

INTEGRATED MARKETING COMMUNICATION IN PROMOTING SOLAR ENERGY IN VIETNAM

Nguyen Hoang Mai

Faculty of Public Relations, Media Communications & Arts, Van Lang University, Vietnam

Corresponding Author's Email: nguyenhoangmai@vanlanguni.edu.vn

ABSTRACT

Solar radiation is an endless source of renewable energy and is friendly to the environment. The use of solar energy contributes to replace the fossil energy sources, which protect the environment and bring benefits of economic. Vietnam is a region with relatively large and stable annual solar radiation. However, the use of solar energy in Vietnam and especially in Ho Chi Minh City has not yet developed. One of the reasons that can be seen is the lack of communication and promotion programs for the community to better understand the economic efficiency as well as the environmental benefits of solar energy. Based on research about the status and potential of solar energy in Vietnam and the results of 20 in-depth interviews with target audience in Ho Chi Minh City in early 2020; this research concludes that people do not fully understand the economic benefit and environmental efficiency of solar energy. So integrated marketing communications programs to promote solar energy system are essential for various stakeholders. With the objective is to help customers understand and raise their awareness about the importance and benefits of solar energy systems as well as understand the economic efficiency and benefits for the community when using solar energy systems; this research create the potential for using solar energy as a local energy source to completely replace traditional forms of energy in Vietnam.

Keywords: *Solar Energy, Integrated Marketing Communications, Vietnam*

INTRODUCTION

Vietnam has the advantage of being one of the countries with the most solar photovoltaic on the world's solar resource map, so the potential of solar energy in this country is extremely huge. In the past, using solar energy was considered a proactive action for the community. Now, the fact that businesses which use solar energy created high investment efficiency, while still contributing to environmental protection were proved. Therefore, using solar energy as a renewable source to replace traditional forms of energy is an economically meaningful strategy. However, the use of solar energy in Vietnam and especially in Ho Chi Minh City has not yet developed. One of the reasons that can be seen is the lack of communication and promotion programs for the community to better understand the economic efficiency as well as the environmental benefits of solar energy. Based on the research on the status and potential of solar energy systems in Vietnam and the results of 20 surveys in the form of in-depth interviews with the target audience in Ho Chi Minh City in January 2020, the study proposes

appropriate integrated marketing communications program that might be used by various stakeholders in promoting solar energy systems.

LITERATURE REVIEW

Nowadays, the human life depends heavily on energy power, so the utilization of energy is special interest to all nations. Traditional sources of energy such as fossil fuels, hydroelectricity and nuclear power have largely met the needs of countries, but their use has certain limitations. Therefore, the indispensable need is to supplement and gradually replace traditional energy sources with safe and renewable sources. Many countries have paid special attention to this area, such as in Sweden, Denmark, Austria and France; in 2014, renewable energy used accounted for 13.4% of total energy consumption in those countries. Vietnam is one of the countries with great potential for developing renewable energy such as hydroelectricity, wind energy, solar energy, biomass energy, geothermal energy. However, the exploitation and use of renewable energy is still very limited (Tâm, Thành & Đô, 2015).

