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## A STEP-BY-STEP APPROACH TO SOCIAL MARKETING IN ENERGY TRANSITION \*

Rasa Smaliukiene <sup>1</sup>, Salvatore Monni <sup>2</sup>

<sup>1</sup> Vilnius Gediminas Technical University, Sauletekio al. 11, LT-10223 Vilnius, Lithuania

<sup>1</sup> General Jonas Žemaitis Military Academy of Lithuania, Silo Str. 5A, LT-10322 Vilnius, Lithuania

<sup>2</sup> Roma Tre University, Department of Economics, Via Ostiense 149, Rome 00154, Italy

E-mails:<sup>1</sup> [rasa.smaliukiene@vgtu.lt](mailto:rasa.smaliukiene@vgtu.lt) ; <sup>2</sup> [salvatore.monni@uniroma3.it](mailto:salvatore.monni@uniroma3.it)

Received 16 November 2018; accepted 20 February 2019; published 30 March 2019

**Abstract.** By examining social marketing this article has featured a step-by step approach for residential behavioural change towards sustainable energy transition. Specifically, this article considers the value-based approach instead of rational information campaigns for behavioural change of energy users. The proposed framework is based on environmental values and designed to transform the selected destructive behaviour into a sustainable one. The framework consist of five steps: (1) selecting the behaviour, (2) user orientation, (3) exchange, (4) marketing mix: elements of intervention, (5) measuring behaviour change. As behavioural change is the final goal of any energy efficiency campaign, it becomes also a starting point and an objective of the rest of the activities in the framework. Second, we suggest using the user orientation concept that divides the society into three groups based on their attitude towards environmental issues, i.e. environmentalist, the environmentally concerned and the disinterested. In the third step we apply the exchange theory; whereas in the step of 'marketing mix' a conceptual combination of six elements for energy transition is reasoned: proposition, cost, communication, communities and partnership. Finally, the fifth step stresses on the measurement of the behavioural change that enables energy transition. The proposed step-by step framework is based on theory and builded on current practice in a field that is analysed in the article.

**Keywords:** energy transition; renewable energy sources; household; social marketing; communication campain

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\* This research was supported by the project, which has received funding from the European Union's Horizon 2020 research and innovation programme European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme Marie Skłodowska-Curie Research and Innovation Staff Exchanges ES H2020-MSCA-RISE-2014 CLUSDEV MED (2015-2019) Grant Agreement Number 645730730



European Research Council

Established by the European Commission

**Reference** to this paper should be made as follows: Smaliukiene, R.; Monni, S. 2019. A step-by-step approach to social marketing in energy transition, *Insights into Regional Development* 1(1): 19-32. [http://doi.org/10.9770/IRD.2019.1.1\(2\)](http://doi.org/10.9770/IRD.2019.1.1(2))

**JEL Classifications:** M3, M36, D83, O1, P48

**Additional disciplines** (besides field of economics reflected in JEL classifications): information and communication

## **1. Introduction**

Accelerating the clean energy transition needs to be high not only on the agendas of technological development but also on user behavioural change policies and practices. Climate change is understood primarily as the outcome of irresponsible demand and consumption of energy. For that reason, attitudinal changes of society at large and household users in particular towards energy consumption are vital in the transition towards sustainable energy. With regard to this approach, governmental and nongovernmental institutions are using social marketing to change behaviour of energy users and to speed up energy transition. This is especially important as European Union has set a new target to reach 27% final energy consumption from renewable sources by 2030 (2030 Energy Strategy, 2014), and this necessitates “not only on the enforcement of the policy measures and goals that have been set, but also on lifestyle choices, e.g. in terms of living space, consumption patterns, etc.” (*Household energy consumption*, 2018). Thus, the society and individuals is a key but often ignored player in energy transitions.

Social marketing is particularly relevant as it is capable to change the behaviour of individuals and households in energy use. These users can play a rather different role in energy system if energy users' behaviour is changed into energy saving habits. Taking into consideration that “households are accountable for nearly three-quarters of global carbon emissions” (Strachan, Cowell, Ellis, Sherry-Brennan, & Toke, 2015), it is essential to apply social marketing that transforms destructive behaviour resulting in these emissions. In this context a sustainable energy transition means significant changes not only in policies and law but also in users' behaviour.

