

## **GREEN ENERGY CONSERVATION PRACTICES IN THE FIVE STARS HOTEL IN MALAYSIA**

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### **ABSTRACT**

A study of 353 travellers both business and leisure were interviewed on the green energy conservation attributes that guests seek in the five star hotels in Malaysia. Using conjoint analysis of energy management, water management and waste management for green energy conservation in the five star hotels, the study found that the most influential green energy conservation on hotel green practices preference for this sample was energy management. These respondents were also supportive and agree that placing more green plant in the hotel area, allow more natural lighting and ventilation in the hotel area. Guests also appreciated the idea for green energy conservation practices in the hotel to be 'green hotel' and it shows that they are strongly support this green practices in the hotel. However, the study found few differences between the level of importance of energy management, water management and waste management. Most of the respondents are supportive with the idea of energy management practices of LED light and the control of hotel air condition temperature with the waste management practices of using recycle amenities in the guest room and placing recycle waste bin around the hotel area due to the concern on hotel rating (five star hotels image). However, this study limitation is that only three green attributes were studied and the inclusion of additional attributes. These findings give five star hoteliers information about travellers' preferences of a green energy conservation practices in the hotel to be a green hotel in line with the ASEAN green standard.

Keywords: ASEAN Green Standards, Green Hotels

### **INTRODUCTION**

According to the 2008 National Leisure Travel Monitor survey, 85 percent of travellers consider themselves environmentally conscious (Crocker 2008), and a separate study found that 43 million U.S travellers are very concern with environment. It shows that there are a great demand and potential for hospitality industry to look into green environmental implementation in the hotel. Hotel Guests' Preferences for Green Guest Room study by Millar. M. and Baloglu. S. it reported that 77.5 percent travellers are willing to pay for green guest room which attributes to green practices. In the past, there is no hospitality industry standard definition of a green hotel. Some only believe the practiced of implementing guest room recycling, using green products and linen re-use practices are enough. According to Butler (2008, p.234) there is hard evidence of green and sustainable development in the long run. Every newspaper or magazine will have some coverage on "green" development which implies that people are going towards being environmentally friendly. Brown (2005) cited by Ikeda (2009, p.1) stated that

sustainability is widely recognized since the World Commission on Environment and Development presented '*Our Common Future*' in 1987 under the United Nations.

Hotels are moving towards green practices due to the facts of cost saving issues and environmentally – friendly issues. Energy is a fundamental source for the hotel for maintaining comfort standards and it is essential that energy ought to be used efficiently. Like other resource management principles, a well planned energy management is beneficial to all parties. Hotels owners and managers would not suffer losses as efficiently run companies requires less manpower which will in turn, reduce the operating expenses. Companies will also benefit from decreased insurance costs, which will be another money saving area (cited from Energy Advantage Inc, 2008). These 'extra' funds could then be used to be utilized in improving or expanding hotel facilities as well as other future projects (Kirk, 1996, page 47). Moreover it benefits the company, financial sustainability wise, during the long run and it is worth to be given consideration as they are less conspicuous.

In the ASEAN region, the ASEAN National Tourism Organization has come up with six ASEAN Tourism Standards and one of it would be the ASEAN Green Hotel Standard. It was first introduced in the year 2008 to recognize hotels that fulfill standards agreed upon by the ASEAN National Tourism Organizations. The ASEAN Green Hotel Award given to hotels is chosen by nomination from each ASEAN Member States which meet the standards listed. From this award, winning hotels are encouraged to continue their green practices to retain the award.

In Asian country, Green movement have begun in Singapore for some time and all it needs is to prove the company's commitment to going green to attract the attention of investors. Those companies who participate in energy management strategies will benefit from a co-funding scheme provided by the National Environment Agency and the Building and Construction Building and Construction Authority (Singapore Government, 2009). Guests would also gain from this implementation because a proficiently managed hotel would be able to satisfy their needs at a lower cost that would also encourage repeat business and stronger customer retainment (Kirk, 1996, page 47).

