UNIVERSITI TEKNOLOGI MARA
Cawangan Perak
Kampus Seri Iskandar

e-Proceeding

v-GOGREEN2020

29 - 30 SEPT

VIRTUAL GO-GREEN: CONFERENCE & PUBLICATION

"SUSTAINABLE ENVIRONMENT, RESILIENCE AND SOCIAL WELL-BEING"

Organiser :
Research, Industrial Linkages, Community & Alumni Network (PJIM&A)

Co-organiser :
Faculty of Architecture, Planning and Surveying (FSPU) & Centre for Post Graduate Studies (CGS)

Publication Date : 22nd February 2021

Virtual Go-Green Conference and Publication 2020

UNIVERSITI TEKNOLOGI MARA, PERAK BRANCH
February 2021

Main Committee

Virtual Go-Green Conference and Publication 2020

Advisor 1	*: Prof Sr Dr Md Yusof Hamid, AMP*
Advisor 2	*: Assoc Prof Dr Nur Hisham Ibrahim*
Chairman	*: Sr Dr Asmalia Che Ahmad*
Co-Chairman	*: 1. Sr Dr Yuhainis Abdul Talib*
	2. Sr Dr Haryati Mohd Isa
Treasurer	*: Mohamad Haizam Mohamed Saraf*
Secretary	*: Noorliza Musa*
Head of v-Conference	*: Sr Dr Nor Suzila Lop*
Head of e-Proceeding	*: Dr Junainah Mohamad*
Head of Scopus Indexed Journal Planning Malaysia Journal (PMJ)	*: Assoc Prof Gs Dr Mohd Fadzil Abdul Rashid*
Head of Scopus Indexed Journal Malaysian Construction Research Journal (MCRJ)	*: Sr Dr Natasha Khalil*
Head of Paper Reviewer	: *Dr Asniza Hamimi Abdul Tharim*

Committee Members

Virtual Go-Green Conference and Publication 2020

E-Proceeding Paper Reviewer

Noraini Md Zain
Shafikah Saharuddin
Nur Fatiha Mohamed Yusof
Farrah Rina Mohd Roshdi

E-Proceeding Formatting

Nurulanis ahmad @ Mohamed
Jannatun Naemah Binti Ismam
Najma Binti Azman

E-Proceeding Language Reviewer

Dr Hjh Shazila Abdullah
Dr Daljeet Singh Sedhu A/L Janah Singh
Zarlina Mohd Zamari
Dr Mary Thomas
Iza Faradiba Mohd Patel
Farahidatul Akmar Awaludin
Wan Faridatul Akma Wan Mohd Rashdi
Jeyamahla Veeravagu
Wan Nurul Fatihah Wan Ismail
Nazirul Mubin Mohd Noor
Noor Aileen Ibrahim
Noraini Johari
Dr Hajah Norakmarwati Ishak

Virtual Conference

Norazlin Mat Salleh	*Registration*
Shahela Mamter	*Auditor*
Mohd Esham Mamat	*Auditor*
Noor Anisah Abdullah @ Dolah	*Auditor*
Mohamad Tajudin Saidin	*Certificate & Conference Kit*
Fairiz Miza Yob Zain	*Logistic*
Mohd Firdaus Zainuddin	*Logistic*
Farah Hanna Ahmad Fuad	*Promotion & Publicity*
Mohamad Shahin Shahdan	*Promotion & Publicity*
Mohd Asrul Hassin	*Liason Officer*

Organiser:
Research, Industrial Linkage Community and Alumni Network Office (PJIM&A)
Universiti Teknologi MARA, Perak Branch, Seri Iskandar.
Malaysia

Co-Organiser:
Faculty of Architecture, Planning and Surveying (FSPU)
and,
Centre for Post Graduate Studies (CGS)
Universiti Teknologi MARA, Perak Branch, Seri Iskandar.
Malaysia

e ISBN 978-967-2920-06-9

A STUDY ON SOLAR ENERGY AS AN ALTERNATIVE POWER SUPPLY FOR CONVENTIONAL ELECTRICITY DURING MALAYSIA'S COVID-19 MOVEMENT CONTROL ORDER (MCO): THE PUBLIC PERCEPTION