The role of social marketing in energy transition is of great interests to researchers and policy implementers. Despite numerous research has already demonstrated some value of social marketing in promoting energy efficiency (Anda & Temmen, 2014; Gordon, Butler, Cooper, Waitt, & Magee, 2018; Gordon, Dibb, Magee, Cooper, & Waitt, 2018), the current research opens new challenges that need to be addressed. The data on energy users behaviour indicates high resistant to change resulting inclination of cost-effective opportunities (F Beckenbach & Kahlenborn, 2016; Hahn & Metcalfe, 2016). In that follows a need for more sophisticated benefit-focused social marketing approach.

The objective of this paper is to provide the research community with a comprehensive step-by-step approach to social marketing for energy transition. We present a general discussion of the mainstream and social marketing application in promoting sustainable energy use and energy conservation. We then revise the framework of social marketing by strengthening value-focused approach and by creating a step-by-step process of social marketing application for behavioural changes toward energy transition. Additionally, we review marketing mix and propose its composition of six elements: proposition, cost, accessibility, communication, communities and partnership. In the article we occasionally use empirical results and cases to illustrate how the elements of our conceptual approach are being implemented in practice.

## **2. Energy User: an impact of Energy Efficiency Paradox**

Many scholars, who perceive the public as being rational, take users' needs and wants into consideration and emphasise the economic benefit of energy efficiency. This perception, however, is not enough as energy

efficiency paradox takes place. There we will briefly analyse the impact of this paradox on the behaviour of energy users.

On the one hand, economic benefit is a very important stimulus for behavioural 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 photovoltaic (PV) panels in residential buildings, or using other greener forms of energy for lighting and heating. The benefit or value-in-behaviour in using energy efficiently is based on the understanding that the public is rational and each household will act in its economic self-interest (Butler, Gordon, Roggeveen, Waitt, & Cooper, n.d.; Evans et al., 2014). 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 behaviour. The cases (McKenzie-Mohr, 2000) provide a range of evidence on non-significant impact of energy efficiency campaigns. In economic literature this phenomenon is called 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 (Baublys, Miškinis, Konstantinavičiūtė, & Lekavičius, 2015; Ramos, Gago, Labandeira, & Linares, 2015). It is clear that information about economic benefit is not enough to change users' behaviour. Therefore, a more sophisticated value-focused social marketing approach is needed as different benefits are of value importance for individual users. The perception what value is can vary. It could be willingness to cut energy bills or minimizing energy poverty, increasing energy security or to fighting climate change. Taking the spectrum of needs into consideration, we review the principles and tools of social marketing in promoting sustainable energy use.

### **3. An application of social marketing in promoting energy transition**

The potential of social marketing in promoting energy transition lies in the domain of traditional marketing, but instead of selling goods and services it changes the behaviour to increase the well-being of households and communities (Kotler & Lee, 2016b; S. Peattie & Peattie, 2016a; Stead & Hastings, 2018). Once 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; therefore, the tools for this purpose have to be revised.

