Uptake of green energy practices: Evidence from hotels in Nakuru County, Kenya

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ABSTRACT

Hotel industry is a major part of development of tourism that spend a lot of its resources on energy intensive facilities. Uptake of energy efficient practices is relevant to hotels in saving approximately twenty percent of its operating costs. The aim of this study was to examine the uptake of green energy practices by hotels in Nakuru County. The study was anchored on stakeholder's theory and resource-based theory. The study adopted a descriptive cross-sectional research design that involve both quantitative and qualitative methodologies in generating rich information to help fully explore the objective of the study. The target population of the study comprised 259 hotels registered within the categories of medium, large and very large, from which a sample of 204 hotels were selected using stratified random sampling method and 204 hotels were sampled and completed. Quantitative and qualitative data was obtained from respondents using a questionnaires and interviews. Quantitative data was analyzed using descriptive statistics and data was presented using tables and graphs. Qualitative data was analyzed using NVIVO software, and data was categorized into themes and presented in form of narratives. Findings show that hotels reported high uptake 90.2% of green energy practices policy, However, the results of the study revealed low uptake 24.5% in creating awareness to employees on green energy policy, 16.7% budget for supporting green energy practices, and 26.0% in capacity building for hotel manager participation in any green energy environmental sustainability trainings. The study concludes that green energy uptake in hotels in relation to creation awareness and budgeting for green energy. The hotel management should consider budgeting and trainings for staff on green energy practices to increase uptake levels and manage hotels energy consumption efficiently.

Keywords: Green Energy Practices, Sustainable Energy Trainings, Sustainable Energy Policies, Sustainable Energy Budget, Uptake

I. INTRODUCTION

The hotel industry has substantial ties to economic and societal development. It is estimated that globally, hospitality industry accounts for 10.4% of Gross Domestic Product, 7% of world exports and 10% of employment (Moise et al., 2021). However, hotels are leading as the most energy intensive facilities resulting to high operational costs related to energy. It is estimated that a large hotel energy cost is between 30% and 35% of the total operational cost. These increased operational costs have a direct effect on hotel's financial performance and with continued trend, it risks the practicability of the business as it has severe consequences on the profits (Efthymion, 2020).

Increased energy consumption in the hospitality sector is a major source of greenhouse gas emissions. These emissions are basically from transport, accommodation and activities by tourists. The hotel sector especially the accommodation sector releases carbon dioxide to the atmosphere, hotels become a culprit and victim of carbon dioxide (Mahachi et al., 2015). Hotels have been associated with large consumption of energy and lack of sufficient facilities for energy management (Samdin et al., 2012).

It is estimated that hotels emit 160 to 200 kg of carbon dioxide per m2 of room floor area (Mahachi et al., 2015). Carbon dioxide emissions stems from the burning of fossil fuels (Tugcu & Topcu, 2018). More so, hotels emits methane, nitrous oxide and other harmful gases that aggravate global-warming and climate changes (Cingoski & Petrevska, 2018). In addition, it is approximated that the end product of hotel to the environment in form of waste produced has increased global gas emission by 21% (Muazu et al., 2017). The emission of the harmful gases poses negative effect on the environment. The carbon emissions leave significant ecological footprint on the environment if proper environmental management is not considered (Jamaludin & Yusof, 2013). It is estimated that hotels contribute about 21% of total tourism sector greenhouse gases globally and is projected that there's a likelihood of the figure to increase in the future. The greenhouse gas produced by the hotels is a major contributor to climate change (Sucheran, 2015).

Vast consumption of energy in the hotel sector has resulted to development related challenges related to degradation of environment and exploitation of energy resources. Some of the negative environmental effects include air emissions and exhaustion of natural resources (Muazu et al., 2017). Climate change resulting from greenhouse gas emission effects are linked to low food production affecting food security of a country and production of intoxicated

food plants that can result to serious health related illness such as kidney problems and brain related illness (Magaji, 2012).

Uptake of green energy practices by hotels is a sustainable practice that aims to reduce excessive consumption of energy and reduce negative environmental impacts of hotels to the environment (Ardiansyah & Iskandar, 2021). In addition, hotels are adopting green energy practices to reduce their operational costs, increasing their profits and competitive advantage in the tourism industry, moreover, a majority of the tourists are aware of green energy practices and become cautious to seek hotel services that have adopted green energy practices (Cingoski & Petrevska, 2018).

