СНАРТЕК

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Social responsibility, social marketing role, and societal attitudes

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Introduction

Social responsibility of business and social marketing are two complementary forces that have a potential to transform energy supply and demand. This is particularly important as irresponsible energy production and consumption by businesses and private households is leading to degradation of the ecosystem and irreversible climate change. Unfortunately, the present unsustainable trend in energy supply and consumption is exacerbating the crisis. Therefore, the main challenge today is finding a way to prevent the degradation at the same time ensuring socially beneficial economic growth. There are two dominating views toward the challenge of unsustainability in the field of energy. The first lays the responsibility with the energy companies while the other one attributes it to the endusers. As a result, responsibility and social marketing become extremely important.

In accordance with the first view, supply side of energy management and, in particular, corporate social responsibility, plays a vital role. More specifically, climate change depends mainly on how responsible energy producers are. Reflecting on the multiple ecological catastrophes in coal and oil mines as well as in the nuclear industry, suspicion and concerns regarding the fairness of the energy business have been raised in society. Additionally, energy suppliers are being blamed for important energy issues such as the exhaustion of traditional energy resources and rising energy prices that are causing energy poverty and other social problems. In response to the growing requirements to be ethical and responsible, energy companies are forced to take additional steps and act in a socially responsible way by delivering more sustainable business outcomes. What is more, the catastrophic oil spill in the Gulf of Mexico by British Petroleum (BP) in 2010 marked the beginning of a new era of social responsibility in the energy business. Nowadays, not only global giants like Exxon Mobil, Shell, or BP are implementing strategies of corporate social responsibility and becoming investors in renewable (Hopkins, 2009; Parrett, 2018) but also local energy suppliers are advancing toward cooperation with local communities to sustain the environment (Strachan et al., 2015). Notwithstanding the fact that companies accept the inevitability of social responsibility, socially responsible actions are highly challenging due to the specific characteristics of the energy sector that we are discussing below.

As for the second view, climate change is understood primarily as the outcome of irresponsible demand and consumption of energy. For that reason, attitudinal changes of society toward energy consumption are vital in transforming the behavior of households and communities. With regard to this approach, governmental and nongovernmental institutions are using social marketing to speed up the change for energy conservation. In this chapter, we will analyze how social marketing can change the demand side of energy management. Taking into consideration that "households are accountable for nearly three-quarters of global carbon emissions" (Druckman and Jackson, 2016), it is essential to apply social marketing that transforms destructive behavior resulting in these emissions. Social marketing is particularly relevant asit is capable of changing the behavior of energy users as their needs and wants become grounded in all activities of social initiatives. Data on household energy consumption indicates that rational initiatives such as building renovation, smart technology in buildings, and improved metering of energy consumption do not lead to desired results and the progress in energy conservation is very slow. This knowledge leads us to an understanding that energy consumption has to be based on specific energy users' needs and wants instead of rational economic values. Therefore, a user-centric approach rooted in social marketing is analyzed in the chapter.

This chapter presents conceptual and methodological insights into the complementarity of corporate social responsibility and social marketing. Specifically, it analyzes the role of the former in transforming the supply side energy management; as for the demand side, we are retooling social marketing to promote sustainable energy use. In the chapter we

occasionally use empirical results and cases to illustrate how the conceptual approach is being implemented in practice.

Supply side: the role of corporate social responsibility

It is not an understatement to say that energy companies have become active in addressing social and environmental issues. This raises a question: What does "socially responsible" actually mean when it comes to the energy business? Two arguments must be taken into consideration. The first one is based on dominating literature and refers to the so-called "so-cial license to operate," which means that companies in order to be effective have to meet the expectations of the society at large and of local communities in particular. The second argument promotes the natural link between business social responsibility and corporate strategy, i.e., companies have to maximize their long-term profitability by incorporating social responsibility into their core business decisions and operations. The contradiction and complementarity of these two arguments stimulate the ongoing discussion regarding social responsibility among scholars and practitioners in the energy sector.

Social responsibility as "social license to operate"

Energy companies are perceived as social agents that force positive social changes, i.e., produce power for economic and societal development, invest in renewables and transform the energy sector, and help endusers change their behavior for energy conservation.

Ever since the 1970s the emphasis on business responsibility has been seen in the literature. Churchill's (1974) theories of social accounting along with Carroll's (1979) pyramid of corporate social responsibility with four types of responsibilities have laid down the foundations for today's practice of business social responsibility. Accordingly, socially responsible practice is perceived as a win-win strategy (Falck and Heblich, 2007) where a value-driven business creates value for the society and performs well financially. In line with this approach, social responsibilities become a business concept that represents a range of potential business returns from the government, partners, users, or the society at large. The most common explanation of business involvement in social responsibility is related to the positive business image and long-term profitability (Chen et al., 2018; Khojastehpour and Johns, 2014). None-theless, a business can perform effectively only if it has a "social license to operate" (Dunfee and Donaldson, 2011; Demuijnck and Fasterling, 2016). The idea behind the license is that in order for a business to be effective it needs tooperate not only in line with legal requirements but also act positively toward the well-being of the society.

Furthermore, it should be pointed out that "social license to operate" is commonly used in the context of confrontation or disapproval between business activities and societal norms. It also alerts that ignoring the latter and harming social well-being could harm business interests, too (Demuijnck and Fasterling, 2016; Morrison, 2014). Accordingly, transition to socially responsible business is slow and based on the hard lessons from irresponsible business practice. The case of Royal Dutch Shell PLC is probably the best illustration of this transition.

Case of Royal Dutch Shell PLC for societal license to operate

Today Shell is one of the biggest investors in new energies with plans to invest \$2billion a year in renewable energy sources (Lempriere, 2018). It also joins forces with other companies to increase its commitment to serving new and underserved markets with hydrogen energy (Grayson and Hodges, 2017) and offshore wind energy at home in the Netherlands (Williams, 2019). Such environmentally responsible business decisions are complemented with social responsibility, which is already integrated into daily practice of the company together with social accountability. Namely, its network of around 100 community liaison officers integrates communities' feedback in their projects or assets and it enables the company to track their social performance (Shell Sustainability, 2018).

Current practice by Shell is based on the hard lessons the company learned through its long history of transnational business activities in oil-rich regions around the world. Probably the best known and most widely analyzed case is related to Ogoni in Nigeria, where Shell subsidiaries were accused of gross violations of human rights and blamed for environmental irresponsibility resulting in oil spills during their explorations in the 1990s. According to a comprehensive analysis provided by Yusuf and Omoteso (2016), the company had long legal proceedings at national as well as international courts. Since 1996 a number of cases were brought against Shell in the United States, which were followed by the Dutch Parliament public hearing on its oil giant's operations. In the end, the District Court of The Hague ruled the practice to hold subsidiaries for the harmful practices in foreign countries unfair. Finally, "the company was under pressure to respond to the concerns being expressed by many stakeholder groups including its stakeholders" (Blowfield, 2014) and a number of human rights organizations were involved in this process and acted against Shell. The company only partially admitted its liability out of court under the Nigerian law in 2011 and offered the sum of \$83 million to those who had been affected by the oil spills during their explorations. The case damaged Shell's reputation and challenged its social license to operate. It comes as no surprise that now one of three strategic ambitions of Shell is oriented toward"strong license to operate" (our Strategy, 2019).