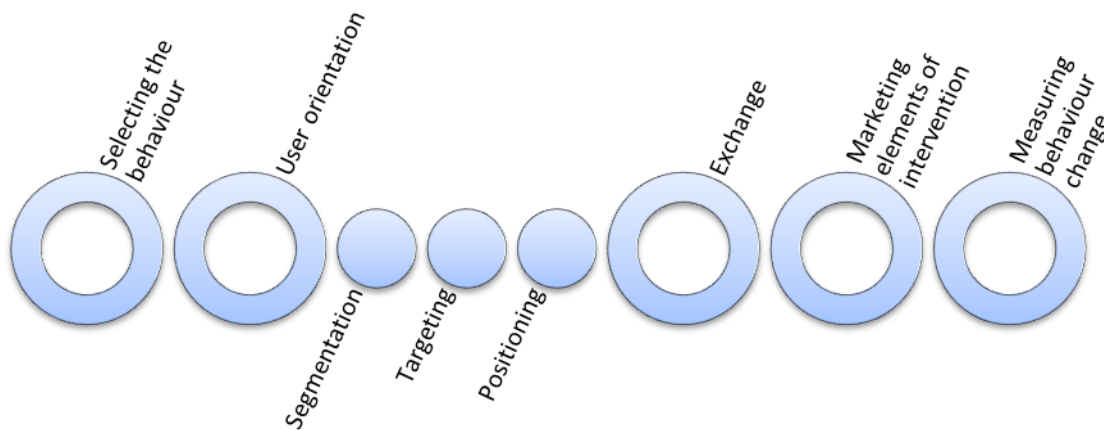
Probably the most adopted approach to using social marketing tools for sustainable energy use has been developed by McKenzie-Mohr (2000). According to him, social marketing can be very effective if it is community-based instead of being an information-intensive campaign. McKenzie-Mohr's framework of the former enhances energy efficiency in several steps. First McKenzie-Mohr (2000) suggests selecting the behaviour we need to change. Second, following the exchange theory, he proposes identifying barriers and benefits of the new behaviour 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 framework is simple and practice-oriented. For this reason it is used for residential energy efficiency programmes by the US Department of Energy ("Community-Based Social Marketing Toolkit," 2017). However, it is worth mentioning that McKenzie-Mohr's approach is oriented exclusively towards small communities; therefore, the vital three-stage marketing research process (segmentation, targeting and positioning) is excluded.

To overcome the limitations of McKenzie-Mohr's model the missing steps of comprehensive marketing research have to be integrated. According to Kotler & Lee, 2016, thus social marketing is different from the commercial one, the former has to follow the principles of the latter in changing the behaviour for societal gain. They provide six main principles for any social marketing. According to the authors, any social marketing strategy has to start

with user-orientation. This step turns all marketing activities towards the needs and wants of individuals to change their behaviour. They also point out that an exchange is the main theoretical concept. The users must perceive the value of changing their behaviour. Therefore marketing research is carried out from the very beginning till 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 behavioural change. For this reason, marketing research provides evidence for decision making. Additionally, marketing decisions have to be different for different target audiences due to their specific needs and wants, thus users are divided into segments. Kotler & Lee (2016) expand further by including segment oriented activities in a marketing mix. The strategy is implemented with an integrative approach and activities are not limited to persuasive communication only. They conclude with results measurement as social marketing is continuously improving its performance based on the feedback.

Very similar principles are presented by Peattie & Peattie (2009). Additionally, authors emphasise not only the behavioural change, but also the behavioural 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 steps: (1) selecting the behaviour, (2) user orientation, (3) exchange, (4) marketing mix: elements of intervention, (5) measuring behaviour change for energy transition (Fig. 1). The process integrates three vital elements of marketing research as user orientation is composed of three-step marketing research process including user segmentation, targeting and positioning.



**Fig.1.** Elements of Social Marketing for Sustainable Energy Use

*Source:* Bird, 2010; Dibb, 2014b; Kotler & Lee, 2016; K. Peattie & Peattie, 2009; S. Peattie & Peattie, 2016

### **Step 1: Selecting behaviour for sustainable energy use**

Behavioural is the final goal of any energy efficiency campaign and the starting point when considering social marketing. According to Rangan & 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 person’s donation nor a sacrifice, it is rather a conscious participation in the process of exchanging costs

and benefits. There are many examples of deliberate and targeted energy efficiency marketing campaigns organized by municipalities with measurable objectives of behavioural change (Gynther, Mikkonen, & Smits, 2012). 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 behavioural change has to occur. In such projects, destructive behaviour is selected and targeted with marketing mix.

Taking Amsterdam's Circular Innovation Programme as an example, we can observe how this theoretical approach of behaviour selection is implemented in practice. The end goal of the city programme 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 in Cities*, 2018). It is expected that this shift would change production processes and consumer behaviour as the programme 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 behavioural changes of Amsterdam residents (*Amsterdam's Circ. Econ. Roadmap*, 2018; "Circular City," n.d.; *Circular Economy in Cities*, 2018). What is important, values and behaviour of the local community were perceived as vital by programme implementers.

## **Step 2: User orientation**

The second step deals with three stages of marketing research process, i.e. segmentation, targeting and positioning. This essential process helps operationalize the concept 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 behavioural 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.