In Kenya, majority of the hotels have not adopted green hotel practices to protect the natural environment and increase competitive advantage through innovations. In Ireland, majority of the hotels have adopted green hotel practices as per the European Union set standards for sustainability and protection of the natural environment (Mutitu, 2023). In Nakuru county, reports have revealed that organic waste is the leading type of solid waste at 56.9% that is collected for disposal at the dumpsite and hotels are leading sources of organic waste generated (Nakuru County Government, 2019). The dumping site becomes the source of odour affecting the environment due to the stench from the area. Air pollution releases greenhouse gases such as carbon dioxide to the environment causing climate change and affecting the environment negatively, affecting both tourism and hospitality sector. Majority of previous studies on green practices adoption by hotels in Nakuru have focused on green procurement practices and sustainable water management practices (Makokha et al., (2022), and Nthiga (2018). However, studies on the extent to which hotels have adopted green energy practices; green energy policies, sustainable energy trainings, and sustainable energy budget in Nakuru are limited. The study by Kamunzyu et al., (2024) analysed effects of green practices on sustainability in urban hotels in Kenya and examined green energy practices adoption in urban hotels including hotels in Nakuru. This study set out to examine the uptake of green energy practices to enhance sustainable green energy practices by hotels and reducing operational costs.

1.2 Research Objectives

To examine the uptake of green energy practices by hotels in Nakuru County.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Stakeholder's Theory

Stakeholder theory was proposed by R. Edward Freeman in 1984 (Freeman et al., 2010). The theory posit that stakeholders are several interested parties that must be included in an intended project or organization such as company's employees, customers, suppliers, financiers, communities, governmental bodies, political groups, trade associations, trade unions and competitors. Emphases are on the interconnected relationship between a business, organization, or project with its stakeholders not just shareholders. Organizations should manage the interests, needs, and diverse view point of stakeholders. The interrelationship creates morals and values in managing an organization. Organizations should give due regard to the interests of its stakeholders. In addition, stakeholder's theory is concerned with the moral endeavour of the organization in relation to the values, choice, and potential harms and benefits for a large group of groups and individuals (Eshikumo & Odock, 2017).

There is need for businesses to identify the needs of stakeholders to ensure that they strive to meet their expectations. Success of an organization is dependent on the management of its relationships with its stakeholders. Without good networks with the stakeholders, there is no reason why an organization should exist (Freeman et al., 2010). Hence, stakeholders are the groups that are important in the realization of success to any organization.

Some of the advantages associated with stakeholder theory is the impact it has on customers, employees and investors resulting to increased productivity. If employees who are considered as stakeholders feel valued, they will work extra hard and become more productive. In addition, organizations will have greater retention of their employees as well as their customers since increased productivity means delivery of services and products to customers that are improved hence enhancing customer loyalty and referring other customers to the organization. Increased productivity, and loyal customers leads to increased investments from investors as they would like to increase their market share in the organization. There are also ethical benefits related to stakeholder theory job satisfaction of employees' results to increased mental health of the work force, improved socio-economic status of the organization due to increased healthy competition with other organizations. Some of the disadvantages related to stakeholder theory are stakeholders' interests are diverse hence balancing this diverse interest becomes problematic. Power imbalance among the different stakeholders will affect the power of different stakeholders in influencing their opinions (Awa et al., 2024).

The author links stakeholders' theory to the research objectives of the study: to examine the uptake of green energy practices by hotels in Nakuru County, Kenya in the sense that there is need to engage diverse stakeholders' including hotel employees, hotel managers, county and national government in uptake of green energy practices in

Nakuru County. Various stakeholders' views, interest and needs need to be factored in while adopting green energy practices.

2.1.2 Resource Based Theory

This study will be informed by the Resource-based theory developed by Itami in 1987. Resource-based theory suggests that the productivity and performance of an organization is largely dependent on its resources. This theory is used to explain the relationship between different phenomena and performance of organizations. Competitive advantage of firms is not dependent on traditional resources such as natural resources, economies of scale, and technology as this can easily be imitated. Resource based theory posit that, competitive advantage of an organization is dependent on resources that exists in the organization and are valuable, rare and hard to imitate. Respect for the environment is a differentiating attribute over competitors and will lead to competitive advantages (Eshikumo & Odock, 2017).

In the context of green practices in the hotels, the theory suggests that green practices affect the organizational performance of hotels. According to the theory, an organization increases its performance when it develops resources that are valuable, rare, and inimitable. Organizations that have respect for the environment attain a differentiating attribute-valuable-green value which is rare and hard to imitate resources over competitors and will lead to competitive advantages (Kimeu, 2015)

The researcher links the research objectives: to examine the uptake of green energy practices by hotels in Nakuru county, Kenya in that green energy practices adopted by hotels are rare resources, valuable and not easily imitated. Green energy resources are rare resources that give competitive advantage over hotels that have not embraced the green energy practices enabling operational performance of green hotels.