The concept of social license to operate is based on the stakeholder theory, which suggests that it is beneficial for a business to operate in a socially responsible way and contribute to the social well-being; otherwise, nonfinancial stakeholders might not support the company, which then may lose its image and customers. Hence, support from the society is central to the stakeholder theory and it accentuates that a business can continue to exist only if its core values resonate with the ones of the society where it operates (Blowfield, 2014).

However, the application of the theory in developing a socially responsible energy business is controversial. With regard to Blowfield (2014), such a business has to balance profit maximization and stakeholders' needs, making the definition highly challenging for multinational energy corporations as stakeholders' needs are incompatible in many cases. Thus, energy companies are forced to prioritize whose needs have to be met and whose needs are less important.

One of the most comprehensive publications in the area of social responsibility in the energy sector is a book by Yakovleva and Crowther (2005) that illustrates the consequences of imbalanced prioritization of stakeholders' needs. Based on the cases in the Russian Federation, specifically in the regions of East Siberia and the country's Far East, Yakovleva and Crowther (2005) assesses the role of the mining industries within main areas of corporate social responsibility. Research results showed that the mining industry takes full responsibility for its financial stakeholders and extends its economic responsibility toward the society it operates in, i.e., it makes a positive economic impact on the region and the society by contributing to the region's budget, employment, and social welfare at large. However, its overall social impact is negative as social responsibility is not integrated into main decisions and operations of the business. The mining industry makes a severe negative environmental impact as it pollutes river flows, disturbs forest and land resources, and uses nuclear exposures that create a danger to human health. Additionally, the industry's dominating effect in the region gives decision-makers the power to distribute the financial benefit in a socially unjust way, creating social inequality and social exclusion in the region. Due to harshness and the range of impacts caused, the mining industry is pressured by international organizations, national governments, employees, and local communities to improve their environmental and social performances (Yakovleva and Crowther, 2005). The case is a good illustration that the energy sector can be an issue not only for environmental but also for social reasons in the society if social responsibility is not of utmost importance for the business.

As we can see from the cases in oil and mining industries, governments and international organizations are big players in stimulating social responsibility in the energy business. Unfortunately, the power of both governmental and nongovernmental organizations is limited because of their conceptual attitude toward business social responsibility. Despite the fact that these organizations are seeking to stimulate social responsibility and encourage companies to integrate social responsible solutions into their decisions and operations, voluntary social responsibility remains in their rhetoric (Smaliukienė, 2005). For example, even though the International Labor Organization (ILO) sees social responsibility of any business as the central part of economic and social advancement, it promotes companies' volunteering contribution to the society. Thus, social responsibility becomes a voluntary activity more akin to charity than to an integrated business solution resulting in the controversial practice of the business. Hence, social responsibility is perceived as an obligation of doing business (Dobrea and Găman, 2011) instead of being a natural part of it.

Integrating social responsibility into corporate strategy

Looking at the patterns in the energy business in many countries, there is a huge shift in addressing the gap between social responsibility and corporate strategy. Indeed, there is a clear understanding among scholars and practitioners that the code of ethics, sponsorships and donations, and social reporting are too limited and too disconnected from the strategy (Dobrea and Găman, 2011; Galbreath, 2009; Smaliukiene et al., 2017). Thus, it remains a question as to why there are still obstacles when integrating social responsibility into a business strategy. Engert (2016) provide probably the most reasonable explanation. Based on their content analysis of over 100 scientific journal articles, they conclude that social responsibility is rooted in sustainability-related topics instead of being integrated into strategic management research streams and strategic management decision practice. This means that social responsibility remains a nobligation rather than a natural part of any business.

To overcome this main challenge, Grayson and Hodges (2017) step further and develop a framework of corporate social opportunity. It is composed of seven steps that transform a business from a "have-to-do"-based approach to "want-to-do" business mentality and integrates social responsibility into the core of corporate strategy (Fig. 14.1).

According to Grayson and Hodges (2017), the first thing a company has to do is identify the triggers that impact its business (step 1). They are usually prompted by stakeholders. In the case of the energy business, the most challenging thing is the intersection of regulation, societal expectations, and commerce. Thus, environmental issues are only one of the possible triggers for the energy business as social issues are equally important. For example, energy poverty and energy inaccessibility are social concerns as inefficient energy management leaves low-income users suffering from cold in their houses even in robust economies (Reves et al., 2019); or communities are left without access to affordable energy sources and stay disconnected from the knowledge economy in developing economies (Ahmed, 2010). Once the trigger is identified, a company then identifies potential business strategies (step 2). It could be a new business model that transforms the entire value chain of the energy supply, or it could be a new market for underserved energy users. When a potential business strategy is selected, an organization must convert it into a business case (step 3). The best practice is to start with corporate goals and other organizational considerations that integrate socially responsible decisions into daily operations (Khalili, 2011) (step 4). The case of the company First Solar is a good example how social responsibility is integrated into a business strategy by identifying social issues and converting them into a business case.



FIGURE 14.1 Integrating social responsibility into a business strategy. Based on Grayson, D., Hodges, A., 2017. Corporate Social Opportunity!: Seven Steps to Make Corporate Social Responsibility Work for Your Business, Taylor & Francis.

Case of First Solar: a link between social responsibility and corporate strategy

In 2008 First Solar was the first solar panel company that managed to decrease its manufacturing cost to \$1 per watt (Kinnear, 2008). It was a considerable achievement in fighting energy accessibility in developing economies. First Solar identified the social issue, shaped their innovation strategy, and reallocated their resources in order to exploit a business trigger. As a result, their priority was to provide energy for the markets that had a compelling need for alternative energy sources (First Solar Sustainability, 2019), thus making First Solar one of the best performing renewable energy producers in the world (Thomson Reuters top, 2019). \$1 per watt as a business trigger marked its first business development stage.

The second business development stage of First Solar was related to the environmental issue: one of the biggest issues in the photovoltaic (PV) solar energy business is recycling as "growing PV panel waste presents a new environmental challenge" (Weckend et al., 2016). The company jumped ahead of this challenge and introduced their recycling service 8 years before the directive for electronic waste was established in the European Union. The initiative was based on the goal to minimize the impact of environmental sensitivity and maximizere source recovery. As a result, PV recycling service became a complementary cost-effective part of the main business at First Solar as up to 90% of semiconductor material and glass are recycled using state-of-the-art recycling facilities and their expertise in PV manufacturing (Recycling, 2019). Recycling solves more than just environmental issues. The company's recycling plants in the United States and Germany contribute considerably to job creation (Field, 2018), thus solving social unemployment problems. In recent years, the company has made a further step forward and introduced mobile recycling modules that mitigate unnecessary shipping and createa new potential revenue source at the same time, creating new jobs in developing countries (Corporate, 2019).