### ***Step 2 A: 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 behavioural interventions similarly. Typically, population is segmented according to demographic characteristics (such as age, gender, ethnicity, etc.); however, as technologies of the internet-era shape everyday behaviour, energy users' behaviour is based more on attitudes and lifestyles than on wants and needs (Pothitou, Hanna, & Chalvatzis, 2016). As a result, segmentation of energy users identifies one or more segments in the target audience according to lifestyle and values (Thøgersen, 2017). Segmentation is based on 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.

**Table 1.** Segmentation of UK and US Populations According to the Attitude towards Environment and Climate Change

Segment of population		Segment description
UK	Germany	
Positive greens	Alarmed	Environmentalists: are very worried about environmental issues; environment-friendly behaviour makes them feel better
Waste watchers		
Concerned consumers		
Side-line supporters	Concerned Activists	
Cautious participants		
Long Term Restricted	Cautious	Environmentally concerned: are generally concerned about the environment, but behave environment-friendly only because of constrains
Stalled starters		
Honestly disengaged	Doubtful	Disinterested: they tend towards apathy when it comes to environmental issues, environmental issues do not resonate with them
	Disengaged	

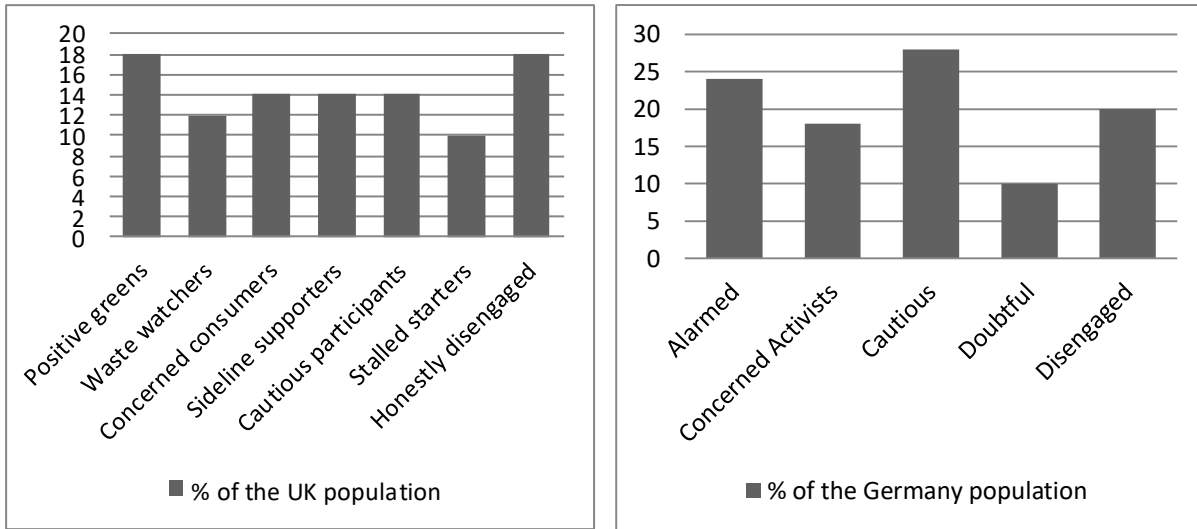
Source: Defra, n.d.; Giorgi, Fell, Austin, & Wilkins, 2016; Metag, Füchslin, & Schäfer, 2017

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 behaviour only with one goal and this goal is usually associated with the decrease in consumption (Ramirez, Tajdini, & David, 2017). There are a few segmentation approaches developed to understand how a population can be segmented according to its attitude towards the environment. As an example, table 1 presents segmentations of UK and Germany's markets. According to these segmentation examples, energy users can be divided into three large groups based on their attitude towards 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 see from the UK and Germany segmentation results, UK society is more fragmented; the segmentation identifies more unique segments that differentiate them in the attitude and consumption.

### ***Step 2 B: Target audience***

One or a few target audiences are selected after a population is divided into groups according to demographic, value-based, lifestyle and behavioural 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 authors to authors and organizations have to choose the most important ones according to their marketing objectives and measurement benchmarks (T Dietrich, Rundle-Thiele, & Kubacki, 2017; Sarstedt & Mooi, 2014; Tvaronavičienė, Mentel, & Chyrva, 2018). 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 (Bruwer, Roediger, & Herbst, 2017; Kotler & Lee, 2016): target audience has to be large enough to make marketing programme effective in scale, each segment of the target audience needs different benefits and target audience is accessible with marketing messages.