2.2 Empirical Review

The authors Cingoski and Petrevska (2018) assessed the perceptions of managers on energy efficiency in hotels in Macedonia, Europe. The study used quantitative methods of research. The study revealed that 56.7% of hotels were certified on energy efficiency. In addition, the results of the study revealed that there are other energy saving measures that are relevant to hotels such as use of same towels and linens by the guests thus conserve energy that would have been used for laundering, utilization of a key card management system in each room without power unless you insert the room key, utilization of bulbs that conserve energy, and use of solar energy; these were energy efficient measures whose loadings were statistically significant with savings. The findings of the study also revealed that managers embraced energy saving practices to conserve the environment, enhance the company image, and reduce operational costs and to increase competitiveness to increase the number of guests in the hotels.

A similar study by Efthymion (2020) assessed energy efficiency management in hotels in Greece. The findings of the study revealed that hotels in Greece have implemented energy efficient management such as use of sensors and controls to adjust heat ventilation and air conditioning, installed a guest presence detection system, and motion sensors for bathrooms to control lighting. The energy efficient management systems implemented have a significant influence on decrease operation cost and maintenance cost of Greece hotels, increased guest comfort and delight and increased savings of approximately 33,700€. The findings of the study are consistent with the study of Cingoski and Petrevska (2018) who found out that hotels in Macedonia Europe have embraced energy saving measures/devices and influence hotel savings linked to decreased energy costs. However, this study was conducted in Greece which is a developed country and its energy efficiency management policies such as incentives might be different from those in Kenya and thus need to examine the energy saving measures/devices influence on operational performance of hotels in Nakuru, county, Kenya.

Similarly, Karvounidi et al., (2024) analysed innovative strategies for minimizing energy use among selected hotels in Greece. The study assessed three hotels for case study; Kawasaki King Skyfront Tokyu REI hotel Sfd, Botique hotel Stadthalle, and nearly zero energy hotels. Results of the study revealed that it is important to involve hotel employees in energy saving initiatives to enable implementation of policies and action to be undertaken. Also results of the study showed that comprehensive training programs can enable staff to adopt sustainable practices. Awareness should be created using campaigns to encourage energy conservation participation. The study however, was not specific on green energy practices trainings that staff ought to be sensitized on.

In addition, Wang et al., (2018) assessed practices of energy conservation amongst hotels in Macau, China. The study used quantitative research design as it developed index system. The study's findings revealed that 96.4% of hotels in Macau use energy saving devices for lightings. Additionally, it was revealed that utilization of energy saving measures in hotels were at about 50%. More so, 92% of hotels use natural lighting and 60% have installed and use timers. Further, the study's findings revealed that hotel design embraced some energy saving practices such as use of curtains to provide shading, use of windows that are heat insulated, and use of glasses in the rooms that are heat insulated. These energy saving practices with regards to energy saving practices are relevant in that they reduce indoor air-conditioning load. In addition, the results of the study revealed that hotels have installed water saving shower heads to reduce consumption

of water and energy used for heating. Green roof was yet another green practice that was adopted by the sampled hotels to minimize energy consumption rates- the green roofs increase building heat insulation and energy efficiency. However, green roof practices have only been adopted by limited number of 5-star hotels. Findings also indicated that hotels in Macau have adopted use of energy saving equipment's for lighting- LED lights and saved about 58% of energy. Moreover, the corridor lighting devices use LED lights. In addition, natural light utilization by the hotels has reduced energy consumption. Timers of lighting have been installed in hotels and these devices control lighting in corridor, offices, and rooms to save on power consumption. Further, hotels use air conditioners and escalators that are regulated to minimize energy consumption. Energy saving measures has reduced consumption of energy per unit resulting to economic benefits in the hospitality industry in Macau.

Although the studies by Cingoski and Petrevska (2018), Efthymion (2020), and Wang et al., (2018) were conducted in different countries and used descriptive statistics, they all are of the opinion that energy saving measures/devices influences the operational cost of hotels. In the sense that, they reduce the energy bills thus reducing the operational cost. In addition, Mbasera et al., (2016) assessed practices that are environmentally-friendly in Zimbabwe and South Africa hotels. The authors assessed green energy initiatives adopted by the hotels. The results of the study also showed that hotels in Zimbabwe and South Africa have implemented energy saving measures/devices. Some green energy initiatives adopted include: switching off electricity whenever possible, solar energy utilization, and replacing high energy consuming bulbs with energy saving bulbs, utilization of timing switch boilers, and usage of frying thermostat. In addition, the authors established the essence of taking on initiatives of green management was to reduce on cost. The authors Mbasera et al., (2016) used qualitative research design to assess practices which are environmentally friendly adopted amongst Zimbabwe and South Africa hotels. The findings from this study might not show environmentally friendly practices relationship with operational performance. Therefore, there is need to conduct the proposed study that intends to use both quantitative and qualitative research design to assess green practices influence on operational performance of hospitality sector to reveal the green practices association with operational performance as well as narratives on importance of green practices to hotels.