Nurhidayah Samsul Rijal[1], Nur Azfahani Ahmad[1], An nisha Nur Welliana Abd Rased[1] and Muhammad Zahir Zulkernain[1]
[1]Department of Building Surveying, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Perak Branch, Seri Iskandar Campus, Seri Iskandar, 32610 Perak, Malaysia

Abstract

In January 2020, the World Health Organization (WHO) proclaimed the emergence of a new coronavirus pandemic, COVID-19. During this unprecedented time, the Movement Control Order (MCO) enforcement was implemented in Malaysia for 3 months (March – May) to control social distancing which would correspondingly help in reducing the virus transmission. During this period, all business premises and institutions were commanded to remain closed. Furthermore, all the citizens were strictly advised to remain in their respective households. This enforcement unfortunately, resulted in high monthly electricity bills since they were required to stay in the house all the time. Hence, it impacted the overall gross income of consumers and has sparked dissatisfaction as well as frustration among them. Therefore, an initiative is needed to help overcome this issue. Solar-generated electricity is therefore perceived as a significant initiative for reducing the consumption energy from Tenaga Nasional Berhad (TNB) grid. This survey has identified the changes in electricity bills for 5 months as a result of MCO enforcement. Thus, this research aims to identify the level of perception among respondents regarding solar energy as an alternative to reduce electricity bills and the challenges in applying this technology specifically for four (4) residentials areas in Seri Iskandar, Perak. The stratified random sampling method was chosen to conduct this survey which depended on the total of population in these four areas. This research intends to be useful in promoting the effectiveness and sustainability of solar energy technology among the public.

Keywords: public perception; solar energy; solar-generated electricity; sustainability

1.0 INTRODUCTION

2020 has been a challenging year for the world due to the emergence of a new virus known as Covid-19. This new coronavirus disease which initially started from China has triggered considerable unease and worries to everyone. The new COVID-19 virus has been declared as an infectious disease by the World Health Organization which began in December 2019 in Wuhan, China. (World Health Organization, 2020). According to Abdullah N.H, Director General of Health Malaysia (2020) the first case was confirmed to spread in Malaysia on 25th January 2020 which was transmitted by China citizens that came to Malaysia a day before. However, the main wave emerged in March 2020 as the total of cumulative positives increased drastically and resulted in deaths in Malaysia (The Star, 2020). Due to the growing number of cases and for the sake of people's safety, on 16th March 2020, Malaysian's Prime Minister announced the first phase of Movement Control Order (MCO) enforcement beginning 18th March 2020 in order to control virus transmittance as well as movement restriction for people (Omar, 2020). As an effort to reduce the virus transmission, school shutdown is one of effective steps reducing interaction and social contacts between pupils (Viner et al., 2020). All

business premises and institutions were directed to stop their operation immediately to break the disease chain (Bunyan, 2020).

In an effort to curb the virus from transmitted, the Malaysian's government has enforced stringent action by enforcing three (3) phases of preventive control order which comprises Movement Control Order (MCO), Conditional Movement Control Order (CMCO) and Recovery Movement Control Order (RMCO) (Salim et al. 2020). However, this research only focuses on MCO which consists of 4 phases that started on 18th March until 3rd May 2020. By creating the *#stayhome* hashtag, people were advised to stay in their homes during the first MCO-phase starting 18th March in an effort to break the chain of Covid-19 disease. (Shah et al., 2020). Unfortunately, lockdown enforcement resulted in high monthly electricity as people had to spend time at home and this had caused frustration due to a spike in electricity bill.

1.1 Research Objectives

The main objective of this research is to identify changes in electricity bills and its factors influential for selected residential areas for 5 months due to MCO enforcement as a result of the Covid-19 outbreak. The second objective of this research is to identify the main perceptions and challenges faced by the respondents regarding the use of solar energy as an alternative power supply for conventional electricity.

2.0 LITERATURE REVIEW

2.1 Changes electricity bill during MCO

Since MCO enforcement was implemented, people were strictly advised to remain in their respective households to avoid the virus transmittance. Controversies happened where this lockdown enforcement resulted in a surge in monthly electricity bills since the consumption was observed to be higher than usual. (Radhi, 2020). According to Minister of Energy and Natural Resources, Datuk Shamsul Anuar Nasarah stated that electricity consumption for residential in Peninsular Malaysia jumped 23% since Movement Control Order (MCO) was implemented (Malay Mail,2020). Apart from that, the growth in energy production boosted around 20% to 50% in residential areas between April to May 2020, said the TNB president, CEO Datuk Seri Amir Hamzah Azizan (The Star, June 2020). As a result, this enforcement unfortunately had resulted in high monthly electricity bills since people spent time in their home with changes of their behavior and activities in their house.