**Fig.2.** Distribution of UK and Germany Populations According to the Attitude towards Environment and Climate Change

Source: Defra, n.d.; Giorgi, Fell, Austin, & Wilkins, 2016; Metag, Füchslin, & Schäfer, 2017

To continue the examination of UK and Germany’s segmentation examples, segmentation divides population into nearly equal and substantial groups according to their attitude towards environmental issues and willingness to act on behalf of the environment (Fig. 2). The UK’s case in particular illustrates good practice in targeting an audience as each segment not only differs in terms of needs, they also were reached with effectively selected marketing messages (Chatterton, 2011). 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 behaviours and attitudes”. Hence, we see not only segmentation, but also targeting which is based on segmentation results.

**Step 2 C: Positioning against competing alternatives**

Thermal comfort, car dependency and other lifestyle norms compete against behavioural 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 behaviour [has] to be seen by the target audience” (Kotler & Lee, 2016). In social marketing positioning statement shows how to overcome the barriers for the new behaviour. The most powerful positioning is based on the message ‘energy-saving’ (Ben & Steemers, 2018), but the message itself has to integrate different values for different segments of any behaviour based on needs, wants and values. Additionally, Giorgi et al. (2016) suggest that the positioning statement has to provide real examples that show how others are doing and what additional value the behavioural change can bring. Once this statement is developed, specific strategies as to how position new demanded behaviour are developed and implemented in the stage of the marketing mix.

**Step 3: Exchange**

As it 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 behavioural change. Giorgi et al. (2016) point that users agree to change their behaviour towards 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 behaviour 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” (*Energy use behaviour change*, n.d.), the disinterested change their behaviour solely because of cost saving. This, consequently, leads to different proposals for behavioural change. They can be very simple or 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 & van der Kooij, n.d.).

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 behavioural change. Despite different attitudes and preferences, research results show that all segments are more willing to participate in exchange when its value is clear (Korsakienė, Tvaronavičienė, & Smaliukienė, 2014; Ramos et al., 2015).

Probably the most interesting case of social marketing exchange is presented by a fossil fuel subsidy reform in Iran. The core of the reform was to increase country’s competitiveness in global labour market by increasing price for petroleum products by 4 times (Rentschler & Bazilian, 2018). As an exchange proposition government implemented a structured cash transfer scheme. 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” (*Emissions Gap Report*, 2018). The value-in-exchange in this case was “country’s economic competitiveness by creating more jobs and using its oil resources more efficiently” (Atansah, Khandan, Moss, Mukherjee, & Richmond, 2017); additionally this value was enforced by “structured cash transfer scheme and its timely implementation” (Rentschler & Bazilian, 2018) which became a backbone for public support of Iran’s fossil fuel subsidies reform in 2010. As can be seen, economic prosperity of the country was used as value for effective exchange.

#### **Step 4: Marketing mix**

The marketing mix is the core concept adopted from commercial marketing for the behavioural intervention. While commercial marketing mix is created of 4P (product, price, place and promotion) or 7P (people, product, price, promotion, place, process and physical evidence) (Lovelock, Patterson, & Wirtz, 2015), social marketing mix contains 8 elements (product/service, price, place, promotion, public, partnership, policy, purse strings) (S. Peattie & Peattie, 2016b). These elements are compared in the Table 2 in first and second columns. This way, social marketing solves more challenging tasks than any business. Despite following the 8 elements of social marketing mix, the application of marketing tools and techniques remains problematic in promoting sustainable energy. Accordingly, Giorgi et al. (2016) suggest moving away from the traditional marketing mix and propose to abolish the elements that come from commercial marketing. With regard to the former, we argue that marketing mix for energy transition consists of six interrelated marketing mix elements (Table 2, third column):

1. Proposition: proposition replaces traditional marketing mix element ‘product’, as ‘product’ is difficult to interpret in energy transition as it is related to behavioural changes. Social marketing, as it was mentioned previously, is oriented towards a new effective behaviour 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. Authors (S. Peattie & Peattie, 2016b) suggest using the concept ‘social marketing proposition’ instead. Additionally, they suggest using a clear narrative on how the behavioural change would benefit the users.

