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THE ROLE OF ISLAMIC FINANCING IN THE GREEN COMMUNITY IN ATTAINING SUSTAINABLE DEVELOPMENT GOALS 2030

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Abstract

A clean environment and sustainable energy are among the Sustainable Development Goals (SDGs) that all nations need to achieve by 2030. Community well-being can be achieved when environmental issues involving greenhouse gases, global warming, thinning and ozone depletion is strengthened. Green energy exploration has contributed to the effort of sustaining the environment. Renewable energy is an alternative source of natural resources. The aim of this paper is to discuss the role of Islamic financing in enhancing the green energy initiatives in Malaysia. The study employs the doctrinal legal method of perusing legal documents and Islamic contracts. Findings of the study showed that green energy is part of the human and environmental needs that need to be preserved to continue living in this world. In addition, comprehensive legal framework plays an important role in ensuring the achievement of SDGs 2030. Accordingly, green technology is seen as a tool to help people maintain environmental sustainability. This green technology will also drive the development of the country both locally and globally. Hence, the initiative to promote green technology development must be realized through an Islamic financing scheme which helps and encourages its participants to venture into business.

Keywords: Islamic Financing, green energy, renewable energy, green community, sustainable development goals.

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1. Introduction

A clean environment run on sustainable energy are among the Sustainable Development Goals (SDGs) that all nations need to achieve by 2030. Community well-being can be achieved when environmental issues involving global warming, ozone thinning and ozone depletion is strengthened. In 1997, the Kyoto Protocol was ratified by more than 160 countries which prioritised the weakening the green house emission (Grubb, Vrolijk, & Brack, 1997). Green community relates to the implementation of low carbon city concept in attaining a sustainable environment. The concept embraces the principle of high-level energy efficiency with low carbon energy resources as well as production technologies. In other words, it enhances a pattern of consumption and behaviour that are consistent with low levels of greenhouse gas emissions in urban areas (Ho, Matsuoka, Simson, & Gomi, 2013).

As a universal religion, Islam appreciates personal and environmental cleanliness (Hassan, Salamon, & Rahman, 2016) and as such, contemporary issues of climate change and environment were addressed 1400 years ago. This is evidenced by the requirement of personal and environmental cleanliness like the practice of using clean water for daily routines from clean rivers (Huma, 2018). Hence, it is pertinent that Islamic financial institutions consider the environmental factor in the decision making process.

2. Problem statement

Green energy is closely related to renewable energy and technologies. Renewable energy is still in its infancy in Malaysia and involves three major sources; hydropower, solar energy and biomass energy (Renewable Energy Policy Network for the 21st Century, 2014). Taking lessons from past failures, external experience and religious views, Malaysia has developed the Feed-in Tariff System as a step towards developing renewable energy sources in Malaysia (Markom & Hassan, 2018). Without the aid of technology, humans may not be able to cooperate in preserving nature. Islam encourages the exploration of relevant knowledge to be used as a stimulant and auxiliary to deal with issues related to nature. This exploration of science will drive the rapidity of technology created to help people. This can be seen through the development of green technology instituted by the government. However, one of the challenges is to provide project funding that is environmentally and socially responsible through corporate social responsibility.

3. Purpose of the Study

In general, the purpose of this study is to discuss the importance of green energy to achieving community and environment sustainability. Specifically, the study explains the concept of green energy in the context of society and states. Then, it examines government policies and laws on green technologies initiatives. Finally, it analyses the potential of Islamic finance in enhancing environmental SDGs. Findings of the study addressed the issue of identifying the legal framework in place in Malaysia for furtherance of SDGs 2030 and its suitability with Islamic financing.

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4. Research Methods

The study employs doctrinal legal method of perusing legal documents and Islamic contracts. The analysis includes National Government Policies on Energy as well as the strength and weaknesses of Malaysian Energy Efficiency Improvement program (MIEEIP), Small Renewable Energy Power Program (SREPP) and Green Technology Financing Scheme. Accordingly, Islamic contracts were examined which suit the needs of green financing that is environmentally sustainable and socially responsible.