There are 10 hotels in Malaysia are now hold green award status in line with the Asean Green Hotel Award. According to Tourism Minister Datuk Seri Dr Ng Yen Yen, mention that the Asean Green Hotel Standard is an essential tool to support Asean as a world class quality destination. The green criteria were encouraging the use of green products, provision of training programs' for operation on environmental management and introduction of waste management techniques' such as recycling. However, in the green implementation and practices in Malaysia hotels are mainly looks into the green services rather than moving towards green energy conservation of the three criteria (energy management, waste management and water management) in specific.

Hence, the purpose of this study is to determine the commitment level of green practices in five star hotels in Malaysia looking into travellers preferences. In order to achieve this research will look at the current practices of green energy conservation in the five star hotels Malaysia referring to any hotel with or without green certification and the differences of green energy conservation practices between the five star hotels Malaysia with the ASEAN Green Hotel Standard will be clarified. By looking into these

two areas, further recommendation will be given to the five star hotels in Malaysia for better practices of green energy conservation looking into cost effectiveness and customer satisfaction.

## **Literature Review**

The Official Hotel Guide (published in the US and followed worldwide), 2010 hotel classification scheme for five star hotels is about offering most luxurious premises, widest range of guest services, as well as swimming pool and sport and exercise facilities. In order to operate such facilities, it might need greater costs to operate the hotel. What is the practice of green in the five star hotels? There is no definite interpretation of "Green Hotel". It may vary from one person to another or one organization to another but the concept is still the same. For instance, a green hotel concept by Butler (cited from Hotel Online 2007) are made up of two aspects of the building; the physical and the operation. The physical aspect covers the materials used for the building and site, whether or not it could be damaging to the environment in the long runs, recyclable materials or reusable materials. The second aspect involves the actual operations of the physical plant; its activity and how it is run, the systems, the organizational culture and their efforts in efficient management. Another view of green hotels as stated by the Travel Industry Dictionary (cited from Home Travel Agency, 2007) defines that a "green" hotel is a lodging establishment that has made a commitment to various ecologically sound practices such as saving water, saving energy, and reducing solid waste.

Other sites and organizations in majority, had not defined what a green hotel is but rather, they explain the concept of how to form a green hotel. Ideally, the definition of a green hotel would be that "Green" Hotels are environmentally-friendly properties whose managers are eager to institute programs that save water, save energy and reduce solid waste, while saving money, to help protect the environment ("Green" Hotels Association, 2009) Integrating Green hospitality into your business involves taking measures of reducing excessive natural resources and help preserve them in any way possible without disrupting the business. It is a proficient way to help the environment and it will improve the image of the establishment at the same time.

According to the survey, consumers would favour properties that actively tried to implement environmental protection (resort hotel), allowed guests the option to reuse towels and sheets, and supported community environmental causes. Some 54 percent stated that they will patron to the hotel that practices green however they are not willing to pay more for any other green implementation that could cost them more ('green' travel) example for car rental companies that introduce hybrid cars. According to Malaysia hotel news on travel and tourism issues related to green award status, mention that business travellers and meeting professionals who support green hotel and sustainable meeting expect venues to reduce their environmental footprint in ways that do not compromise the guest experience. Such as implementing a program of linen and towel reuse, recycling bins in guest rooms and functions spaces, and energy and water conservation initiatives are a good start. Many hotels aware that they should go beyond these sustainable basics to attract travellers moving forward, 42 percent of the corporate travellers' say they are now fully committed to corporate social responsibility for their events (such as involving with green meeting project), according to watch 2011.

The principle of energy management; hotels consumes more energy than industrial buildings, naturally ventilated offices and secondary schools, according to the Energy Efficiency Office. According to Kirk (1996, page 47) there is often a considerable scope for making savings and researches was done through funding of demonstration projects, target consumption figures for different categories of hotels and development of case studies. There is a possibility of producing a percentage of 5% savings in energy costs through good housekeeping measures and 10% should the hotels implement low cost measures. The principle of energy management is to reduce cost of energy consumed by the establishment however; at no stage should there be any intrusion in the comfort level supplied to the guests unless they have consented to it.