On the other hand, Kariuki and Odock (2017) examined green operations practices relationship to operational performance of hotels in the coastal region, Kenya. The authors examined the energy consumption relation to operating performance. The study's results revealed that the most common energy consumption practices are clean AC units, (Mean =4.4.5, SD=0.806). Other energy practices include use of energy efficient bulbs, solar power utilization, use of natural illumination, utilization of energy star equipment, and collection of used oil for subsequent use. In addition, the study results showed energy consumption significantly influence operational performance (B=0.313, p=0.058). this means that increase in 1 unit of energy saving measures results to increase in operational performance of hotels by 0.313 (31.3%). Kariuki and Odock's (2017) study was conducted in coastal region. This findings are consistent with the study of Cingoski and Petrevska (2018), Efthymion (2020), Wang et al., (2018), and Mbasera et al., (2016) that energy saving measures/devices have influence on operational performance of hotels in that they help reduce the energy bills hence reducing operating cost. The study's results might not reflect the situation in Nakuru County because of the different environmental context. Thus, need to conduct the proposed study on green practices influence on operational performance in hospitality industry within selected towns in Nakuru County, Kenya.

III. METHODOLOGY

The study adopted cross-sectional descriptive research design with preference to mixed methods approaches (quantitative and qualitative methodologies) in generating rich information which addressed the objective of the study. Cross-sectional research design allowed green energy practices data to be collected at one-point in time thus quick and inexpensive to conduct. This design is useful in assessing practices about a population (Mutitu, 2023). The study was carried out in 259 hotels in Nakuru County. Nakuru County is Kenya's fourth biggest city with 11 sub-counties. Agriculture, tourism, and manufacturing are the main economic activities in Nakuru county (Abagudo, 2023). The target population for the surveys were determined using probability sampling techniques. Specifically, 204 hotel managers were sampled using stratified random sampling technique from a sampling frame consisting about 259 hotels. Using the non-probability method (purposive sampling), key informants who are informed on hospitality industry and uptake of green energy practice were chosen for interviews. A total of thirteen interviews were held comprising sample of government and private officials associated with the hotel industry. Both quantitative and qualitative methods were used in primary data collection process, such as interviews utilizing semi-structured interview guides for qualitative data and surveys with questionnaires to collect quantitative data administered to hotel managers. Analyses of the data were both quantitative and qualitative. With the use of SPSS software version 25, quantitative data was examined using descriptive statistics. Version 12 of the N-VIVO program was used to analyze qualitative data, and the findings were presented in themes. The study took a variety of ethical guidelines into account. Authorization for research was obtained from all

pertinent government agencies. Respondents were guaranteed anonymity and the confidentiality of the data gathered about them.

IV. FINDINGS & DISCUSSION

4.1 Demographic Results

The study sought to establish the gender and education level of the respondents. The findings were presented in Figure 1.