As a consequence of this long-term investment and focus on social and environmental triggers, the company has become one of the industry leaders in the energy sector not only for its economic performance or investor confidence but also for social responsibility. According to Thomson Reuters top (2019), the company is ranked higher than average in the sector for protecting public health and respecting business ethics as well as human rights, for focusing on the effectiveness toward job satisfaction and work conditions, as well as integrating economic, social, and environmental decisions into daily operations.

As it can be seen from the case of First Solar, if socially responsible goals are set reasonably, putting a strategy into action is a rather natural process as organizational values, leadership, and systems contribute to it. According to Grayson and Hodges (2017), a very important step in the framework of "want-to-do" social responsibility is related to resource integration and gathering (step 5). A company must assess the resources needed for strategy implementation as well as identify resource gaps and find potential sources through cooperation and partnership. In the energy sector, we can list numerous national and international initiatives when energy companies share their resources with other ones for socially responsible business initiatives (see Monni et al., 2017; Mezher et al., 2010). Moreover, as stakeholders' engagement (step 6) is crucial, a company has to assess its strategy's impact on stakeholders and vice versa. Notwithstanding the fact that internal and external stakeholders may have very

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different expectations, they should be closely and formally involved in business activities and their supervision (Hopkins, 2009; Smaliukiene, 2007). Finally, the last step in the proposed framework is measuring and reporting that show how effective achieved goals are. Evaluation includes subjective measures and facilitates the discussion with stakeholders involved in the strategy implementation (Khalili, 2011; Tvaronavičienė, 2018), but financial business performance is of particular importance. The integration of social responsibility into corporate strategy enables a business to look for advanced solutions that would be both costeffective and valuable for the society's well-being.

Demand side: the power of social marketing in promoting sustainable energy use

The primary aim of social marketing is to change a destructive behavior and convert it into a constructive one. Thus, social marketing is capable to change the demand side while transforming behavior of energy users. Numerous research has already demonstrated the value of social marketing in promoting energy efficiency and in changing users' behavior (Anda and Temmen, 2014; Gordon et al., 2018). Still, household energy efficiency could contribute up to 25% of carbon emissions reductions (UNEP, 2017), but for this purpose extensive communication with the users is necessary. As it was stated in the UN Emissions Gap Report 2018 (United Nations Environment Program, 2018), there is a need to increase public awareness and the public needs to be informed about the greater impact of their behavior on cleaner air and human health. Hence, social intervention that changes understanding and behavior of a population requires more attention.

The irrational energy user

Taking users' needs and wants into consideration, many scholars, who perceive the public as being rational, emphasize the economic benefit of energy efficiency. This perception, however, is not enough. On the one hand, economic benefit is a very important stimulus for behavioral changes. When social marketing campaigns take place, they highlight the economic value of participating in a specific activity, for instance, when using energy star– qualified bulbs, installing PV panels in residential buildings, or using other greener forms of energy for lighting and heating. The benefit (Evans et al., 2014) or valueinbehavior in using energy efficiently (Butler et al., 2016) is based on the understanding that the public is rational and each household will act in its economic self-interest. Consequently, economic values have become the core message in social marketing campaigns to achieve energy efficiency.

On the other hand, there are a number of examples of inefficient residential energy efficiency campaigns that ignored the value of social interaction and relied solely on information delivery regarding the economic value of the new behavior. The cases (see McKenzie-Mohr, 2000) provide a range of evidence on nonsignificant impact of energy efficiency campaigns. In economic literature this phenomenon is called the energy efficiency paradox, when users neglect cost-effective opportunities and do not take logical measures at current energy prices to decrease their spending on energy (Ramos et al., 2015). It is clear that information about

economic benefit is not enough to change users' behavior. Therefore, a more sophisticated benefit-focused social marketing approach is needed as different benefits are of different importance for individual users. The perception of what benefit is can vary. It could be will-ingness to cut energy hills or minimizing energy poverty increasing energy security or

ingness to cut energy bills or minimizing energy poverty, increasing energy security, or fighting climate change. Taking the spectrum of needs into consideration, we review the principles and tools of social marketing in promoting sustainable energy use.

Retooling social marketing to promote sustainable energy use

Behavioral change toward sustainable energy use requires retooling of social marketing, as when social marketing is advocating energy efficiency, it is usually associated with reducing consumption and decreasing demand for unsustainable energy sources. However, it is important to realize that the intention to "reduce" and "decrease" contradicts the common culture of consumerism in the globalized world; therefore, the tools for this purpose have to be revised.

The potential of social marketing in promoting sustainable energy use lies in the domain of traditional marketing, but instead of selling goods and services it changes the behavior to increase the well-being of households and communities. Probably the most adopted approach to using social marketing tools for sustainable energy use has been developed by McKenzie-Mohr (2000). According to him, social marketing can be very effective if it is communitybased instead of being an information-intensive campaign. McKenzie-Mohr's framework of the former enhances energy efficiency in several steps. First McKenzie-Mohr (2000) suggests selecting the behavior we need to change. Second, following the exchange theory, he proposes identifying barriers and benefits of the new behavior and designing a strategy to remove the obstacles to reach the goal. Finally, strategy is piloted in a small segment of society. McKenzie-Mohr's (2000) framework is simple and practice-oriented. For this reason it is used for residential energy efficiency programs by the US Department of Energy (2019). However, it is worth mentioning that McKenzie-Mohr's (2000) approach is oriented exclusively toward small communities; therefore, the vital three-stage marketing research process (segmentation, targeting, and positioning) is excluded.

To overcome this limitation, the principles of social marketing have to be integrated. According to Kotler and Lee (2016), thus social marketing is different from the commercial one, the former has to follow the principles of the latter in changing the behavior for societal gain. They provide six main principles for any social marketing (Kotler and Lee, 2016):

- Userorientation. Orienting all marketing activities toward the needs and wants of individuals to change their behavior.
- Exchange is the main theoretical concept. The users must perceive the value of changing their behavior.
- Marketing research is carried out from the very beginning until the very end. An effective strategy is developed only if specific needs and wants of a target audience are understood and reflected in the entire process of behavioral change.
- Marketing decisions have to be different for different target audiences due to their specific needs and wants, thus they are divided into segments.

- Activities are included in a marketing mix. The strategy is implemented with an integrative approach and activities are not limited to persuasive communication only.
- Results are measured and used for improvement. Social marketing is continuously improving its performance based on the feedback.