2. Cost: 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.



3. Accessibility: there is challenging to get access to the groups that ar remoted or are in economic or social exclusions. In social marketing for energy transition thes groups are individuls and communities under energy poverty and energy inaccessibility, they are “the least accessible, hardest to reach and least likely to change their behaviour“ (Menegaki, 2012). Accrdingly, accesability in social marketing for energy transition means accessibility of clean energy product and the channels through which consumers are reached for information.

4. Communication: the element ‘communication’ replays element ‘promotion’, as social marketers most frequently deal with negative demand. The targest groups are apathetic or resistant to change thei behaviuor. As it was stated in the UN *Emissions Gap Report* 2018, there is a need to increase public awareness about the greater impact of their behaviour on cleaner air and human health. Hence, two way communication that builds up confidence and trust is more efficient that promotion only.

5. Communities: social marketing mix emphasizes the interrelationship and impact of a community and society on a person’s behavioural change. Hence, Gordon, Dibb, et al. (2018) convert social marketing mix into a new model with five interrelated elements where the last one is communities. The model enhances the understanding of communities and other stakeholders and their impact on behavioural change. Moreover, it resonates with other contemporary approaches in marketing and behaviour such as the theory of value co-creation and value co-production (Osborne, 2017; Smaliukiene, Chi-Shiun, & Sizovaite, 2014; Vargo, Maglio, & Akaka, 2008). Most importantly, new approaches on marketing mix stress the importance of users’ motivation as it directs their behaviour.

6. Partnership: the element of ‘partnerships’ refers to public-private partnership in providing and communicating value. Behavioural change for energy transition is complex phenomena that demand co-operations with other stakeholder with similar goals form public as well as privat sector. One of the most illustrative examples of partnership in social marketing is represented by Amsterdam’s Circular Innovation Programme. The programme implementation is based on the cooperation between policy content experts and communication and marketing companies (*Benchmarking study: Amsterdam –branding at its best*, 2018). Another similar example is Brussels Regional Program for a Circular Economy 2016-2020 where comunity’s behaviuor change are target by municipal as well as by governmental institutions and communication agencies (“Arctik: Communication for Sustainability,” n.d.). Botho of these cases provide evidences that partnership is the key of the marketing approach.

**Table 2.** Marketing Mix Conversion for Energy Transition

<b>Commercial marketing mix 7 (P’s)</b>	<b>Social marketing mix 8 (P’s)a</b>	<b>Social marketing mix for energy transition</b>
1. Product/Service: features, packaging, performance characteristics	1. Product/Service: proposition; specific behavior that the social marketer wishes to see	1. Proposition: proposition for exchange and rewards after the behavior is established
2. Price: selling price, trade margins, credit terms, other cost to customer	2. Price: cost of involvement	2. Cost of changing behaviour (financial and non-financial)
3. Place: (including cyberspace and time): types and locations of distribution channels, coverage	3. Place: product accessibility, access to alternative means of achieving satisfaction.	3. Accessibility: product accessibility and the channels through which consumers are reached for information
4. Promotion: all means to persuade to buy	4. Promotion: social communication, interaction and relationship building.	4. Communication: social two-way communication, all means for building up confidence and trust
5. People: staff, customers management, customer empowerment, customer co-production	5. Publics: target audience, secondary audiences, policymakers, other stakeholders, social networking, participation of citizens, endorsement of celebrities	5. Communities: co-creation, social networking, participation of residents
6. Physical evidence: servicespace, elements of physical layout	6. Partnerships: invitation to diverse stakeholders.	6. Partnership: public-private partnership in providing and communicating value
7. Process: process requirements, self-service, online service	7. Policy: legislation, institutional framework, access to information and subsidies.	