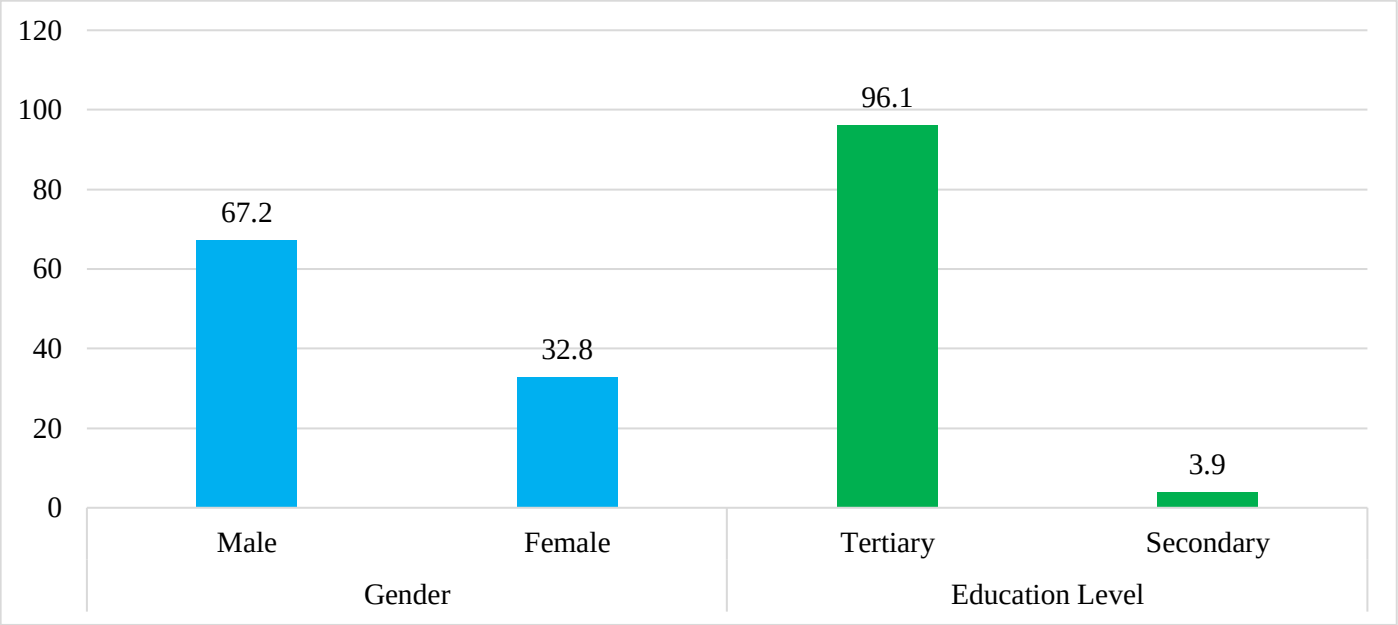

Figure 1
Gender and Sex of Respondents

4.1.1 Gender

Majority of the respondents (67.2%) were male, while (32.8%) were female. This shows that a majority of hotel managers were male. This might be attributed to managerial role demanding nature making men dominate more in the sector compared to women. These findings are consistent with the findings of Abdou et al., (2020) which revealed that a majority (93.7%) of hotel managers in Egypt were male.

4.1.2 Education Level

Majority of respondents (96.1%) had attained tertiary education, while (3.9%) had secondary education. The possible explanation is that, hotel managers require basic knowledge and skills for better hotel management. This might imply that; hotel managers can be trained on green practices and get the concept right for hotels since they have basic education. This finding is consistent with the finding of Abuelhassan and Elsayed (2020) which revealed that a majority (83.5%) hotel employees had attained tertiary education.

4.2 Uptake of Green Energy Practices

The objective of the study was to examine the uptake status of green energy practices by hotels in Nakuru County. The goal was to establish the extent to which the sample hotels had adopted green energy practices with specific focus on uptake of green energy policies, budget, and capacity building. Table 1 presents key statistics regarding respondents' scores on this variable.

Table 1

Uptake of Green Energy Practices

Variable	Categories	Mean ±SD (%)
Uptake of Green Energy Policy		
Policy on green energy practices	Yes	90.2%
	No	9.8%
Intentional procurement policy on purchasing energy saving electronics	Yes	69.6%
	No	30.4%
Budget for Uptake of Green Energy Practices		
Budget for supporting green energy practices	Yes	16.7%
	No	83.3%
Capacity Building for Uptake of Green Energy Practices		
Hotel manager participation in any environmental sustainability trainings	Yes	26.0%
	No	74.0%
Hotels manager participation in specific green energy trainings		
Energy saving measures	Yes	23.5%
	No	76.5%
Green energy practices	Yes	20.6%
	No	79.4%
Staff trainings on environmental sustainability trainings	Yes	25.0%
	No	75.0%
Create awareness to staff on hotels green energy practices	Yes	24.5%
	No	75.5%

Table 1 summarizes the descriptive statistics of the uptake of green energy practices. Participants were asked to indicate if their hotel have a policy on green energy practices. Results reveal that 90.2% hotels had green energy practices policies while 9.8% hotels did not have green energy practices policies. These findings are inconsistent with the findings of Barakagira and Paapa (2023), Kanokwan (2020), Muazu et al., (2017), and Luo et al., (2021) which revealed low adoption of green energy policies as contributing factors to low adoption of green energy practices. These findings were supported from an interview with one of the key stakeholders who stated that:

> "*The ones that have recently just come up maybe 2018, 2019 those are the very newest hotels that we have measures adopted by these hotels… use of the large windows for the air and as well as having some plantations in some of the buildings*" (Interviewee 3).