Very similar principles are presented by Peattie and Peattie (2009). Additionally, the authors emphasize not only the behavioral changebut also the behavioral maintenance when social marketing goes beyond decreasing consumption. They stress the importance of adoption and maintenance of significantly different lifestyle.

Following these viewpoints, the redesigned social marketing process consists of five stages: (1) selecting the behavior, (2) user orientation, (3) exchange, (4) marketing mix: elements of intervention, and (5) measuring behavior change for energy transformation (Fig. 14.2). The process integrates three vital elements of marketing research as user orientation is composed of a three-stage marketing research process including user segmentation, targeting, and positioning.

Step 1: selecting behavior for sustainable energy use

Behavioral is the final goal of any energy efficiency campaign and the starting point when considering social marketing. According to Rangan and Karim (1991), social marketing is about "changing attitudes, beliefs, and behaviours of individuals or organizations for a social benefit < ... > and the social change is the primary purpose of the campaign." Even though the change is the backbone of social marketing, it is essential to note that it is neither a donation nor a sacrifice, it is rather a conscious participation in the process of exchanging costs and benefits.



FIGURE 14.2 Elements of social marketing for sustainable energy use. Based on Dibb, S., 2014. Up, up and away: social marketing breaks free. Journal of Marketing Management 30, 1159–1185. https://doi.org/10.1080/0267257X.2014. 943264, Kotler, P., Lee, N., 2016. Social Marketing: Changing Behaviors for Good/Nancy R. Lee, University of Washington and Social Marketing Services, Inc, Philip Kotler, Kellogg School of Management, SAGE, Los Angeles; Bird, S., 2010. Benchmark Criteria for Social Marketing: Bristol Social Marketing. Centre Spotlight on Social Marketing #2; Peattie, K., Peattie, S., 2009. Social marketing: a pathway to consumption reduction? Journal of Business Research 62, 260–268. https://doi.org/10. 1016/j.jbusres.2008.01.033.

There are many examples of deliberate and targeted energy efficiency marketing campaigns organized by municipalities with measurable objectives of behavioral change. Still, the most recent and prominent example of behavioral changes in energy use in a city took place in Amsterdam, the Netherlands.

Case of behavioral changes in energy use in Amsterdam

Although Amsterdam's strategy on circular economy is not finished, the city's Circular Innovation Program already won the World Smart City Award in 2017 (Benchmarking Study, 2018). This award was given for the platform that accelerates the city's transition. Implementing a variety of projects and intensive marketing campaigns of a smart city with a circular economy, Amsterdam's municipality aims to redesign 20 product or material chains (Amsterdam's Circular, 2018). It is expected that the majority of new material chains involve technological as well as behavioral results that would lead to added monetary value in millions of euro, growth of employment rate, as well as material savings and reduction in CO₂ emissions (Circular Amsterdam, 2018).

The cooperation between policy content experts and communication and marketing companies is the key of the marketing approach of the Amsterdam's Circular Innovation Program (Benchmarking Study, 2018). As a result, there is a comprehensive approach toward main marketing elements such as product, place, promotion, and personnel. There are three impulses when it comes to marketing of this program: "linking projects [...] and events to city marketing objectives; and starting new marketing projects and include those which already exist with an integral approach" (Benchmarking Study, 2018). The end goal of the city is to implement a circular economy that "requires rethinking market strategies and models that encourage competitiveness in different sectors and the responsible consumption of natural resources" (Circular Economy, 2018). This shift would change production processes and consumer behavior as the program not only stimulates energy savings and investments into solar energy but also tries to transform the mind-set of the residents. New solutions for energy saving (including food and water cycles) and new forms of renewable energy (using innovative collection and sorting of waste, etc.) are based on behavioral changes of Amsterdam residents (Amsterdam's Circular, 2018; Circular Economy, 2018; Amsterdam Smart City, 2019). What is important, values and behavior of the local community were perceived as vital by program implementers.

As can be seen from these and other cases, projects on energy efficiency integrate research, best practices, and theories of social marketing to understand attitudes as well as the social context in which the demanded behavioral change has to occur. In such projects, destructive behavior is changed into the constructive.

Step 2: user orientation

The second step in our social marketing in fostering demand for sustainable energy—user orientation—deals with three stages of marketing research process, i.e., segmentation, targeting, and positioning. This essential process helps operationalize the concept of user-oriented and puts marketing theory into practice. Although these three stages have been developed (and are actively used) as concepts of commercial marketing with the intention to sell the goods, nowadays they have become a vital part of behavioral change interventions for social purposes (Dibb, 2014). Their application for effective energy use is rather straightforward; however, it is not as wide as in business. Let's discuss the meaning and application of these three concepts.

Segmentation

Energy users' segmentation divides a large population into groups according to their shared values, wants, and needs. According to segmentation theory, people in the same group are likely to respond to behavioral interventions similarly. Typically, any population is segmented according to demographic characteristics (such as age, gender, ethnicity, etc.); however, as technologies of the Internetera shape everyday behavior, energy users' segmentation is based more on attitudes and lifestyles than on wants and needs. As a result, segmentation of energy users identifies one or more segments in the target audience (Thøgersen, 2017) as there is an in-depth understanding that it is impossible to be effective across all the population. It, therefore, has to be segmented into groups and only a few segments can be targeted with social marketing mix.

As already mentioned, social marketing adopts the methods of commercial marketing, yet its purpose is very different. In business, the same segments are targeted with a variety of accompanying products they might prefer to use. In contrast, social marketing targets behavior only with one goal and this goal is usually associated with the decrease in consumption. There are a few segmentation approaches developed to understand how a population can be segmented according to its attitude toward the environment. As an example, Table 14.1 presents segmentations of UK and US markets. According to these segmentation examples, energy users can be divided into three large groups based on their attitude toward the environment—environmentalists, the environmentally concerned, and the disinterested. How large these groups are and how many segments compose each group depends on values of the society at large. As we can sees from UK and US segmentation results, UK society has more segments that are environmentalist and environmentally concerned. Meanwhile US society's segmentation identifies more unique segments that are indicated as disinterested in the environmental impact of their consumption.

Target audience

One or a few target audiences are selected after a population is divided into groups according to demographic, value-based, lifestyle, and behavioral criteria. This step requires consideration regarding the potential efficiency of each segment. According to the mainstream marketing authors, any target audience has to meet several criteria. These criteria vary from author to author and organizations have to choose the most important ones according to their marketing objectives and measurement benchmarks (Dietrich et al., 2016; Sarstedt and Mooi, 2014). In spite of differing views on targeting, there is a common agreement in mainstream as well as in social marketing literature about three most important criteria: target audience has to be large enough to make marketing program effective in scale, each segment of the target audience needs different benefits, and target audience is accessible with marketing messages.