However, more developed energy saving technologies that have been made available to the industry with some being untapped. For example, according to a study done in Jordan done by Haithem (2005, page 1) just several years ago , the result showed that there is a possibility to save at least 15 % of the annual energy cost in majorities of the hotels there. An energy management specialized company in Australia, Energy Conservation (cited from Energy Conservation, 2009) had proven to reduce as much as 30 per cent of the energy bills.

Like other resource management principles, a well planned energy management is beneficial to all parties. Hotels owners and managers would not suffer losses as efficiently run companies requires less manpower which will in turn, reduce the operating expenses. Companies will also benefit from decreased insurance costs, which will be another money saving area (cited from Energy Advantage Inc, 2008). One of the world’s largest green developments, City Centre in 2011 was designed with sustainability in minds on the green practices and the practices has catch the attention of those interested in sustainable travel and green meetings. This green practices was paying attention to the sustainability elements, first is sustainable energy design such as the used of low wattage lighting in guest rooms, public spacing and garage, follow by water conservation such as the used of low-flow showerheads, faucets and toilets that do not compromise performance (saves 30 percent). Continue with hotel ventilation with the aim of producing better air quality and energy savings. Last is about using of recycled material in hotel.

**METHOD**

A research of Environment management practices in Malaysia hotel, by Khalid. S, 2006 mention that, the practices of environmental management are mainly concern with the hotel day to day practices with the four R concepts which consists of, Reduce, Reuse, Recycle and Rethink as a guide. For example to reduce waste, glass and jugs were used to provide drinking waters during hotel event instead of using bottled plastic water. Reuse old furniture and maintain old roof tiles in some instances as decorations. The four R practices are elaborate into a list, the lists of the practices in place to ensure an environmentally friendly hotel is listed in table 1

Table 1: Hotel Operations Green Practices

<b>Green Attribute</b>	<b>Hotel practices</b>
In cooperating green practices in hotel operation	Used recycle amenities, the use of organic products, green training in hotel
Waste management	recycle policy (towel, linen) recycling bin in hotel area

Conservation of water	Control the water supply in hotel using auto system in all hotel area
Energy conservation	Possible use natural lighting in all area and LED light to control cost
Usage of natural resources	Cut down the usage of chemical for pesticide, reuse of old furniture, in stalled solar panel for water heating
The hotel social and community programs are discussed	Poster and banner related to green practices to create hotel staffs and guests awareness

In this study it will analyze the three green management practices in the hotel refer to table 2 and using travellers comment it will further study how significant of the green management attribute towards travellers' perception and the important level of green to travellers when booking for a green hotel. Due to the complexity of travellers' preferences towards green attributes, conjoint analysis has been used to understand travellers' preferences in specific. (Apostolakis and Jaffry, 2005; Lewis, Ding and Geschke, 1991). The result of this green attributes measurement will be used as guidelines for a five star hotel in Malaysia in practicing green. This study will also look at the significant differences of the green attributes practices which consist of energy management, water management and waste management in the hotel using Asean Green Hotel standard.

Table 2: Three Green Practices

Green Management	Attribute
Energy Management	Majority of the hotel area have window to allow natural lighting Majority of the hotel public area allow natural ventilation Hotel used LED lighting to control cost Hotel air- condition temperature are controlled
Waste Management	Hotel provides waste bins in all area (guest room and public area) Hotel used recycled amenities in the guest room Green awareness using poster and banners
Water management	Recycled rain water for cleaning purposes Use of low-flow shower heads, faucets, and toilet flush Towel reuse policy

## FINDINGS

The demographic data will be used to identify the green attributes most preferred by the travellers. It also looks into the travellers' perception on level of importance toward the green attribute. Using descriptive statistic and correlation analysis it will further present each attribute level of energy management, waste management and water management. The categories in each attribute are representing the variable for each green attributes and represents the "desirability" of that particular attribute level. A positive value indicates a preference for the attribute level, while a negative value indicates no preference. Before running any statistical analysis of the respondents, checking of the data for irregularities, missing data or unrealistic responses had been done. As a result, total 353 data was analyzed for this study.