Respondents were asked to indicate if the hotel have a procurement policy that is intentional in purchasing energy saving electronics. The findings of the study revealed that 69.6% hotels have a procurement policy that is intentional on purchasing energy saving electronics whereas 30.4% hotels do not have a procurement policy that is intentional on purchasing energy saving electronics. The possible explanation to this finding might be majority of the hotels (69.9%) have an intentional procurement policy on purchasing energy saving electronics to reduce energy consumption thus reducing energy related bills.

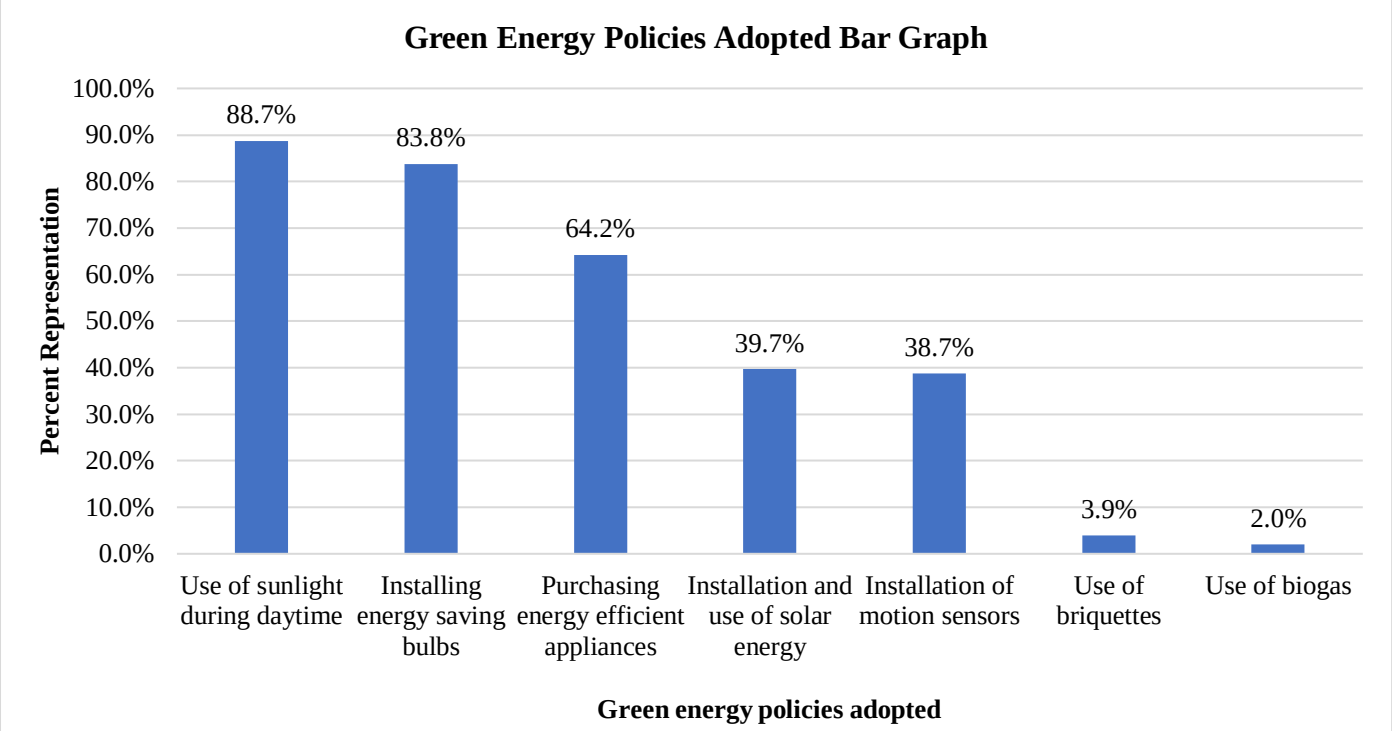

Figure 2
Green Energy Policies Adopted

Respondents were asked to indicate specific green energy policies adopted in their hotel. Figure 2 above presents the distribution of specific green energy policies adopted. 88.7% hotels use sunlight during daytime, 83.8% hotels install energy saving bulbs, 64.2% hotels purchased energy efficiency appliances, 39.7% hotels had policies on installation and use of solar energy, 38.7% had green energy policies related to installation of motion sensors, 2.0% hotels had green energy policies related to the use of biogas, and 3.9% hotels had policies related to the use of briquetted. Installation of energy saving bulbs policy had the highest representation at 88.7% whereas biogas usage energy policy had the lowest representation of 2.0%. The plausible explanation to these findings might be energy saving bulbs installation policies need minimal amount of money to purchase bulbs compared to installation and use of biogas energy which might be capital intensive. These findings might imply that majority of hotels are still dependent on energy use that is not green such as charcoal and this might imply that the carbon footprint is relatively high. This findings are consistent with the findings of Kariuki and Odock (2017a) which revealed that majority of hotels (M=4.35) have adopted energy saving bulbs. This view also received support from key informants who shared that:

> "*There are some hotels who uses for instance gas and solar panels for water heating to reduce their dependency on firewood for cooking and heating water that affects the forest cover and results to increased carbon footprint*." (Interviewee 5).