5. Findings

5.1. Green Energy

Green energy and renewable energy refer to efforts to harness the energy of nature. There are various types of renewable energy sources such as biogas, biomass, small hydro power, solar photovoltaics, sea, wind and heat.

Table 1 below shows there are seven types of renewable energy criteria in Malaysia.

Table 01. Types of Renewable Energy

No.	Sources of Renewable Energy	Explanation
1	Biogas	A source in gaseous form produced by anaerobic digestion or fermentation of non-dehydrated and biodegradable organic matter, including fertilizers, sewage sludge, yield, by products and residues from agricultural, industrial or municipal waste originating from Malaysia.
2	Biomass	A source in solid form comprising non-fossilized and biodegradable organic matter, including revenue and by products and residues from agricultural, industrial or municipal waste derived from Malaysia.
3	Small hydropower	• A technology that utilizes flowing water power to generate electricity • Hydroelectricity is the electricity generated when flowing water from reservoirs or flowing water from rivers, rivers or waterfalls are distributed through water turbines. • The pressure on the water flowing on the turbine blade causes the wooden part of the turbine to rotate and drive the electric generator. It will then convert to electricity. • Normally, dam water and flow of water to the turbine will be controlled by the opening and closing of the water gate and pipes. This is known as a penstock.
4	Geothermal	Geothermal refers to thermal obtained from earth (geo). • There is a steady stream of heat from the centre of the earth (5000 ° C) through the earth's surface.
5	Wind	• Wind energy is generated by converting existing winds to other forms of energy using wind turbines. • The wind turbine will absorb energy from the air or wind to kinetic energy from rotational motion through the rotors. • Wind power is usually used to generate electricity and is also used for pumping water especially in rural areas.
6	Solar	• Solar energy is generated when energy from the sun is converted to electricity or used to heat water, air and others. • There are two types of solar thermal and solar photovoltaics.
7	Sea	• There are two types, namely, mechanical energy from tides and surfaces, and heat energy from sun heat. • This sea energy is classified as tidal power, solar energy and thermal energy.

Sources: Renewable Energy Act 2011 (Malaysia) and Australian Energy Resource Assessment, 2013.

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5.2. Legal Framework of Green Energy

The comprehensive legal framework plays an important role in ensuring the achievement of SDGs 2030. Various green energy policies have been enacted since 1979 to date. The New Energy Act was enacted in 2011 to illustrate that renewable energy and the incentive tariff system are important to Malaysia. This Act has encouraged many investors to invest in electricity generation due to the presence of the Tariff System which obligates Malaysia's National Power Incorporated known as *Tenaga Nasional Berhad* (TNB) to buy all the electricity produced by the holders. Hence, the enactment of this Act becomes a parameter of producing renewable energy sources as well as making the Tariff System more comprehensive.

Table 2 shows the evolution of green energy policies and establishment of institutions in Malaysia since 1979 until recently.

Table 02. Green Energy Policy

Year	Policy/Institution
1979	State Energy Policy
1980	Energy Reduction Policy
1981	Basic Fuel Diversification Policy No.4
1997	Energy Centre Malaysia
2000	State Biofuel Policy
2006	Ministry of Energy, Green Technology and Water
2009	Green Energy Policy
2010	Malaysian Green Technology Corporation
2011	Renewable Energy Act
2011	Sustainable Energy Development Authority Act
2011	Sustainable Energy Development Authority (SEDA)
2018	Ministry of Energy, Science, Technology, Environment & Climate Change
2018	Ministry of Water, Land and Natural Resources

Sources: Author

Table 3 below lists the renewable energy subsidiary laws as follows:

Table 03. Renewable Energy Subsidiary Laws

No	Subsidiary Laws	P.U(A)/P.U(B)
1	Appointment of Date commencing Operation	P.U.(B) 589
2	Renewable Energy (Criteria for Renewable Resources)	P.U. (A) 383
3	Renewable Energy (Allocation from Electricity Tariffs) Order 2011	P.U. (A) 384
4	Renewable Energy (Feed-in Approval and Feed-in Tariff Rate) Rules 2011	P.U. (A) 385
5	Renewable Energy (REPPA) Rules 201	P.U. (A) 386
6	Renewable Energy (Technical and Operational Requirements) Rules 2011	P.U. (A) 387
7	Renewable Energy (Recovery of Moneys by Distribution Licensee) Rules 2011	P.U. (A) 388
8	Renewable Energy (Administrative Fees) Rules 2011	P.U. (A) 389
9	Renewable Energy (Feed-in Approval and Feed-in Tariff Rate) (Amendment) Rules 2013	P.U. (A) 107
10	Renewable Energy (Table Amendment) 2013	P.U.(A 108
11	Renewable Energy (Feed-in Approval and Feed-in Tariff Rate) (Amendment) (No.2) Rules 2013	P.U. (A) 312

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12	Renewable Energy (Criteria for Renewable Resources) (Amendment) Regulations 2013	P.U. (A) 373
13	Renewable Energy (Table Amendment) (No.2) 2013	P.U.(A) 374
14	Renewable Energy (Allocation from Electricity Tariffs) Order 2013	P.U. (A) 375

Source: http://www.seda.gov.my

5.3. Green Technology

Green technology is the catalyst for renewable energy development which began with the establishment of the National Green Technology Council and Climate Change responsible for drafting the National Green Technology Policy. This effort continues through the adoption of green technology in four main sectors - energy, building, water and waste management and transportation. In order to ensure a smooth implementation of the National Green Technology Policy, the involvement of several key institutions has been identified. These include the Ministry of Energy, Green Technology and Water (KeTTHA), the Green Foundation of Malaysia (YaHijau) and the Malaysian Green Technology Corporation (MGTC) responsible for regulating green technology implementation (Ruzian, 2018). Finally, various programs, projects and promotions have been implemented to empower green energy and technology in life.

5.4. Islamic Financing of Green Technology

Malaysia as an Islamic financial hub is moving forward to the next level of growth that is sustainable, with clear value proposition. (Bank Negara Malaysia, 2018) It is driven by long term and wider objectives including profit, people and planet. Accordingly, Islamic financing of green technology is an alternative to conventional financing. In realizing Islamic financing schemes, the fundamental principles of *shariah* [1] must be adhered to and emphasized. According to Islamic financing principles, the contract must be consented to by both parties as well as be free from the elements of interest (*riba*), uncertainty (*gharar*), gambling (*maysir*) and other prohibited elements such as cheating (Markom & Ismail, 2009). Studies show that green financing policy involves two approaches namely the greening of internal operations of the bank and the approval of environmentally responsible financing. The former includes identifying suitable methods of applying renewable energy automation and various procedures to lessen carbon footprint. The latter indicates that in decision making of granting financing, the banks should secure their environmental risk rating to enhance the growth of green technology initiatives and projects (Julia, Rahman, & Kassim, 2016). Undoubtedly, the unique features of Islamic finance operate from the perspective of social finance which are suitable for new long-term linkages between finance, society and the environment. The integration of environmental sustainability together with social and corporate governance principles play a critical role within Islamic finance industry's business decision making. Research has revealed that such an approach is not only profitable but essential for business financial sustainability over the long term (RFI Foundation, 2018). Research findings conclude that many green financing decisions consider environmental concerns specifically those related to climate change,

[1] path to the right way and purification of soul. *Shariah* law is a divine law. The sources of law are *al Quran, hadith, Ijma'* and *Qiyas*.