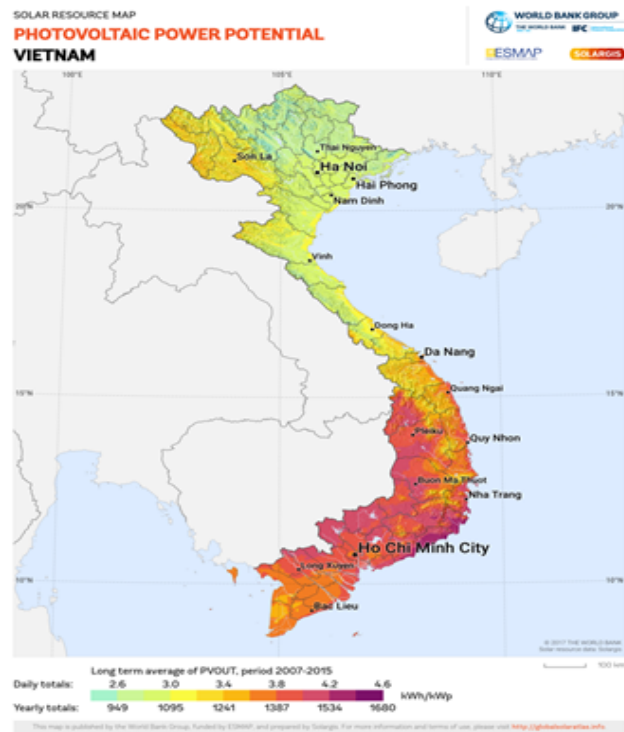
Solar energy system

Using solar energy has been concerned by scientists around the world and also in Vietnam. The current popular solar applications cover the major fields of solar heat and solar power. Specifically, as for the solar heat field, the applications use water heaters, stoves using solar panels, solar drying equipment, and water distillation equipment solar energy, refrigeration and air-conditioning units using solar energy or using solar energy to run heat engines (Stirling engines). For solar power field; the base is the use of solar cells on different scales: small, off-grid scale is usually solar panels that generate electricity from solar energy and use it directly (such as in lighting, electricity for living or for office equipment, automatic gauges, telecommunications, ...); Small grid-connected scale is usually solar panels installed on the roofs of households or offices and large-scale connected grid (Le *et al.*, 2017).

Current situation and potential of the utilization of solar energy in Vietnam

According to many studies, Vietnam is a region with relatively large and stable annual solar radiation, especially in the Central Highlands, South Central Coast, Southeast and Southwest. As stated by the General Department of Meteorology and Hydrology of Vietnam, the number of sunshine hours (average data for 20 years) in Vietnam can be divided into 3 regions (Vietnam meteorological and hydrological administration, 2020). Region 1 covers the Northwestern provinces (Lai Chau & Son La) with relatively high sunshine hours (from 1897 hours / year to 2102 hours / year). Region 2 covers the remaining provinces of the North and some provinces from Thanh Hoa to Quang Binh with low hours of sunshine (average from 1400 hours / year to 1700 hours / year). Region 3 includes the provinces from Hue and the highest sunny hours in the country (from 1900 hours / year to 2700 hours / year). The South Central, Central Highlands and Southern regions are assessed to have good potential with the total number of sunny hours from 2000 hours / year to 2500 hours / year and the intensity of solar radiation ranging from 4.9 kWh / m² / day to 5.7 kWh / m² / day. Because of the best climate conditions for solar and wind power projects as well as incentive policies from the State and local governments, this area is an attractive destination for investors in the field of renewable energy, especially solar power. The figure 1 demonstrate the photovoltaic power potential of Vietnam.

Figure 1: Photovoltaic power potential of Vietnam - Global Solar Atlas (2020)



Integrated marketing communication (IMC)

Since the early of 90s, integrated marketing communications (IMC) have been a topic of great interest for both academia and business (Holm, 2006). IMC can be defined as a process where companies accelerate profits by aligning communication goals with corporate goals and it is used to coordinate and regulate all communication activities at all touch points of customers. IMC is used to ensure that brand personality, message and location are consistently delivered to customers across all forms of communication (Schultz & Schultz, 2004). In a typical IMC campaign, more than one tool can be used. According to Kotler & Keller (2006) the most notable IMC tools are advertising, sales promotion, direct marketing, public relations, personal sales, events, and sponsorship. Other IMC tools are emphasized by O Guinn *et al.*, (2015) including media, sales promotion, direct marketing, personal sales, event sponsorship, public relations, outdoor signs, advertising boards, Internet or interactive marketing; electronic word of mouth (e-WOM) includes social media networks such as Twitter and WhatsApp and podcasting (mobile). These integrated marketing communication tools can be used to disseminate information about solar power systems in the community.