2.2 Solar energy as an alternative power supply

Based on stated issues, it can be seen that an initiative is needed to produce power supply other than from TNB grid. Beside conventional sources, solar energy is a Renewable Energy (RE) source that has potential in generating electricity and it helps to reduce the consumption from TNB grid. (Khambalkar, 2020 & Zakaria et al. 2019). As the environment faces numerous energy issues, more efficient approaches such as solar power can be used to solve them (Adedoyin, 2019). Zakaria et al. (2019) found this fossil fuels will be depleted due to continuous useage and cannot be reused. The findings can evaluate the public's perception regarding solar-generated electricity is perceived as a significant initiative for reducing the consumption energy from Tenaga Nasional Berhad (TNB) grid as long as it reduces the electricity bill.

3.0 METHODOLOGY

3.1 Data collection stage

This research was conducted by using a survey approach to identify the changes of electricity bills and level of perception among respondents regarding solar energy as an alternative to reduce electricity bills. In the domestic area of Seri Iskandar, Perak, 4 residential areas were chosen, which are Taman Gemilang, Bandar Universiti, Puncak Iskandar and Iskandar Perdana. This survey was conductedby using a stratified random sampling based on overall population in these four residential areas. The collected questionnaires were analysed using the SPSS Windows Version 20 software system. The collection of the sample is based on a medium cost housing area with a wide population. Krejcie and Morgan's (1970) tables have been used as a guide for sample selection for this research. A total of 170 samples were collected from the chosen residential areas.

4.0 RESULT AND DISCUSSION

4.1 Factors influential of increasing electricity bills in domestic sector

The data represents the frequencies and percentages for the factors influencing the increasing electricity bills in the domestic sector. (Table 1). Based on the findings, the majority of the respondents strongly agreed that "*Electricity usage is higher than normal during "Stay at Home" order"* (70.6%) resulting in a spike in electricity bill. According to The Star,2020 stated excessive energy consumption during this lockdown leads to higher power demands than average where everyone needs to stay at home and result in the utilities continuously kept using nonstop. (Mutalib, 2020 & Radhi,2020). The second factor is *"Hot weather factors in Malaysia that influenced the increase of consumption"* (50%) followed with "*Consumer changes lifestyle in daily activities and attitudes"* (40.6%) and "*Cumulative electricity tariff rates according to 3 months' electricity consumption unit during MCO"* (34.7%). The finding shows the highest mean is "*Electricity usage is higher than normal during "Stay at Home' order"* (M=4.558, SD=0.776) and the lowest mean is "*Using electrical appliances that are less energy efficient (high Watt capacity appliances"* (M=4.135, SD=0.876). Hence, the overall mean factors influencing the increasing electricity bills in the domestic sector is 4.258 and standard deviation is 0.74. These shows tjat the respondents agreed about factors influential in increasing electricity bills in domestic sector.

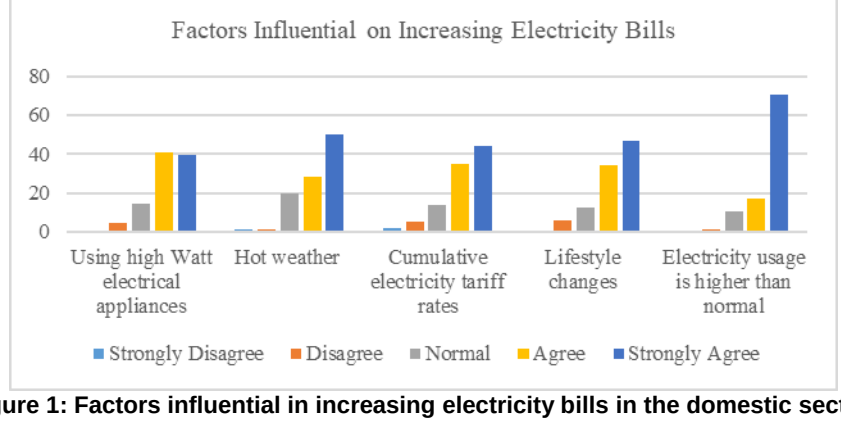

Figure 1: Factors influential in increasing electricity bills in the domestic sector.