To continue the examination of UK and US segmentation examples, segmentation divides population into nearly equal and substantial groups according to their attitude toward

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Demand side: the power of social marketing in promoting sustainable energy use

Segments of the UK population	Segments of the US population	Segment description	
Positive greens	Liberal greens	Environmentalists: are very worried about environmental	
Waste watchers		issues and feel interconnected with the nature, try to conserve whenever they can	
Concerned consumers	Outdoor greens	Environmentalists: are very worried about environmental	
Sideline supporters	Religious greens	issues, environment-friendly behavior makes them feel better	
Cautious participants	Middle-of-the-roaders	Environmentally concerned: are generally concerned about the environment, but behave environmentfriendly only because of constraints	
Long-term restricted			
Stalled starters	Homebodies	Disinterested: they tend toward apathy when it comes to environmental issues, environmental issues do not resonate with them	
Honestly disengaged	Disengaged		
	Outdoor browns		
	Religious browns		
	Conservative browns		

TABLE 14.1	Segmentation of UK and US populations according to attitude toward environment and
	climate change.

Based on the data from Public Opinion and the Environment: The Nine Types of Americans. Yale School of Forestry & Environmental Studies, 2015. and Defra, January 2008. A Framework for Pro-environmental Behaviours.

environmental issues and willingness to act on behalf of the environment (Fig. 14.3). The UK's case in particular illustrates good practice in targeting an audience as each segment not only differs in terms of needs but they also were reached with effectively selected marketing messages. According to Giorgi et al. (2016) some audiences received "only information, whereas others received a mixture of information and activities, depending on the target and existing behaviors and attitudes." Hence, we see not only segmentation but also targeting, which is based on segmentation results.

Positioning against competing alternatives

Thermal comfort, car dependency, and other lifestyle norms compete against behavioral interventions that would lead to sustainable energy use. It is the issue that social marketing is trying to solve by using positioning, i.e., an act that distinguishes the offer from the competing alternatives, makes it even more attractive, and provides inspiration and parameters as to "how [...] the desirable behavior [has] to be seen by the target audience" (Kotler and Lee, 2016). Asocial marketing positioning statement shows how to overcome the barriers for the new behavior. The most powerful positioning is based on the message "energy-saving" (Ben and Steemers, 2018), but the message itself has to integrate different values for different segments of any target audience based on their needs and wants. Additionally, Giorgi et al. (2016) suggest that the positioning statement has to provide real examples that show how 14. Social responsibility, social marketing role, and societal attitudes



FIGURE 14.3 The distribution of UK and US populations according to the attitude toward environment and climate change. Based on the data from Public Opinion and the Environment: The Nine Types of Americans. Yale School of Forestry & Environmental Studies, 2015. and Defra, January 2008. A Framework for Pro-environmental Behaviours.

others are doing. Once this statement is developed, specific strategies as to how to position new demanded behavior are developed and implemented in the stage of the marketing mix.

Step 3: exchange

As was already discussed, voluntary exchange is a mainstay of social marketing. According to the exchange theory, social marketing has to offer users benefits in exchange for their behavioral change. Giorgi et al. (2016) point out that they agree to change their behavior toward more sustainable energy use in exchange for lower cost, convenience, and lifestyle choice. Respectively, marketers have to consider the alternatives as to what will motivate users to change their behavior and what should be offered as a value in exchange. The only concern is that the meaning of value is different for different segments. The exchange in energy consumption can be motivated by self-interest, social norms, or concern for the common good. While environmentalists "can leave comfort and cleanliness behind in the pursuit of a contemporary natural purity" (RCZM, 2019), the disinterested change their behavior solely because of cost saving. This, consequently, leads to different proposals for behavioral change. They can be very simple or very complex depending on the segment and its willingness to change, i.e., adjust the temperature, use more efficient vehicles, avoid unnecessary flights, manage energy better, recycle more, waste less food, etc. (Jonkhof andvan der Kooij, 2019).

Giorgi et al. (2016) provide a comprehensive list of proposals how to offer value to a different target audience based on their attitudes and preferences. For environmentalists, they suggest specific measures that would help incorporate changes into their lifestyles, while for the disinterested cost saving has to be the key entry point to stimulate their behavioral change. Despite different attitudes and preferences (Ramos et al., 2015), research results show that all segments are more willing to participate in exchange when its value is clear.

Step 4: marketing mix

The marketing mix is the core concept adopted from commercial marketing for the behavioral intervention. While commercial marketing mix is created of 4Ps (product, price, place, and promotion) or 7Ps (people, product, price, promotion, place, process, and physical evidence) (Lovelock et al., 2015), social marketing mix contains eight elements (product/service, price, place, promotion, public, partnership, policy, purse strings) (Peattie and Peattie, 2016). This way, social marketing solves more challenging tasks than any business.

Despite following the eight elements of social marketing mix, the application of marketing tools and techniques remains problematic in promoting sustainable energy. Accordingly, Gordon et al. (Galbreath, 2009) suggest moving away from the traditional marketing mix and propose to abolish the elements that come from commercial marketing. It is a reasonable proposal as even the first element—product—is difficult to interpret. Social marketing, as it was mentioned previously, is oriented toward a new effective behavior that changes the lifestyles of individuals or communities; therefore, when using this term one can mean a conscious energy usage at home or house renovation as well as a new tax reform that introduces a tax for carbon emissions. Peattie and Peattie (2016) suggest using the concept "social marketing proposition" instead. Additionally, they require a clear narrative on how the behavioral change would benefit the users. One of the most interesting cases of such social marketing proposition is presented by a fossil fuel subsidy reform in Iran. The government's subsidy reform on energy was "carefully prepared by clear government communication through various channels, such as websites and hotlines to answer questions about the reform" (United Nations Environment Program, 2018). The "proposition" in this case was "country's economic competitiveness by creating more jobs and using its oil resources more efficiently" (Atansah et al., 2019).

The link between "price" and "cost" is no less challenging. Some scholars propose to change the element "price" into "cost" (Dibb, 2014) as the latter can deal with both monetary costs as well as the costs of inconvenience. Other elements of social marketing mix emphasize the interrelationship and impact of a community and society on a person's behavioral change. Hence, Gordon et al. (Galbreath, 2009) convert social marketing mix into a new model with five interrelated elements: promotion, nudge, rewards and exchanges, service and support, and relationships and communities. The model enhances the understanding of communities and other stakeholders and their impact on behavioral change. Moreover, it resonates with other contemporary approaches in marketing and behavior such as the theory of value cocreation and value coproduction (Vargo et al., 2008; Osborne, 2017; Smaliukiene et al., 2014). Most importantly, new approaches on marketing mix stress the importance of users' motivation as it directs their behavior.