RESEARCH METHODOLOGY

This study aims to (1) explore the status and potential of

solar energy extraction in Vietnam and (2) propose integrated marketing communications program to various stakeholders in promoting solar energy systems. To accomplish the research objectives, we used statistical methods and qualitative research. Firstly, we conduct statistical research through materials from books, newspapers, magazines, websites with information related to solar energy utilization as well as the actual situation and potential of solar power exploitation in

Vietnam. The current situation and potential of the utilization of solar energy in Vietnam were given above in the literature reviews. We also research about products and service of different solar energy supply companies. Table below compared and contrast five solar energy supply company in Ho Chi Minh, Vietnam, we focus on five different perspectives which are the cost, the quality, the customer service, the warranty and performance of their products and service.

Table 1: Compare solar energy supply companies in Ho Chi Minh, Vietnam

					
Cost	15,400,000 VND/kWp	21,000,000VND/kWp	16,500,000VND/kWp	18,559,000VND/kWp	20,790,000VND/kWp
Quality	High-quality, genuine products, have passed rigorous testing procedures, meeting international safety standards. Spare batteries have a lifespan of 6-8 years. Beautifully designed, highly aesthetic.	The product is machined by robots, increasing the perfection of the products, reducing the depreciation performance of the panels.	The product is machined by robots, increasing the perfection of the products, reducing the depreciation performance of the Inverter panels can operate up to 98.4% against reverse polarity protection.	Products are manufactured in Vietnam with capital investment and cooperation from Japan. Maintain high performance even in low light intensity conditions (such as in the early morning and even in overcast days). Free monitoring system included with the system. Can view and analyse the graph of the amount of electricity generated from the solar power system in real time.	Solar Cells acquire international certification. Remote output monitoring system (Designed specifically for Vietnamese people, while updating and improving new features)
Customer service	Free consulting services, free installation and warranty services, delivery, instructions for use, operation.	Free delivery to customers in urban districts of the city area. Hanoi, Danang and Ho Chi Minh City	Free installation and delivery in the city of Ho Chi Minh City.	Free shipping on prepayment 100% of order value.	Free installation.
Warranty	12-year solar battery warranty, 5-year inverter	Warranty: 10 years	Warranty: 25 years (10 years for battery panels, 5 years of inverter error 1 exchange 1, if defective from manufacturer) Maintenance: every 6 months	Warranty period: 12 years	System warranty from 5 - 10 years. 2-year maintenance (Including system cleaning, comprehensive inspection to ensure system performance) Warranty 1 plate 1 exchange for 12 years.
Performance	80%- 25 years, 85%- 20 years, 90%-10 years	Above 80% 25 in years	Above 80% in 25 years	In the following years, the power loss shall not exceed 0.68%, in the 25th year, the capacity shall not be less than 80.18% of the original capacity.	Above 80% in 25 years

Next, due to the lack of research in the recent studies about promoting solar energy in Vietnam, qualitative research methods should be used to exploring informant perspectives and perceptions. According to Daymon & Holloway (2010) the qualitative interview process involves participants and interviewers in a form of social interaction through which they collaborate to produce meaningful, situated accounts of participants' experiences. In-depth interviews are a major source of data in qualitative research. This method has the advantage of access to rich and detailed data sources that describe the processes that have been taking place in a specific situation, helping to identify and explain the causes and results. Therefore, in-depth interviews with 20 respondents in Ho Chi Minh City, Vietnam in early of 2020 were conducted. The questions for the interviews were developed and validated by field experts. The interview sessions elicited the participants' opinions regarding the marketing communications tools used to acquire information about solar energy in Vietnam. The respondents were also required to demonstrate their knowledge of the solar energy system they had installed at their home. The interview sessions were audio recorded, and notes were made by enumerators. The recordings were then transcribed and analyzed by identifying the themes and commonalities found among the respondents. For reporting purposes, each respondent was assigned an anonymous code for identification (e.g., R01 represents Respondent 1 and so on). A respondent validation process was conducted to seek corroboration and to ensure a good correlation between the findings, perspectives, and experiences of the respondents (Bell *et al.*, 2018). Finally, based on the survey results and opinions collected to provide analysis and comparison. The table below provide the characteristics of the target audience.