4.2.1 Budget for Uptake of Green Energy Practices

Participants were asked to indicate if their hotel have a budget for supporting green energy practices. From table 1 above, 16.7% hotels revealed that they have a budget for supporting green energy practices whereas 83.3% hotels indicated that they did not have a budget for supporting green energy practices. These findings suggest that most hotels did not have a budget for supporting green energy practices. The explanation to this finding might be financial implications to the hotel on setting aside a green energy budget. The findings might imply that green energy practices are not implemented by most hotels due to lack of finances budgeted for green energy. These findings are consistent with the findings of Luo et al., (2021), Alonso-Almeida et al.,(2017), and Mittal and Dhar (2016) which revealed low financial budget for green practices affecting uptake of green energy. In support of low budget as challenge for uptake of green energy practices, one of the interviewees stated that:

> "*Most of these green energy practices… initial capital investment is a barrier but those that have invested now have realised the benefits*." (Interviewee 7).

4.1.2 Capacity Building for Uptake of Green Energy Practices

Participants were asked to indicate if their hotel organized activities to create awareness to their employees concerning the hotels green energy practices. From table 1 above, results of the study reveal that 24.5% hotels indicated

that they create awareness to employees on green energy practices policy whereas 75.5% hotels revealed that they did not create awareness to employees on green energy policy. These findings are consistent with the findings of Silva (2022), Moramudali and Manawadu (2022) and Jamaludin and Yusof (2013) which indicated low trainings on green energy practices amongst hotels employees affecting uptake of green energy practices. Need to create awareness on uptake of green energy practices was captured in the interviews as one respondent stated:

> "*The hotels should take the initiative of training their own staff on the importance of going green, they do not need to procure consultancy service from externals point of view…it will cut cost*" (Interviewee 8)

In addition, participants were asked to specify which environmental sustainability trainings they participated in. The results of the study revealed that 23.5% hotel managers participated in energy saving measures trainings whereas majority of the managers (76.5%) did not participate in trainings on energy saving measures. Moreover, 20.6% managers participated in green energy practices trainings while 79.4% managers did not participate in green energy practices. Trainings. This finding reveals that majority of the hotel managers did not participate in environmental sustainability trainings that are specific to green energy practices. This implies that hotel managers might not be well informed on hotel green energy practices thus not implementing green energy practices in their hotels.

Participants were asked to indicate if they had organized staff trainings on environmental sustainability in the last one year. Results revealed that 25.0% hotels train their staff on environmental sustainability trainings whereas 75.0% hotel staff are not trained on environmental sustainability trainings. The plausible explanation to this finding might be majority of hotel staff are untrained on environmental sustainability issues. This implies that hotel staff do not consider sustainable practice in their daily activities in the hotel resulting to unsustainable practices in hotels. These findings are consistent with the findings of Jamaludin and Yusof (2013), Luo et al., (2021) which revealed low trainings for staff on green energy practices indicating low incidences of participation in these trainings.

