of Authors**

This study prepared from Bayram's master thesis. Bayram and Şener conceived of the presented idea. Bayram developed the theory and performed the computations. Bayram wrote the article under the consultancy of Şener. Şener verified the analytical methods. Şener and Taşkın were in charge of overall direction and planning. All authors discussed the results and contributed to the final manuscript.

### **Conflict of Interest**

The authors declare that there is no conflict of interest.

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## **Resume**

**Ayşegül BAYRAM (Science Expert)**, graduated from Anadolu University Tourism and Hotel Management undergraduate. She completed her master's degree in Dumlupınar University, Department of International Trade and Finance. She is a German teacher at Tavşanlı Atatürk Anatolian High School.

**Habibe Yelda ŞENER (Assoc. Prof.)**, works in the Department of International Trade and Finance of the IIBF at Kütahya Dumlupınar University. Many international and national articles, papers, and book chapters are available on International Marketing Strategies, International Brand Management, and International Marketing Communication.

**Ercan TAŞKIN (Prof. Dr.)** is working at the Department of International Trade and Finance at the Turkish Kütahya Dumlupınar University. He has books, international and national articles and notifications in the field of International Logistics Management, International Brand Management, and International Marketing Strategies.