Demographic profile of the 353 respondents received from both business and leisure travellers, 195 (55.2%) of them were from male travellers. The respondents' age distribution was fairly even 114 (32.3%) were 26 to 35 years old and 97 (27.5%) were 36 to 45 years old group. In term of nationality most of the respondents are Malaysian, 284 (80.5%) and 69 (19.5%) are foreign travellers. Most of the respondents are employed, 221 (62.6%), follow by 39 (11%) respondents are self employed, 39 (11%) are students and 118 (5.1%) are retired. (For a summary of demographic results, see table 3).

Table 3: Demographic Profile of Travellers

Demographic Category		Travellers (n= 353)	
		Frequency	%
Gender	Male	195	55.2
	Female	158	44.8
	Total	353	100
Age	18 - 25 Years old	82	23.2
	26 - 35 Years old	114	32.3
	36 - 45 years old	97	27.5
	46 -56 Years old	60	17
	Total	353	100
Nationality	Malaysian	284	80.5
	Foreigner	69	19.5
	Total	353	100
Occupation	Employed	221	62.6
	Unemployed	22	6.2
	Self employed	53	15
	Student	39	11
	Retired	18	5.1
	Total	353	100

The green attributes consists of three green practices, which it consists of energy management, water management and waste management. In each attributes it further discuss the green practices implement in the hotel. Respondents are require to rate the level of importance on each category in the attributes based on their expectation, travel and stay experienced at the hotel which practices the green attributes.

Table 4: Energy Management Category

Energy Management Category	Natural Lighting		Natural Ventilation		Hotel Air-condition Temperature controlled		LED light in hotel	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Not Important	0	0	0	0	3	0.8	10	2.8
Less Important	24	6.8	29	8.2	54	15.3	69	19.5
Average	152	43.1	168	47.6	161	45.6	126	35.7
Important	143	40.5	112	31.7	97	27.5	97	27.5
Very Important	34	9.6	44	12.5	38	10.8	51	14.4
Total	353	100	353	100	353	100	353	100

Majority travellers shows the concern of energy management practices in hotel on the use of natural lighting in day time, natural ventilation in the hotel public area, the control of hotel air-condition temperature in the hotel public area and guest rooms and the used of LED light in the hotel public area for energy cost saving. However the energy management practices in table 4 shows that energy management practices is not consider as the main attributes in green energy conservation practices, looking into the four category by the level of importance 43% of the respondent commented at average and 31.8% comment at important level and 0.9% commented on less important.

Table 5: Waste Management Category

Waste Management Category	Recycle Amenities		Recycle waste bin		Green poster and Brochure in hotel	
	Frequency	%	Frequency	%	Frequency	%
Not Important	32	9.1	2	.6	0	0
Less Important	66	18.7	70	19.8	14	4
Average	122	34.6	118	33.4	141	39.9
Important	103	29.2	108	30.6	132	37.4
Very Important	30	8.5	55	15.6	66	18.7
Total	353	100	353	100	353	100

For waste management practices it consists of three categories using recycle amenities in the hotel and guest room, placing recycle waste bin in all hotel area and guest room and green education to all hotel staffs and guest using poster and brochure for green awareness. Refer to table 5, it shows that respondent's expectation of waste management practices in hotel is consider important 32.4% and 36% comment at average level of importance.

Table 6: Water Management Category

Water Management Category	Recycled rain water For cleaning purposes		Use of low-flow shower, Faucets & toilet flush		Towel reuse policy	
	Frequency	%	Frequency	%	Frequency	%
Not Important	0	0	4	1.1	0	0
Less Important	5	1.4	34	9.6	18	5.1
Average	102	28.9	146	41.4	144	40.8
Important	135	38.2	97	27.5	131	37.1
Very Important	111	31.4	72	20.4	60	17
Total	353	100	353	100	353	100

Looking into the green implementation of water management category, which consists of recycled rain water for cleaning purposes, use of low-flow shower, faucets and toilet flush and towel reuse policy, they had comment that their expectation towards the level of importance at 37% average level and 34.3% of the respondent rate it as an important implementation in the hotel.