Step 5: measuring behavioral change for sustainable energy use

Evaluation of behavioral changes can generate strong implications about the impact of social marketing and confront criticism regarding the value of the intervention. However, many social marketing programs are either evaluated poorly or not at all (Grier and Bryant, 2005). An example of existing good practice is the case of the city of Macau, China, where social marketing results were quantified.

Case of behavioral changes in energy use in the city of Macau

Macau was challenged by a steady increase in energy consumption over the last 25 years and decided to focus on building-use energy, especially air-conditioning and lighting systems. Energysaving publicity campaigns were conducted in schools and for the general public as well as for the business sector. The campaign increased public awareness and knowledge, which resulted in the population acting more responsibly. As a result, energy-saving behavior became very common in the daily life of city residents and businesses. The measurable impact was most important as behavioral changes affected energy consumption; energy intensity per million electricity meter operators decreased four times and the energy consumption per capita decreased by more than 10%.

Adapted from Song, Q., Li, J., Duan, H., Yu, D., Wang, Z., 2017. Towards to sustainable energy-efficient city: a case study of Macau. Renewable and Sustainable Energy Reviews 75, 504–514. https://doi.org/10.1016/j.rser.2016.11.018.

Since social marketing is often a continuing activity that runs over long periods of time, it is not easy to do so. That is why impact evaluation looks at the effect rather than the outcome of each program. Alternative evaluation, on the other hand, provides important insights while observing behavioral changes instead of measuring energy saved. While impact evaluation deals with user-specific information that is collected through surveys, interviews, consumer panels, opinion polls, feedback from program participants, etc. (Global CCS Institute, 2020), actual evaluation or the cost-effectiveness of the programs are very difficult as social marketing aims to change the behavior of energy users.

Concluding remarks

While analyzing the academic discourse, we found that social responsibility and social marketing are powerful sources for transforming energy production and its use toward sustainability. The former in the context of energy transformation represents the supply side of energy management, while the latter is related to the demand side. Thus, both of them are two complementary discourses of the same issue.

Business social responsibility is associated with the always increasing pressure on controlling climate change while the energy business is liable for the supply side of sustainable energy. In other words, energy business is directly or indirectly responsible for the social issues arising from extreme weather, food security, water supply, etc. Therefore, as it is not enough for the energy business to see social responsibility as only a social license to operate, an integrative approach that would integrate social responsibility into corporate strategy is needed. More specifically, it is no longer sufficient to refer only to the level of acceptance of stakeholders. This is especially important when taking the diversity of stakeholders from multinational energy corporations into consideration. Working only under a social license to operate is becoming a highly challenging task since energy companies have to decide which stakeholders are more important as well as address their needs in order of priority. Consequently, wrong prioritization of the needs may result in the loss of the social license when nonfinancial stakeholders turn away from the company.

Concluding remarks

Accordingly, in this analysis we propose integrating social responsibility into corporate strategy instead of focusing only on the social license. Based on the analyzed cases, it is evident that the framework of corporate social opportunity is a realistic way to do exactly that. More specifically, regardless of the size of the energy company, it has to move from a "have-to-do"-based approach to "want-to-do" business mentality and integrate social responsibility into the core of its corporate strategy, which can happen only when social challenges are perceived as business triggers and are transformed into the corporate strategy. For example, it could be a new business model that transforms the entire value chain of the energy supply, or it could be a new market for underserved energy users. Whatever social challenge a company is dealing with, what is paramount is that its corporate strategy is at the same time oriented toward the society's well-being and business prosperity. This claim is not just a theoretical concept as business can balance its dual objectives in a highly efficient way and supply energy from highly sustainable sources.

The demand side of energy sustainability is greatly affected by the behavior of household energy users. By examining the impact of social marketing on energy sustainability, we show its power in changing their destructive behavior. Our discourse and case studies also illustrate how social marketing can change the demand side of energy. By examining the demand side of energy it is important to realize that the behavior of household users is irrational and their energy consumption is often driven by their lifestyle and values rather than by economic-rational motives. Thermal comfort, car dependency, and other lifestyle norms compete against behavioral interventions that would lead to sustainable energy use. Taking this irrationality and complementing contemporary theoretical advantages into consideration, we suggest retooling social marketing for sustainable energy use. The new tools are integrated into the framework that transforms the selected destructive behavior into a sustainable one. First, we suggest using the user orientation concept that divides the society into three groups based on their attitude toward environmental issues, i.e., environmentalist, the environmentally concerned, and the disinterested. Then, by applying the exchange theory, we point out what would motivate users to change their behavior and what should be offered as a value in exchange. When considering the latter, segmentation results are likely to have the strongest impact on this decision. Finally, we propose to reconsider social marketing mix and reframe it in accordance with energy-user behavior matters.

The analysis provided some interesting insights related to the link between social sustainability and social marketing in developing energy sustainability. Although these two social practices represent and shape supply and demand, both of them tackle the same social issues. In both cases the issues are transformed into the strategy that provides the base for targeted actions. As for the results, they are measured from the perspective of societal well-being; in addition, they have to be economically feasible to eliminate the short-term impact.

Our academic discourse provides a more complete picture of two practically interlinked but theoretically separated discourses. Knowing how social responsibility is manifested as the supply side of sustainable energy and how social marketing can shape the demanded behavior of household energy users, further research has to continue to broaden the scope of these two fields of research while at the same time looking for more links between them. 14. Social responsibility, social marketing role, and societal attitudes

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References

Ahmed, M., 2010. Economic dimensions of sustainable development, the fight against poverty and educational responses. International Review of Education 56, 235–253. https://doi.org/10.1007/s11159-010-9166-8.

Amsterdam Smart City, Circular City. https://amsterdamsmartcity.com/themes/circular-city.