Table 2: Characteristics of the Target Audience

	Characteristics of the target audience
Demographic	Gender: Male, because they have basic understanding of the technology field as well as practical applications to life; Age range: 25 - 40 years old; Marital status: married and have children; Geography: living in Ho Chi Minh City; Income: Over 20 million per month;
Psychological / Lifestyle	Living at home in possession/ owned a house Foresight and desire to have durable products over time. Have a civilized, modern and thrifty lifestyle; Attention to health and environment; Concerned about protecting natural resources and reducing air pollution; Warmly and positively welcome the solar energy system;

Behavior	Often buy high quality, reliable and durable products with a lot of after-sales services; Often shop at shopping malls, electronics stores, online e-commerce websites Often access to information through newspapers, social networks; however, they do not have much access to information on solar energy system;
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RESULTS & DISCUSSION

Based on the in-depth interview results and opinions collected, we list out noticable points below. First, respondents mostly are men aged 25 - 40 are those who are interested in solar power products. They have certain knowledge about the application of solar products and have the desire to use solar energy systems. Married respondents tend to spend more on savings and tend to have a sense of environmental protection for future generations.

“When choosing between environmental protection and economic development, I prioritize the environment because I feel it is necessary for the society” (R08)

“The solar energy system is important because it saved money and reduce emissions” (R17)

“Yes, because solar energy is a new trend and will soon become a future trend, it helps protect the environment and save more energy” (R20)

“I think using fossil energy is not good for the environment, keeping the environment clean will help the air to be better, the life will be better, the life will be longer”. (R15)

However, there are some respondents still refuse to switch to solar energy due to construction cost.

“In my opinion, the solar energy system is not really important because it takes a lot of investment costs to assemble the initial solar power system while the power source of EVN's electricity production is popular with acceptable cost.” (R05)

“I know solar energy system might contribute to environmental protection, so it is important because the environmental situation is seriously polluted now, but it still needs to be affordable, so people can use it in mass replacement of electricity energy system. (R07)

Next, most respondents who have used solar energy products have felt very well with the desire to improve the compactness and convenience. They are willing to pay a price of 20-50 million for solar power energy

products so that they could save money on electricity but also protecting the environment.

“I use solar power because I see the money I can save to my family and that can be used for long term. Saving money is quite decent. I appreciate most about solar energy systems is saving electricity bills for the family”. (R04)

“I am using solar water heaters. I feel that it helps made hot water ready whenever I want to use and saving electricity bills, however it has disadvantages which is depending heavily on the weather” (R11)

However, there are products still not met the requirements of customers which is convenience.

“I have once used a product that use solar energy which is a phone battery charger, but it was too heavy to hold much, so I gave it to my brother.” (R14)

With solar power system, the respondents pay much attention to the quality and reputation of the brand also they do care much about the price. The intended audience has many services associated with the product such as warranty, maintenance, installation, cleaning, transportation, ...

“When decide which solar system to buy, in my opinion, reasonable price is the most important, besides, I also concerned about convenience, prestige and quality”. (R06)

“For me it is price and product quality, but the most important criterion is price. I still hope the product will be durable”. (R18)

“I am interested in price, service and reputation of the brand. In my opinion, the most important criterion is warranty because it affects the life of my family, and I have to use it for a long time”. (R08)

“I do care about quality and reputation. To me quality is the most important, because you just shared with me, the installation cost is quite expensive, and I have to use it for a long time but the quality is not good, so it become wasting my money.” (R12)

“For me, the packaging and shipping services are just a formality, most important is the company still guarantee the product’s quality.” (R19)

When choosing between foreign and local brand, there are many different opinions.