Based on the level of importance from table 4, table 5 and table 6 for the green attributes, Most of the travellers had commented their preferences of green practices of green management, water management and waste management at average level and important level. This shows that the green attributes are very important factors that travellers will concern when selecting green hotel to stay. Looking into the level of importance for each attribution under category of very important, it can be rank that

water management (part-worth by very important factors is equal to 0.688) considers as the most important factors, follow by energy management (part-worth by very important factors is equal to 0.517) and waste management (part-worth by very important factors is equal to 0.428).

Respondents are ask to rank the importance score for the hotel green attributes practices, this rank looking into the three green management between energy management, waste management and water management. Table 7 shows that 23.5% of the respondent rank the green attributes from water management, continue by energy management and waste management, it shows that the water management are the main important practices that are highly expected by travellers when choosing a green hotel. Refer back to the water management category in table 4; table 5 and table 6 it also shows that water management contribute the highest part-worth by very important factors is equal to 0.688. Table 7 also can be used to infer, attributes with the highest relative preference score are the most influential on green practice preferences between energy management, water management and waste management.

Table 7: Rank for Green Attributes

Green Attributes Rank	Frequency	Important score	Rank
Energy M, Waste M, Water M	51	14.4	5
Energy M, Water M, Waste M	67	19.0	2
Waste M, Water M, Energy M	58	16.4	3
Waste M, Energy M, Water M	52	14.7	4
Water M, Energy M, Waste M	83	23.5	1
Water M, Waste M, Energy M	42	11.9	6
Total	353	100.0	

M (management)

The study also measure travellers willingness to support hotel green practices by looking into travellers awareness on three aspects, which consist of hotel green practices, willingness to support hotel green practices and price sensitivity (willing to pay less, more or same to stay at green hotel). 256 respondents (72.5%) are aware about hotel green practices, 253 respondents (71.7%) also comment that they will stay at hotel that practices green and 301 (85.3%) respondents are willing to recommend green hotel to others. In table 8.0, correlation between travellers green awareness and willingness to support hotel green practices, r calculate is 0.277 (very weak positive correlation); Not Significant < 0.05.

Table 8: Correlation between Travellers' Green Awareness and Willingness to Support Hotel Green Practices

		Green Awareness	Willingness to Support Hotel Green Practices
Green Awareness	Pearson Correlation	1	.277**
	Sig. (2-tailed)		.000
	N	353	353
Willingness to Support Hotel Green Practices	Pearson Correlation	.277**	1
	Sig. (2-tailed)	.000	
	N	353	353



To further test traveller willingness to support green, Table 9 further analyse the correlation between hotel green practices and travellers' willingness to support hotel green practices, which \*\*. Correlation is significant at the 0.01 level (2-tailed). the correlation r calculate is 0.103 (also consider very weak positive correlation); Not Significant < 0.05. Both table 7 and 8 shows a possible relationship between each preferences to stay and support the hotel green practices.

Table 9: Correlation between Hotel Green Practices and Travellers' Willingness to Support Green Practices

		Willingness to Support Hotel Green Practices	
		Green Practices	
Willingness to Support Hotel Green Practices	Pearson Correlation	1	.103
	Sig. (2-tailed)		.053
	N	353	353
Green Practices	Pearson Correlation	.103	1
	Sig. (2-tailed)	.053	
	N	353	353

Although most of the respondents show a good respond in supporting green practices in the hotel, however not many of them are willing to pay extra for staying at green hotel and some commented they were willing to pay less refer to table 8.0. 26.3% of travellers indicated that they were willing to pay less and only 53% were willing to pay more. However, 58.6% majority believed there should be no price difference between green hotel and traditional hotel. Travellers were also asked their willingness to pay less or more by what percentage. 51.6% Majority are only willing to pay less by 5% and 54.7% majority are willing to pay more by 5%.

Table 10: Travellers Price Sensitivity towards Green Hotel Green Practices

		Frequency	%
Willing to pay _____ in order to stay in the green hotel	Less	93	26.3
	Same	207	58.6
	More	53	15.0
	Total	353	100.0
Willing to pay less by _____ %	5%	48	51.6
	10%	29	31.2
	15%	16	17.2
	Total	93	100.0
Willing to pay more by _____ %	5%	29	54.7
	10%	15	28.3
	15%	9	17
	Total	53	100.0

The study also further analyse the correlation between travellers willingness to stay at green hotel and travellers willingness to pay less, same or more in order to stay in the green hotel. The objective of this analysis it to test on the price sensitivity issues against travellers' decision in supporting hotel green practices. Refer to table 11, the correlation r calculate is -.007 (also consider very weak negative correlation); which it is

not significant < -0.05. That is mean travellers willingness to pay for stay in the green hotel not highly determine by their preference in choosing green hotel to stay.