4.2 Solutions in overcoming the issues of increasing electricity bills

Several approaches have been addressed in order to solve the issue of spike in electricity bill (Table 2). Based on the findings, majority of the respondents choose strongly agreed about "*Limit the use of high capacity electrical appliances (Water heater, air conditioner, oven etc.)"* (75.3%) followed by *"Use Renewable Energy such as Solar Technologies as an alternative for electricity"* (71.8%). Then, the respondents also agreed about "*Use LED light instead of pendaflour light"* (20.6%) and "*Use hot air suction system (turbine Ventilator or exhaust fan) to remove hot air"* (20%). According the findings below, the highest mean is "*Use Renewable Energy such as Solar Technologies as an alternative for electricity"* (M=4.547, SD=0.836) and the lowest mean is "*Use hot air suction system (turbine Ventilator or exhaust fan) to remove hot air"* (M=4.323, SD=0.958). Hence, the overall mean solution in overcoming the issues of increasing electricity bills in the domestic sector is 4.449 and standard deviation is 0.842. It shows that the respondents agreed with the solution of overcoming the issues of increasing electricity bills in the domestic sector.

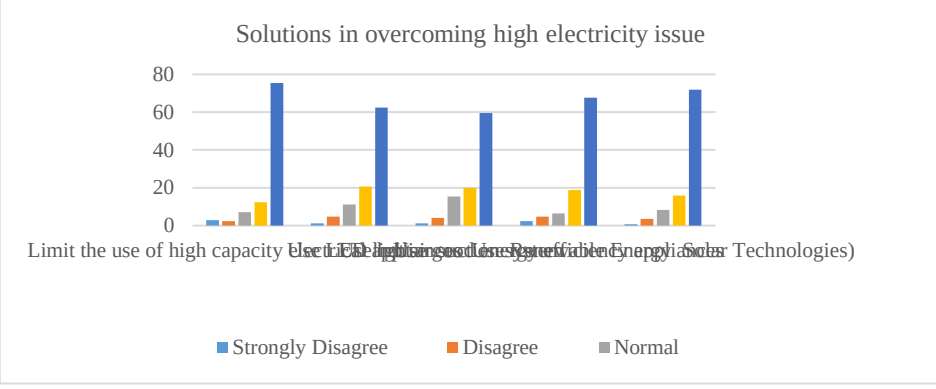

Figure 2: The solution in overcoming increasing electricity bills in domestic sector

4.3 Public knowledge and awareness regarding solar energy

The data represents the knowledge and awareness level of people regarding solar energy as an alternative energy besides conventional energy from Tenaga Nasional Berhad (TNB) grid (Table 3). The result shows that respondent's knowledge about solar energy is quite high. It found that 62.9% of the respondent aware "*There are other alternatives energies that can be used to generate electricity other than fossil fuels resources from Tenaga Nasional Berhad (TNB)* followed by *"Renewable Energy (solar, wind, biogas, biomass and nuclear) are alternatives energies to generate electricity" (60%)*. Total of 62.9% of the respondent agreed that "*Solar energy could help to minimize the electrical energy generated from Tenaga Nasional Berhad (TNB) grid and reduce bills"* followed by *"Consumers can install and sell back any excess solar energy generated from solar panel to Tenaga Nasional" (62.9%). It is followed by "Renewable Energy (solar, wind, biogas, biomass and nuclear) are alternative energies to generate electricity" (60%).* Based on the result, it shows that Malaysia needs a more proactive approach so that the community will have better understanding about solar and its advantages.

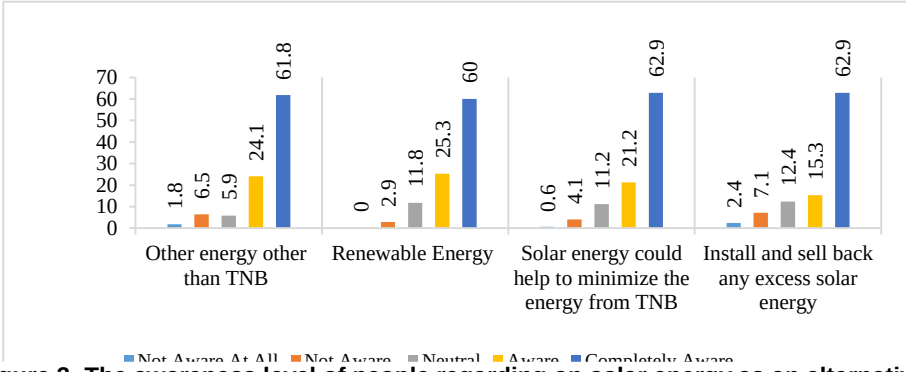

Figure 3: The awareness level of people regarding on solar energy as an alternative energy to reduce electricity bills