“I will prioritize Vietnamese brands, because I think

Vietnamese technology is now achieved as developed countries in Japan, USA, ... In addition, the market in Vietnam is open now so everything is okay. The technology transfer is over.” (R01)

“I will choose a foreign company because I think that Vietnam's technology may not be at its best yet.” (R10)

“I will choose foreign products such as made in European countries, USA, Korea, Japan or Singapore because I trust in the quality and product safety of them” (R08)

Second, in terms of communication and marketing, the respondents had very little access to the information about solar power system and they did not fully understand the economic and environmental benefits of that system. However, we had collected that the research stage of them mainly through channels such as newspapers and recommendations from friends. Social networking sites are potential information channels but have not been fully exploited. Customers want a form of instalment payments or promotional discounts on quite expensive products as solar energy systems.

“I have never heard of any solar brand” (R06)

“I rarely see information about solar energy on the Internet” (R02)

“I have not heard about solar power system, so I do not know if it is beneficial for the environment or not. In my opinion, this electricity system is not really important” (R08)

“I know about solar power systems on TV news and also online, I see ads on Facebook a lot.” (R16)

“When I surfed Facebook and saw my friends said about solar power systems on Facebook. (R13)

And finally, about distribution channel, respondents want to go to the official store, large electronics supermarket to consult and buy products because it is a reputable distributor such as Nguyen Kim, Thien Hoa, Dien May Xanh. In addition, they have references in advance on reputable e-commerce sites such as Tiki, Lazada, Shopee etc.

“When buying essential technology products, I often go to electronics stores which are authorize stores because those places are reputable and ensure the quality of products. Such as big market for electronics products like Nguyen Kim” (R04)

“I do shop online for convenience. If I go to the showroom, I can't distinguish whether the product is good or not good, so I just read other customer's review and shop online at website such us tiki.vn” (R08).

CONCLUSION

Based on the theory, survey results and discussion above, we conclude that the potential of solar energy exploitation in Vietnam is very huge. However, the application of solar energy in Vietnam has not developed yet, the reason is that there have not been many specific studies on solar potential as well as the ability to invest in constructing solar power projects. In addition, the communication and promotion for the community to better understand the economic efficiency as well as the environmental development benefits of solar energy are still limited and have not been mentioned in recent studies in Vietnam. In-depth interviews of this study showed that the respondents, despite having certain knowledge about the of solar products and willing to purchase solar energy systems; have very little access to information as well as they do not fully understand about the economic and environmental efficiency of the product. Therefore, we would recommend integrated marketing communication programs to promote solar energy system for various stakeholders. With the objective of communication is to help customers understand and raise their awareness about the importance and benefits of solar energy systems as well as understand the economic efficiency and benefits for the community when using solar energy systems. Thereby changing customer behaviour when converting the desire from using traditional electricity to solar energy systems. We propose the key message of this program is “Clean Energy-Free Electricity Conversion” with the use of integrated marketing communication tools such as press releases, press conferences, outdoor advertising, event, seminars, social media and sponsorship. In particular, we would like to emphasize a key activity is the event “Green Energy”; with the goal of bringing customers closer to solar energy system products, increasing product knowledge and raising awareness about clean energy use; thereby making customers love and enjoy the brand of solar energy company providing solar power products. This event aims to get the participation of about 1000 people aged 25 - 40 years old who love the green lifestyle and show much care for the community. The event consists of three main activities: fundraising jogging; visit a solar conversion model home with all the electrical equipment powered by solar energy. And finally, the participation will have

experience the solar-powered device with the highlight of the event closing ceremony with all the lights and sound from the stage running from the power of the mobile solar generator.

Although there are certain limitations of the survey structure, the sample size as well as the limited knowledge of the author, this research can be applied in finding communication and marketing solutions suitable for companies providing solar energy systems in Ho Chi Minh City and Vietnam. Future research can learn more to find the factors that affect the use and installation of solar power systems. This allows in-depth analysis, and most importantly, helps the community better understand the economic efficiency and environmental development benefits of solar energy; could create the potential for using solar energy as a local energy source to completely replace traditional forms of energy.

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