Table 11: Correlation between Travellers Willingness to Pay for Green Hotel and Preference to Stay at Green Hotel

		willingness to pay for green hotel	Preference to stay at Green Hotel
willingness to pay for green hotel	Pearson Correlation	1	-.007
	Sig. (2-tailed)		.901
	N	353	353
Preference to stay at Green Hotel	Pearson Correlation	-.007	1
	Sig. (2-tailed)	.901	
	N	353	353

## IMPLICATIONS

Majority Respondent, preferences towards green hotel are mainly mention in the green attribution (table 4, table 5 and table 6), except some of the respondent commented other green preferences such as wanted a hotel room that incorporated a refill shampoo, hotel should have more green plan in the hotel public area as it will create more natural environment for guest to have better green experiences for relaxation, travellers also propose on the use of hotel key card to control power use in the guest room and recycling bin in the corridor area, but not the room.

The findings shows that, the three green attribute (energy management, water management and waste management) for ASEAN Green Hotel Standard was the most influential attribute on overall preference for the hotel green practices. Numerous other studies have found that travellers tend to be environmental concern such as they are tended to be skeptical of eco-labels (Carlson et al. 1996; Karna et al. 2001). The preference stated here may indicate a desire for some sort of regulation in the industry, or a checklist or criteria that gives potential hotel guests a clear picture of what constitutes a green hotel. If the hotel were to create a green label that it's straightforward, easy to understand and truthful, guests' skepticism will be minimized. The practice of green attribute standard communicate certain characteristics to guests and at the same time it them about the green hotel industry.

The three green attributions are the only extrinsic attributes that had been tested in this study. The fact that it was accorded importance far greater than the intrinsic factors it can be rank that water management (part-worth by very important factors is equal to 0.688) considers as the most important factors, follow by energy management (part-worth by very important factors is equal to 0.517) and waste management (part-worth by very important factors is equal to 0.428). However the three green attributes does play the important intrinsic variable for travellers preference towards hotel green practices. Most of the travellers are undoubtedly familiar with some of the attributes tested, such as reused if towel policy, using LED light in the hotel area for energy saving and the used of recycle bins, which are already widespread. In fact, based on the information collected from some of the five star hotels in Malaysia through the interview process with the hotel manager, most of them commented that the green

attributes mention in table 2 had been implemented by the hotel in line with the green practices. Some of the hotel manager also commented that they also refer to international green standard such as ASEAN Green hotel standard, LEED certification as a benchmark for the hotel to determine the hotel green practices.

Travellers also commented on the concept of refill shampoo rather than replace it; perhaps hoteliers could take advantage of this opportunity by experimenting with dispensers filled means refill upon request. This will help hotel to save cost, reduce waste cost and housekeeping staffs does not need to replace the amenities daily. Travellers also commented on their preference that hotel should have more green plant in all areas to reflect the natural environment in the hotel. The use of green plant will also benefit hotel in many factors such as it help to create natural ventilation, hotel do not have to spend more cost on flower decoration as green plant will longer life span compare to fresh flower. Travellers also commented on the use of room key card to control room energy used, which based on the survey done by Philips, P. and Louvieris, P. (2005), it stated that most of the modern hotel had implemented a key card system to control 76% of the energy used in the room such as lighting, water heater, air conditioner and television.

In addition travellers also commented on the use of recycling bin at hotel corridor rather than guest room. However the practice of this attributes in most of the hotel in Malaysia it is not exist. Most of the hotel only commented that the recycling bin will only be place outside the hotel or either at the back of the hotel, which mean hotel will hardly get hotel guest to get involved in recycling policy. In addition, some of the hotel may not recycle at all. Referring to the finding in table 5, only 33.4% commented the importance level of placing the recycle waste bin at hotel area under average category which is not consider as high attribute to green waste management practices.