- Amsterdam's Circular Innovation Programme Changing Behavior "Google" paieška. https://www.google. com/search?q=Amsterdam%E2%80%99s+Circular+Innovation+Programme+changing+behavior&ei= sW0WXJ6FEbHqrgSsw4DABw&start=10&sa=N&ved=0ahUKEwjeoZna06TfAhUxtYsKHawhAHgQ8 NMDCJMB&biw=1680&bih=882.
- Anda, M., Temmen, J., 2014. Smart metering for residential energy efficiency: the use of community based social marketing for behavioural change and smart grid introduction. Renewable Energy 67, 119–127. https://doi.org/10. 1016/j.renene.2013.11.020.
- P.Atansah, M.Khandan, T.Moss, A.Mukherjee, J.Richmond, When Do Subsidy Reforms Stick? Lessons from Iran, Nigeria, and India. https://www.cgdev.org/publication/when-do-subsidy-reforms-stick-lessons-iran-nigeriaand-india.
- Ben, H., Steemers, K., 2018. Household archetypes and behavioural patterns in UK domestic energy use. Energy Efficiency 11, 761–771. https://doi.org/10.1007/s12053-017-9609-1.
- Benchmarking Study: Amsterdam Branding at Its Best. A Well Co-ordinated, Managed and Marketed Place: Future Place Leadership. https://futureplaceleadership.com/wp-content/uploads/2018/04/Case-Amsterdam-by-Future-Place-Leadership.pdf.
- Bird, S., 2010. Benchmark Criteria for Social Marketing: Bristol Social Marketing. In: Centre Spotlight on Social Marketing #2.
- Blowfield, M., 2014. Corporate Responsibility a Critical Introduction, third ed. Oxford University Press, Oxford, New York.
- Butler, K., Gordon, R., Roggeveen, K., Waitt, G., Cooper, P., 2016. Social marketing and value in behaviour? Journal of Social Marketing 6, 144–168. https://doi.org/10.1108/JSOCM-07-2015-0045.
- Carroll, A.B., 1979. A three-dimensional conceptual model of corporate performance. Advances in Magnetic Resonance 4, 497–505. https://doi.org/10.5465/amr.1979.4498296.
- Chen, Y.-C., Hung, M., Wang, Y., 2018. The effect of mandatory CSR disclosure on firm profitability and social externalities: evidence from China. Journal of Accounting and Economics 65, 169–190. https://doi.org/10.1016/j. jacceco.2017.11.009.
- Churchill, N.C., 1974. Toward a theory for social accounting. Sloan Management Review 15.
- Circular Amsterdam: A Vision and Action Agenda for the City and Metropolitan Area, 2018. https://www.oecd. org/governance/observatory-public-sector-innovation/innovations/page/circularamsterdamavisionandactionagendaforthecityandmetropolitanarea.htm#tab_description.
- Circular Economy in Cities: White Paper, 2018. World Economic Forum.

Corporate. http://www.firstsolar.com/en/PV-Plants/Corporate.

- Defra, A., January 2008. Framework for Pro-environmental Behaviours.
- Demuijnck, G., Fasterling, B., 2016. The social license to operate. Journal of Business Ethics 136, 675–685. https://doi. org/10.1007/s10551-015-2976-7.
- Dibb, S., 2014. Up, up and away: social marketing breaks free. Journal of Marketing Management 30, 1159–1185. https://doi.org/10.1080/0267257X.2014.943264.
- Dietrich, T., Rundle-Thiele, S., Kubacki, K., 2016. Segmentation in Social Marketing: Process, Methods and Application. Springer Singapore.
- Dobrea, R., Găman, A., 2011. Aspects of the correlation between corporate social responsibility and competitiveness of organization. Revista: Economia, Seria Management 14, 236.
- Druckman, A., Jackson, T., 2016. Understanding households as drivers of carbon emissions. In: Clift, R., Druckman, A. (Eds.), Taking Stock of Industrial Ecology. Springer Open, Cham, pp. 181–203.
- Dunfee, T.W., Donaldson, T., 2011. Social contract approaches to business ethics: bridging the "is-ought" gap. In: Frédérick, R. (Ed.), A Companion to Business Ethics. Blackwell Publishers Ltd; Wiley-VCH, Malden, MA, pp. 38–55.
- Engert, S., 2016. Exploring the integration of corporate sustainability into strategic management: a literature review. Journal of Cleaner Production 112, 2833–2850.

References

- Evans, W.D., Pattanayak, S.K., Young, S., Buszin, J., Rai, S., Bihm, J.W., 2014. Social marketing of water and sanitation products: a systematic review of peer-reviewed literature. Social Science & Medicine 110, 18–25. https://doi.org/ 10.1016/j.socscimed.2014.03.011.
- Falck, O., Heblich, S., 2007. Corporate social responsibility: doing well by doing good. Business Horizons 50, 247–254. https://doi.org/10.1016/j.bushor.2006.12.002.
- Field, K., 2018. First Solar Breaks Down Its Plans for Solar Module Recycling #SPI2018. https://cleantechnica.com/ 2018/12/04/first-solar-breaks-down-its-plans-for-solar-module-recycling-spi2018/.
- First Solar Sustainability Report. http://www.firstsolar.com/-/media/First-Solar/Sustainability-Documents/First-Solar_SustainabilityReport.ashx.
- Galbreath, J., 2009. Building corporate social responsibility into strategy. European Business Review 21, 109–127. https://doi.org/10.1108/09555340910940123.
- Giorgi, S., Fell, D., Austin, A., Wilkins, C., 2016. Public Understanding of the Links between Climate Change and (I) Food and (II) Energy Use (EV0402): Final Report.
- Global CCS Institute, 2020. Case Studies on Innovative Communication Campaign Packages on Energy Efficiency. Global CCS Institute. https://hub.globalccsinstitute.com/publications/energy-efficiency-recipe-success/casestudies-innovative-communication-campaign-packages-energy-efficiency.
- Gordon, R., Butler, K., Cooper, P., Waitt, G., Magee, C., 2018. Look before you LIEEP. Journal of Social Marketing 8, 99–119. https://doi.org/10.1108/JSOCM-04-2016-0017.
- Gordon, R., Dibb, S., Magee, C., Cooper, P., Waitt, G., 2018. Empirically testing the concept of value-in-behavior and its relevance for social marketing. Journal of Business Research 82, 56–67. https://doi.org/10.1016/j.jbusres.2017.08.035.
- Grayson, D., Hodges, A., 2017. Corporate Social Opportunity!: Seven Steps to Make Corporate Social Responsibility Work for Your Business. Taylor & Francis.
- Grier, S., Bryant, C.A., 2005. Social marketing in public health. Annual Review of Public Health 26, 319–339. https:// doi.org/10.1146/annurev.publhealth.26.021304.144610.
- Hopkins, M., 2009. Corporate Social Responsibility and International Development: Is Business the Solution? Routledge, London.
- E.Jonkhof, E.van der Kooij, Towards the Amsterdam Circular Economy. https://assets.amsterdam.nl/publish/ pages/580742/towards_the_amsterdam_circular_economy_web.pdf (accessed 13 January 2019).
- Khalili, N.R., 2011. Practical Sustainability: From Grounded Theory to Emerging Strategies. Palgrave Macmillan, Basingstoke.
- Khojastehpour, M., Johns, R., 2014. The effect of environmental CSR issues on corporate/brand reputation and corporate profitability. European Business Review 26, 330–339. https://doi.org/10.1108/EBR-03-2014-0029.
- Kinnear, J., 2008. Information Review of First Solar | Solar Power Authority. https://www.solarpowerauthority. com/first-solar/.
- Kotler, P., Lee, N., 2016. Social Marketing: Changing Behaviors for Good/Nancy R. Lee. University of Washington and Social Marketing Services, Inc, Philip Kotler, Kellogg School of Management, SAGE, Los Angeles.
- Lempriere, M., 2018. Shell Moves into Renewables: Big Splash or a Dip in the Water? https://www.power-technology.com/features/shell-moves-renewables-big-splash-dip-water/.
- Lovelock, C.H., Patterson, P., Wirtz, J., 2015. Services Marketing: An Asia-Pacific and Australian Perspective, sixth ed. Pearson Australia, Frenchs Forest, N.S.W.
- McKenzie-Mohr, D., 2000. Fostering sustainable behavior through community-based social marketing. American Psychologist 55, 531–537.
- Mezher, T., Tabbara, S., Al-Hosany, N., 2010. An overview of CSR in the renewable energy sector: Examples from the Masdar Initiative in Abu Dhabi. Management of Environmental Quality: An International Journal 21 (6), 744–760.
- Monni, S., Palumbo, F., Tvaronavičienė, M., 2017. Cluster performance: an attempt to evaluate the Lithuanian case. Entrepreneurship and Sustainability Issues 5, 43–57.
- Morrison, J., 2014. The Social License: How to Keep Your Organization Legitimate. Palgrave Macmillan, Basingstoke.
- Osborne, S.P., 2017. From public service-dominant logic to public service logic: are public service organizations capable of co-production and value co-creation? Public Management Review 20, 225–231. https://doi.org/10. 1080/14719037.2017.1350461.
- Our strategy. https://www.shell.com/investors/shell-and-our-strategy/our-strategy.html.
- Parrett, D., 2018. The Biggest Investors in Renewable Energy Will Shock You. https://moneymorning.com/2018/10/ 10/chart-the-biggest-investors-in-renewable-energy-will-shock-you/.