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carbon emissions, ozone depleting substances, nuclear power, deforestation and intensive farming (Riaz, Salma, Farukh, & Hafaz, 2017). Accordingly, the realization of Socially Responsible Investments (SRIs) as financial tools are Social Impact Bonds (SIBs) and Sustainable and Responsible Investment (SRI) *sukuk*[2] (bin Syed Azman, & Ali, 2016). Both SIB and SRI *sukuk* are claimed to be financial models that will assist the industry to reduce the social problem of poverty as well as provide economic security for the community. The prospects of SIB and SRI in the form of green *sukuk* in the future are encouraging as they are motivated by a number of reasons. Among others are the intensification of the demand for energy supply, energy financing due to population growth as well as for energy funding and investment to finance the clean energy and energy efficiency projects to meet the needs of the future population (Bank Negara Malaysia, 2017). In 2017, the government of Malaysia introduced Tadau energy issued the world's first ever green *sukuk*, amounting to MYR 250 million (US$ 58.4 million), the proceeds of which financed a major solar-power project in the state of Sabah. The *sukuk* was a joint effort between Malaysia's securities Commission, Bank Negara Malaysia and the World Bank Group. It also saw Chinese participation in Malaysia's *sukuk* market given that Tadau energy is owned by China's Edra Power (Thomson Reuters, 2017). Figure 1 below shows the Islamic financing framework of green technology. The comprehensive framework integrates the elements of *shariah* and corporate governance in ensuring *shariah* compliant decision making. In addition, in the decision making process, consideration should be given to the impact to the environment, socially responsibility to the community and corporate social responsibility.

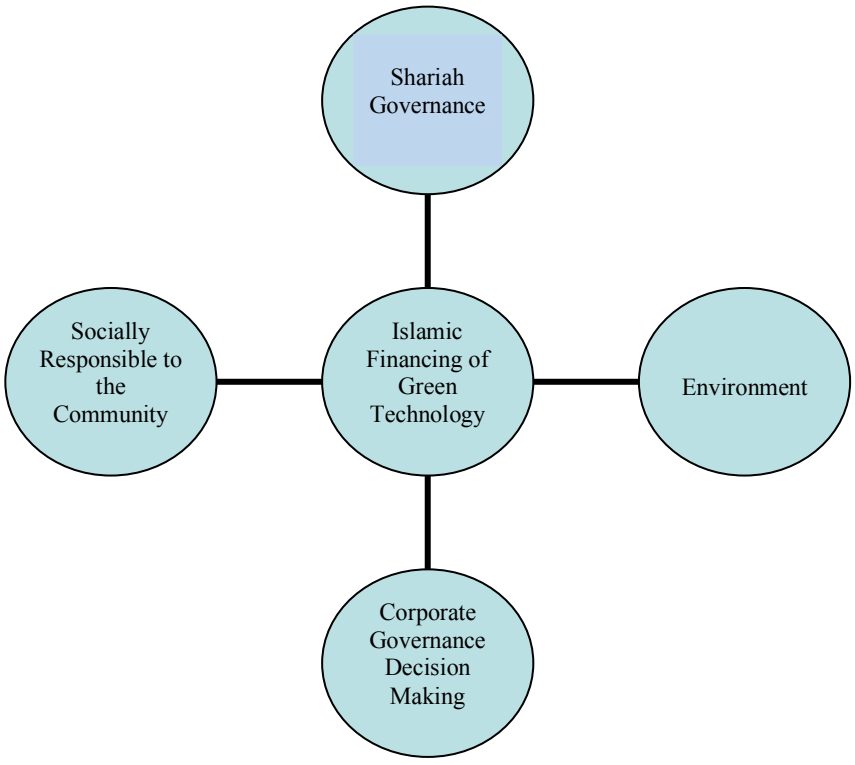

Figure 01. Islamic financing framework of green technology. Source: Author's own

[2] As above

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6. Conclusion

In general, green energy and technology have great potential in Malaysia. This is clearly shown in various efforts and commitments shown by the government in making Malaysia a Green State. In order to further strengthen the development of green energy and green technology, it is proposed that the financial industry including banks provide Islamic-based green energy financing, create green school programs at various levels of education, set up green banks, implement green ICT in all government and private sectors and emphasize Environmental Management Accounting (EMA) in public and private sector management.

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