4.4 The challenges in implementing solar energy in domestic areas

As shown in Table 1, the respondents provided various reactions towards the challenges in implementing solar energy in domestic areas. Based on the findings, the majority of the respondents have chosen "*High Cost for Installation"* (84.7%) as the most challenging factor. Despite the fact that Malaysia has great resources to produce renewable energy, unfortunately, the demand for such resources among the population is unfortunately very minimal due to cost installation (Bari et.al, 2012). Respondents also agreed with the factors of *"People do not care in upgrading their electricity supply from the existing energy (conventional) to renewable energy because they believe that the Covid-19 pandemic is a temporary issue"* (61.2%) and *Lack of information through programs, campaigns and advertising.* This shows that this technology is still not well recognised in Malaysia. According to the findings above, the highest mean is *"People do not care in upgrading their electricity supply from the existing energy (conventional) to renewable energy because they believe that the Covid-19 pandemic is a temporary issue"* (M=4.394, SD=0.872) while "*High cost for Installation"* (M=1.276, SD=0.721) ranked last for the challenges in implementing solar energy in domestic areas. From the result, the government should take action to reduce the price to attract people to use it.

Table 1: The challenges in implementing solar energy in domestic areas

Statement	1st Choice	2nd choice	3rd choice	4th choice	5th choice	Mean	SD
High Cost for Installation	144 (84.7%)	10 (5.9%)	12 (7.1%)	3 (1.8%)	1 (0.6%)	1.276	0.721
Lack of information through programs, campaigns and advertising	8 (4.7%)	79 (46.5%)	44 (25.9%)	19 (11.2%)	20 (11.8%)	2.788	1.094
People are not confident	6 (3.5%)	19 (11.2%)	69 (40.6%)	38 (22.4%)	38 (22.4%)	3.488	1.067
Hard in finding trustworthy supplier	11 (6.5%)	58 (34.1%)	20 (11.8%)	74 (43.5%)	7 (4.1%)	3.047	1.097
People do not care	1 (0.6%)	4 (2.4%)	26 (15.3%)	35 (20.6%)	104 (61.2%)	4.394	0.872

4.5 The willingness in implementing solar energy in the house

As shown in Table 2 is the frequency and percentages of the respondent's willingness to pay an additional amount and install of the solar panel in the house. Based on the findings, the majority of the respondents, at 61.8%, may be willing to pay extra charge followed by those at 32.9%, are willing to pay extra to install solar technology. Meanwhile, the minority of the respondents, at 5.3%. are not willing to install solar panels in the house. From the result, it indicates that implementing solar energy may seem to be challenging as the respondents are still hesitant to spend money for its installation. It seems that respondents are not really ready to use solar energy in their daily activities due to the high cost of installation.

Table 2: Willing pay extra to the product and install of the solar panel in the house

Willing Pay Extra	Frequency	Percent
Yes	56	32.9
No	9	5.3
Maybe	105	61.8
Total	170	100.0

5.0 CONCLUSION

In this present study, the drastic changes in electricity bills during Malaysia's Covid-19 Movement Control Order (MCO) was evaluated. Apart from that, this study was conducted to determine the public perception with solar energy as an alternative power supply for conventional electricity due to increasing electricity usage. The study was conducted with 170 respondents in 4 selected residential areas in Seri Iskandar, Perak. Due to lockdown enforcement, the majority of the respondents were working and studying from home. This situation caused the electricity consumption to be higher compared to the normal situation. The usage of electricity for domestic use experienced a spike in between 20% to 50% as the majority of the respondents spent more time for indoor activities at home. In addition, the study shows increment in electricity bills during MCO because of consumers' daily activities changes and personal behaviour. Most of the respondents spent their time watching the news, entertainment and movies.