- Peattie, K., Peattie, S., 2009. Social marketing: a pathway to consumption reduction? Journal of Business Research 62, 260–268. https://doi.org/10.1016/j.jbusres.2008.01.033.
- Peattie, S., Peattie, K., 2016. Ready to fly solo?: reducing social marketing's dependence on commercial marketing theory. Marketing Theory 3, 365–385. https://doi.org/10.1177/147059310333006.
- Public Opinion and the Environment: The Nine Types of Americans, 2015. Yale School of Forestry & Environmental Studies.
- Ramos, A., Gago, A., Labandeira, X., Linares, P., 2015. The role of information for energy efficiency in the residential sector. Energy Economics 52, S17–S29. https://doi.org/10.1016/j.eneco.2015.08.022.
- Rangan, V.K., Karim, S., 1991. Focusing the Concept of Social Marketing. Harvard Business Review.
- RCZM, Energy use behaviour change. http://www.rczm.co.uk/post-5.html.
- Recycling. http://www.firstsolar.com/en-EMEA/Modules/Recycling.
- Reyes, R., Schueftan, A., Ruiz, C., González, A.D., 2019. Controlling air pollution in a context of high energy poverty levels in southern Chile: clean air but colder houses? Energy Policy 124, 301–311. https://doi.org/10.1016/j. enpol.2018.10.022.
- Sarstedt, M., Mooi, E. (Eds.), 2014. A Concise Guide to Market Research: The Process, Data, and Methods Using IBM SPSS Statistics, second ed. Springer Berlin Heidelberg; Imprint; Springer, Berlin, Heidelberg.
- Shell Sustainability Report 2017, 2018. https://reports.shell.com/sustainability-report/2017/.
- Smaliukiene, R., 2007. Stakeholders' impact on the environmental responsibility: model design and testing. Journal of Business Economics and Management 8, 213–223. https://doi.org/10.1080/16111699.2007.9636171.
- Smaliukiene, R., Chi-Shiun, L., Sizovaite, I., 2014. Consumer value co-creation in online business: the case of global travel services. Journal of Business Economics and Management 16, 325–339. https://doi.org/10.3846/16111699.2014.985251.
- Smaliukienė, R., 2005. Public–private partnership and its influence to corporate social responsibility. Public Policy and Administration 1, 69–76.
- Smaliukienė, R., Bekešienė, S., Chlivickas, E., Magyla, M., 2017. Explicating the role of trust in knowledge sharing: a structural equation model test. Journal of Business Economics and Management 18, 758–778. https://doi.org/10. 3846/16111699.2017.1317019.
- Song, Q., Li, J., Duan, H., Yu, D., Wang, Z., 2017. Towards to sustainable energy-efficient city: a case study of Macau. Renewable and Sustainable Energy Reviews 75, 504–514. https://doi.org/10.1016/j.rser.2016.11.018.
- Strachan, P.A., Cowell, R., Ellis, G., Sherry-Brennan, F., Toke, D., 2015. Promoting community renewable energy in a corporate energy world. Sustainable Development 1. https://doi.org/10.1002/sd.1576.
- Thøgersen, J., 2017. Housing-related lifestyle and energy saving: a multi-level approach. Energy Policy 102, 73–87. https://doi.org/10.1016/j.enpol.2016.12.015.
- Thomson Reuters Top 100 Global Energy Leaders Report. https://www.thomsonreuters.com/content/dam/ewpm/documents/thomsonreuters/en/pdf/reports/thomson-reuters-top-100-global-energy-leaders-report.pdf.
- Tvaronavičienė, M., 2018. Towardssustainable and secure development: energy efficiency peculiarities in transport sector. Journal of Security & Sustainability Issues 7.
- UNEP, 2017. The Emissions Gap Report 2017: A UN Environment Synthesis Report. United Nations Environment Programme (UNEP), Nairobi, Kenya.
- United Nations Environment Programme, 2018. Emissions Gap Report. http://wedocs.unep.org/bitstream/handle/ 20.500.11822/26895/EGR2018_FullReport_EN.pdf.
- US Department of Energy, Office of Energy Efficiency & Renewable Energy, Community-Based Social Marketing Toolkit. https://www.energy.gov/eere/better-buildings-residential-network/downloads/community-basedsocial-marketing-toolkit.
- Vargo, S.L., Maglio, P.P., Akaka, M.A., 2008. On value and value co-creation: a service systems and service logic perspective. European Management Journal 26, 145–152.
- Weckend, S., Wade, A., Heath, G., 2016. End-of-life Management: Solar Photovoltaic Panels. https://www.irena.org/-/ media/Files/IRENA/Agency/Publication/2016/IRENA_IEAPVPS_End-of-Life_Solar_PV_Panels_2016.pdf.
- D.Williams, Shell Pushing for More Dutch Wind Power. https://www.powerengineeringint.com/articles/2017/10/ shell-pushing-for-more-dutch-wind-power.html.
- Yakovleva, N., Crowther, P.D., 2005. Corporate Social Responsibility in the Mining Industries. Taylor and Francis, Florence.
- Yusuf, H.O., Omoteso, K., 2016. Combating environmental irresponsibility of transnational corporations in Africa: an empirical analysis. Local Environment 21, 1372–1386. https://doi.org/10.1080/13549839.2015.1119812.