Source: Lovelock, Patterson, & Wirtz, 2015a; Menegaki, 2012; K. Peattie & Peattie, 2009; S. Peattie & Peattie, 2016

### Step 5: Measuring behavioural change for sustainable energy use

Evaluation of behavioural changes can generate strong implications about the impact of social marketing and confront criticism regarding the value of the intervention. However, many social marketing programmes are either evaluated poorly or not at all (Grier & Bryant, 2005). An example of existing good practice is the case of the city of Macau (China) where social marketing results were quantified. According to the project's report (Song, Li, Duan, Yu, & Wang, 2017), energy-saving 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 behaviour became very common in the daily life of city residents and businesses. This social marketing campaign was measured in terms of decreasing energy consumption per capita which was 10% at the end of the project.

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 programme. Alternative evaluation, on the other hand, provides important insights while observing behavioural 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 programme participants, etc. (*Case studies on innovative communication campaign packages on energy efficiency*, n.d.), actual evaluation or the cost-effectiveness of the programmes are very difficult as social marketing aims to change the behaviour of energy users. An application of marketing management approach can substantially contribute in solving an issues with measuring behavioural change, as measurable objectives become the core of all social marketing activities.

### Conclusions

By examining social marketing within the context of energy transition this articles has featured the step-by step approach for residential behavioural change towards sustainable energy consumption. Specifically, this article considers the value-based approach instead of rational information campaigns for behavioural change of energy users. In particular, it is important to realize that the behaviour 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 behavioural interventions that would lead to sustainable energy use. Taking this irrationality and complementing contemporary theoretical advantages into consideration, we suggest five stage social marketing framework for residential energy transition.

The new framework is designed to transform the selected destructive behaviour into a sustainable one. First step in our framework is selecting behaviour. As behavioural change is the final goal of any energy efficiency campaign, it becomes also a starting point and an objective of the rest of the activities. Second, we suggest using the user orientation concept that divides the society into three groups based on their attitude towards environmental issues, i.e. environmentalist, the environmentally concerned and the disinterested. In the third step we applying the exchange theory and point out what would motivate users to change their behaviour 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. The fourth step of our framework is marketing mix. We propose to reconsider social marketing mix and reframe it in accordance with energy-user behaviour matters. Finally, the fifth step is measuring behavioural change that enables energy transition.

As an integral part of our framework, we ground a six elements' marketing mix for energy transition. Our proposal is based on marketing mix of mainstream and social marketing theory as well as best practices in the field. According, marketing mix for energy transition has six elements: (1) proposition for exchange and rewards after the behaviour is established, (2) cost of changing behaviour (financial and non-financial), (3) accessibility and the channels through which consumers are reached for information, (4) social two-way communication that

includes all means for building up confidence and trust, (5) communities that are involved in co-creation, social networking and other kind of participation that fosters behavioural change of society at large and each household individually, (6) public-private partnership in providing and communicating value.

This paper extends the literature by arguing that there is a need for a value-based approach towards residential behavioural change for energy transition. This approach is equipped with a step-by step framework which is grounded on theory and build on current practice in a field.

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### ***Acknowledgements***

*This research was supported by the project, which has received funding from the European Union's Horizon 2020 research and innovation programme European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme Marie Skłodowska-Curie Research and Innovation Staff Exchanges ES H2020-MSCA-RISE-2014 CLUSDEVMED (2015-2019) Grant Agreement Number 645730730*



**Short biographical note about the contributors at the end of the article (name, surname, academic title and scientific degree, duties, research interests):**

**Rasa SMALIUKIENE** is the Professor of Management and Public Administration at Vilnius Gediminas technical university and Lithuanian Military Academy. Her research interests focus on leadership, corporate social responsibility, social marketing, co-creation for organizational and social value. R.Smaliukiene has authored or co-authored more than 40 research papers.

**ORCID ID:** [orcid.org/0000-0002-5240-2429](http://orcid.org/0000-0002-5240-2429)

**Salvatore MONNI** is Associate Professor of Economic Policy and Director of the Master Program in "The Cooperative Firm: Economics, Law and Management", at Roma Tre University, Department of Economics. His current main research and publications are in the fields of development economics and policy. He is Coordinator of SHUMED (Sustainable Human Development for MED Countries) and AguaSociAL (Social Innovation in Brazil, in the Water Treatment Sector) two FP7 Marie Curie Action People Projects and CLUSDEV MED (Cluster Development Med) an H2020 MSCA RISE project.

**ORCID ID:** <http://orcid.org/0000-0002-6326-5714>

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