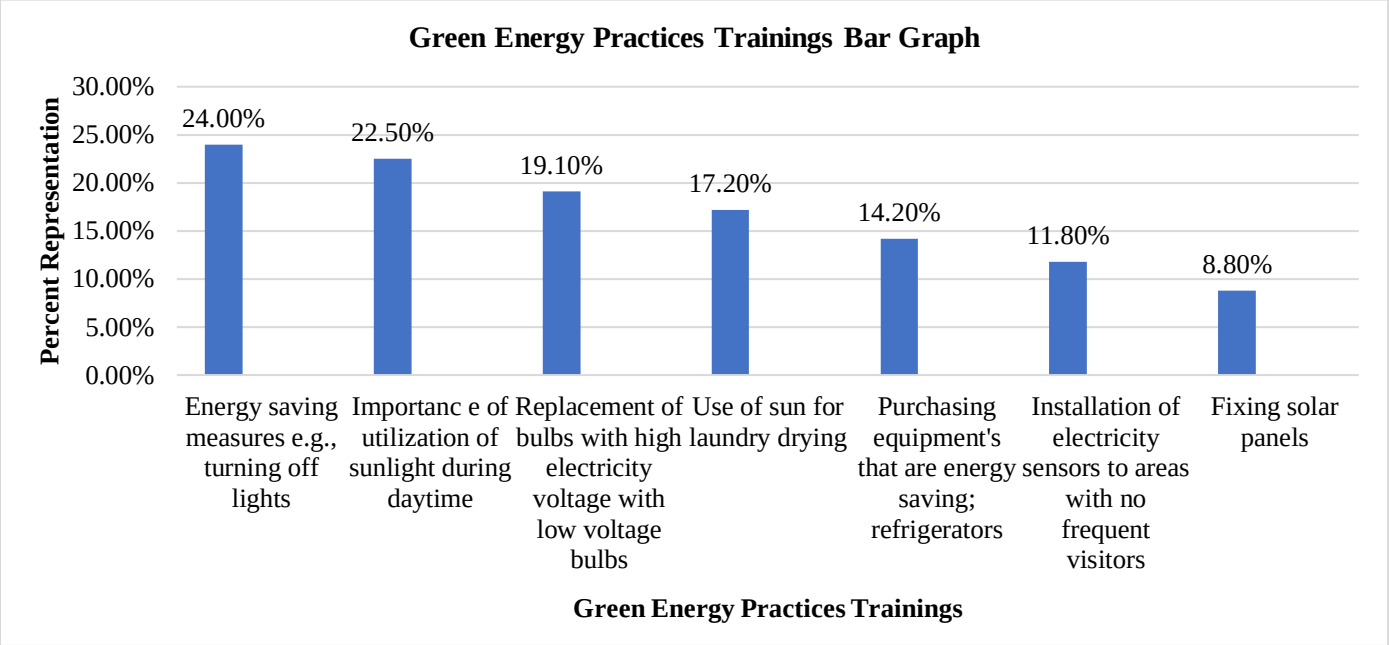

Figure 3
Green Energy Practices Trainings

Participants were asked to indicate specific trainings on green energy practices that they participated in the last one year. As shown in Figure 3 above, 24.0% hotels trained their staff on energy saving measures, 8.8% hotels trained their staff on fixing solar panels, 22.5% hotels offer trainings to their staff to their staff on utilization of sunlight during daytime, and 14.2% of hotels train their staff on purchasing of energy saving equipment's. In addition, 19.1% hotels train their staff on replacement of high voltage bulb with low voltage bulb, 11.8% hotels offered trainings to their staff related to installation of electricity sensors, and 17.2% hotels train their staff on use of sunlight for laundry drying to their staff.

Energy saving measures e.g., turning off lights if you are not in the office had the highest representation at 24%. The explanation to this finding might be that turning off lights if you are not in the office might be not be a training per se rather a warning that is given to employees to save energy. Fixing solar panel had the least representation at 8.8%. The plausible explanation to this finding might be the trainings needs expertise who are hired only once when the hotels are mounting the solar panels and thus since it's not a day to day activity the management might not consider its training a priority to its employees. These findings are consistent with the findings of Karvounidi et al., (2024) which revealed

the need for continuous engagement of employees in comprehensive training programs to raise awareness in adoption of sustainable practices to enhance employees engagement in energy conservation in their daily activities.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

According to study results, there is low uptake of green energy practices, that is; green energy budget and trainings. In addition, the results of the study revealed high uptake of green energy policies. Hotel management can offer a forum for educating their staff about green energy practices and importance of uptake of green energy practices to environmental conservation by reduction of air pollution and greenhouse gases resulting to climate change. In addition, the trainings will inform the staff on how green energy practices uptake help reduce operational cost related to energy bills hence increasing profits. More so, hotel management should set aside budget for uptake of green energy practices. Hotels should not only increase their uptake of green energy policies but also develop strategies of implementation of the policies through green energy trainings and budget to reduce energy consumption, operational costs related to energy bills and environmental conservation.

5.2 Recommendations

The government should formulate policies that promotes subsidised green energy such as solar panels. This will make the solar panels affordable to the hotel owners and might influence their uptake of the green energy especially on solar energy. The government can also consider training the youths on developing briquettes and biogas energy. The limited skills in establishing these energy sources might limit access and affordability hence availability of these skills and put into practice might influence uptake of green energy in hotel sector.

The hotel management should offer trainings to their staff on green energy practices. Hotels should consult with green energy professionals to train their staff on how to energy in practices that help save energy within their hotels and use of clean green energy such as biogas energy. This will increase the know-how and skills needed for energy conservation. In addition, hotel management should set aside budget for adoption of green energy practices. Financial resources are relevant in the uptake of green energy and this should be provided by hotels having a specific budget targeting green energy uptake and retrofitting energy systems to enhance energy saving.

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