The relationship between activities during MCO and electricity bill was also evaluated. In February, it was discovered that online shopping, watching news, watching movies and browsing social media had significant relationship towards electricity bills resulting in increasing the electricity bills. In March, April and May, it was found additionally that hobbies like cooking or baking also resulted in electricity usage increment thus, it is concluded that electricity consumption could increase relatively with people's activities while staying at home. In June, it was found that baking/cooking, online shopping, watching news and watching movies had significant effects towards electricity bills. Overall, it can be concluded that each of these activities performed by the respondents had relatively impacted the electricity consumption. Due to MCO, Malaysians are definitely using more domestic electricity as previously they spent more time with outdoor activities.

In order to solve this issue, it is recommended to use renewable energy such as solar technology as an alternative power supply. Renewable energy could be obtained from solar, wind, biogas, biomass and nuclear. Based on the data, most of the respondents have a high awareness level on solar energy. They agreed that solar energy could help to minimize the electrical energy generated from Tenaga Nasional Berhad (TNB) grid and reduce bills. It is depending on the size of the solar system and electricity usage. In addition, it not only could save electricity bills but there is also a possibility to receive payment for the surplus if energy that is exported back to the grid. Furthermore, consumers could install and sell back any excess of solar energy generated from solar panels to TNB. The usage of solar energy increased after its awareness was spread for betterment. In terms of economics, it plays a major role in improving people's life by increasing their income and reducing the cost of living due to the great demand of electricity usage.

However, the implementation of solar energy in domestic areas is still low and it is still facing several challenges. It could be seen that when the majority of the respondents claimed that the installation of solar energy is costly. The initial cost of purchasing a solar system is fairly high. It includes the cost for solar panels, inverter, batteries, wiring as well as installation. In addition, the respondents also do not care about upgrading their electricity supply from the existing energy (conventional) to renewable energy as they believe that Covid-19 pandemic is a temporary issue. From this study it could be concluded that implementing solar energy could be challenging respondents are yet unsure to spend on the extra installation amount.

REFERENCES

Abdullah N.H. (2020) Pengesanan kes baharu yang disahkan dijangkiti 2019 novel Coronavirus (2019-nCoV) di Malaysia. Archived from the original on 25th January 2020. [Accessed 17th April 2020].

Adeyoyin, S.O; Alawiye, M.K; and Ewulo, O.R (2019),"Awareness and Use of Solar Energy as Alternative Power Source for ICT Facilities in Nigerian University Libraries and Information Centres". Library Philosophy and Practice (ejournal).

Bunyan, J. (2020). "PM: Malaysia under movement control order from Wed until March 31, all shops closed except for essential services". The Malay Mail. Archived from the original on 16 March 2020. (Accessed 13th July 2020)

Elengoe A. (2020). COVID-19 Outbreak in Malaysia. Osong Public Health and Research. Perspectives, 11(3), 2020;11(3):93–100. doi: 10.24171/j.phrp.2020.11.3.08.

https://www.bharian.com.my/berita/nasional/2020/05/693844/penggunaan-elektrik-kediaman-meningkat-20-hingga-50-peratus-ketika

http://www.moh.gov.my/index.php/database_stores/store_view_page/21/ 1301

https://www.bharian.com.my/berita/nasional/2020/05/693844/penggunaan-elektrik-kediaman-meningkat-20-hingga-50-peratus-ketika

https://www.malaymail.com/news/malaysia/2020/03/16/pm-malaysia-in-lockdown-from-wed-until-march-31-all-shops-closed-except-for/1847204

https://www.malaymail.com/news/malaysia/2020/05/30/residential-electricity-usage-soar-23pc-during-mco-says-energy-ministry/1870790

https://www.nst.com.my/news/nation/2020/06/597249/spike-consumers-electricity-charges-due-stay-home-order

https://www.thestar.com.my/news/nation/2020/03/14/covid-19-cops-urge-those-with-info-on-tabligh-to-contact-health-

https://www.thestar.com.my/news/nation/2020/06/03/spike-in-electricity-bills-due-to-mco#:~:text=Mahdzir%20added%20that%20during%20the,normal%20monthly%20bills%2C%20he%20said.