The conclusion on pricing for green hotel shows that majority of travellers in this study believed that a green hotel room should not be priced differently than one that is not green. Even they are willing to pay more, majority of the travellers commented that they will not pay more than 5% extra for green room. In any event, hoteliers need to understand and aware that guests have a perception that a green hotel costs more to stay at compare to a non green hotel. Guest preferences on green hotel are also influence and determine by price factor. Therefore it is very importance for hotelier to take this issue into consideration when establishing green hotel room rate and to ensure the rate are charge accordingly and competitively. However a further studies need to be done to resolve the controversy, since in 2011 Cornel study found that a substantial number of guests would pay more for sustainable rooms (Suskind and Verma 2011).

Finally, this study found most of the travellers are very supportive towards green practices in the hotel based on the three green attributes list out in the questionnaire. It also shows a strong relationship between their support towards green hotel and majority of the travellers will prefer to recommend green hotel to other, as most of the travellers nowadays are environmentally oriented and most of them also aware about hotel green practices. Refer to the ranking for green attribute in table 7, it shows that majority of the travellers rank water management as the first priority to green practices in hotel follow by the energy management and waste management. Despite the facts that Malaysia are now so concern on the water crisis issues, many research and proposal had been done by Energy, Green technology and water departmental to overcome this crisis issues such as

the introduction of water management implementation in all sectors, water treatment plant and maintenance work on pipes had been propose to minimise the risk of losing more non- revenue water (Deborah Loh, Averting water crisis, July 2010).

Due to the facts that most of the hotels in Malaysia begun incorporating green policies in to the management and operating practices, and despite the belief that hotel guests seek environmental green application in the green hotel. As a result, it shows future opportunities for future studies. One possibility is to see how the green attribute can be implemented in hotel chain (e.g., looking into different categories of travellers), food industry and event industry. It can be used to gain a better understanding of the supply side of green hotel attributes, such as what is the hotel manager think about environmental friendly policy and how it can be incorporate to the company culture.

This study was looking into three main green attributes which consists of energy management, water management and waste management. However additional green attributes can be included in the future research as well such as sustainable management (eco factors). It can be further look into how each attributes, both individually and as a bundle, and both green and not, may influence traveller preference for a hotel. Possibility recommendation for future research, that seeks understanding of the green hotel consumer and the green hotelier should also assess environmental attitudes, personal values and how the green practise may influence hotelier perception on the green implementation and practices in management and operational aspects in line with guest satisfaction in the hotel.

As it mentioned at the outset, the sample only looking into hotel travellers both business and leisure travellers who indicate their preferences toward hotel green practices, their willingness to stay in the green hotel, their support towards green hotel and willingness to pay to stay at green hotel. And the data analysis only looks into frequency distribution and correlation of each variable of guest preferences. Even though some travellers may not be willing to stay in a green hotel and not willing to pay extra to stay at green hotel, it does not, mean that they do not have pertinent opinion about the green attributes that may be incorporate into an environmentally friendly hotel. based on the additional collected from the interview with the hotel manager it also shows a positive result that majority of the hotel in Malaysia are moving toward green practices, which in line with the ASEAN Green Hotel Standards and they are working towards the achievement for green certification.

## **CONCLUSION**

The primary of this study was to identify the travellers' preferences towards green energy conservation practise in the five star hotels in Malaysia. The analysis revealed some findings such as most of the travellers are highly concern towards water management in green practices, they appreciated a recycling policy such as placing a recycle bin the hotel public are so the guest will also support the practice recycling and they would be favourable to the concept of using green plant in hotel public area for better enhancement on environmental effect. The travellers also highly encourage staying in the hotel that had practice green attribution and they are willing to support the practice of reuse towel policy, the control of hotel air condition temperature by the hotel. Travellers also willing to support and recommend other to stay at the green hotel, which practice green attribute. This result contributes to the practical advancement of the hotel

industry both management and operational side by indicating the green attributes that may be most desirable to travellers. With this information, it can also help the hotel managers and operators set up their green hotel room accordingly and help to control operation cost through effective green attribution.

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