Khambalkar V.P, Katkhede S. S., Dahatonde S., Korpe N. D., Nage S. M. (2010) Renewable energy: An assessment of public awareness, International Journal of Ambient Energy, 31:3, 133-142, DOI: 10.1080/01430750.2010.9675112

Malay Mail (2020), Residential Electricity Usage Soar 23pc During MCO, Says Energy Ministry. Archived from the original on 30th May 2020. (Accessed July 10, 2020)

Mutalib. A.Z (2020) Residential electricity consumption increased by 20 to 50% during MCO. Berita Harian Online. Archived from the original on 28hb Mei 2020. (Accessed July 3, 2020)

Omar A.R.C, Ishak. S, Jusoh M.A (2020). The impact of Covid-19 Movement Control Order on SMEs' businesses and survival strategies. Malaysian Journal of Society and Space. 16. 10.17576/geo-2020-1602-11.

Radhi N.A.M, (2020), 'Spike in consumers' electricity charges due to stay-at-home order'. New Straits Times. Archived from the original on 2th June 2020 (Accessed 21th June 2020)

Salim N, Chan W.H, Mansor S, et al. (2020). COVID-19 epidemic in Malaysia: Impact of lockdown on infection dynamics; doi: https://doi.org/10.1101/2020.04.08.20057463

Shah AUM, Safri SNA, Thevadas R, et al. (2020). COVID-19 outbreak in Malaysia: Actions taken by the Malaysian government. Int J Infect Dis. 2020; 97:108-116. doi: 10.1016/j.ijid.2020.05.093

The Star (2020), Spike in Electricity Bills Due to MCO. Archived from the original on 3th June 2020 (Accessed 3th July 2020)
The Star (2020). COVID-19: cops urge those with info on tabligh to contact Health Ministry. Archived from the original on 14 March 2020. (Accessed 13th July 2020)
The Star (June 2020), Spike in Electricity Bills A Global Concern. Archived from the original on 18th June 2020 (Accessed 3th July 2020) from https://www.thestar.com.my/business/business-news/2020/06/18/spike-in-electricity-bills-a-global-concern
Viner, R. M. et al. (2020) School Closure and Management Practices During Coronavirus Outbreaks Including COVID-19: A Rapid Systematic Review. Lancet Child Adolesc Health 4, 397–404 (2020).
World Health Organization. (2020) What is Covid-19: Q&A. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-coronaviruses accessed 04 September 2020)
Zakaria S, Basri S, Kamarudin S.K, and Majid, N.A.A. (2019) Public Awareness Analysis on Renewable Energy in Malaysia: International Conference on Sustainable Energy and Green Technology 2018, DOI:10.1088/1755-1315/268/1/012105

Pejabat Perpustakaan
Librarian Office

Universiti Teknologi MARA
Cawangan Perak
Kampus Seri Iskandar
32610 Bandar Baru Seri Iskandar,
Perak Darul Ridzuan, MALAYSIA
Tel: (+605) 374 2093/2453 Faks: (+605) 374 2299

UNIVERSITI TEKNOLOGI MARA

Surat kami : 700-KPK (PRP.UP.1/20/1)
Tarikh : 20 Januari 2023

UNIVERSITI TEKNOLOGI MARA PERAK
TERIMA
25 JAN 2023
Tindakan
Universiti Teknologi MARA Perak
PEJABAT REKTOR

Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
Universiti Teknologi MARA
Cawangan Perak

Tuan,

PERMOHONAN KELULUSAN MEMUAT NAIK PENERBITAN UiTM CAWANGAN PERAK MELALUI REPOSITORI INSTITUSI UiTM (IR)

Perkara di atas adalah dirujuk.

2. Adalah dimaklumkan bahawa pihak kami ingin memohon kelulusan tuan untuk mengimbas (*digitize*) dan memuat naik semua jenis penerbitan di bawah UiTM Cawangan Perak melalui Repositori Institusi UiTM, PTAR.

3. Tujuan permohonan ini adalah bagi membolehkan akses yang lebih meluas oleh pengguna perpustakaan terhadap semua maklumat yang terkandung di dalam penerbitan melalui laman Web PTAR UiTM Cawangan Perak.

Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

nar

Setuju.

27.1.2023

PROF. MADYA DR. NUR HISHAM IBRAHIM
REKTOR
UNIVERSITI TEKNOLOGI MARA
CAWANGAN PERAK
KAMPUS SERI ISKANDAR