

SUBMISSION TO THE HKIE EXECUTIVE

REPORT OF

32ND CONFERENCE OF THE ASEAN FEDERATION OF ENGINEERING ORGANISATION  
AND

21ST YOUNG ENGINEERS OF ASEAN FEDERATION OF ENGINEERING ORGANISATION  
CONFERENCE

10 - 13 NOVEMBER 2014 | YANGON, MYANMAR

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## 1 INTRODUCTION

### 1.1 Background

The 32<sup>th</sup> Conference of the Association of Southeast Asian Nations (ASEAN) Federation of Engineering Organisation (CAFEO 32) in conjunction with the 21<sup>st</sup> Meeting of Young Engineers of ASEAN Federation of Engineering Organisation (YEAFEO 21) is the highlighted event of the ASEAN Federation of Engineering Organisation (AFEO).

AFEO commenced in 1973, from the engineering convention held between The Institution of Engineers Malaysia (IEM) and The Institution of Engineers Singapore (IES). The IEM/IES Engineering Convention was held primarily for the purpose of promoting interaction and relationship for their members in view of their common historical background and geographical similarities. IEM and IES took turns to host the convention. In 1976, while preparing for the 3rd IEM/IES Convention it was decided that all other ASEAN countries would be invited. In 1980, an agreement was signed for the formation of the AFEO. The formal date for the establishment of AFEO was 8<sup>th</sup> August 1982. AFEO is a non-governmental body affiliated with the ASEAN Secretariat. Its members are the national Institutions/Organisations of engineers of the ASEAN countries. AFEO is an organisation of the national engineering/technological institutions of the ten ASEAN member countries including Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

CAFEO has been held annually at the different member institutions in a rotating alphabetical order since 1982. CAFEO historically attracts more than 200 foreign and 300 local engineering professionals from various industries, fields and sectors. CAFEO 32, hosted by the Myanmar Engineering Society (MES), was held at Yangon, Myanmar this year.

Besides organising the annual conference known as CAFEO hosted in rotation, member institutions also held the yearly AFEO government board meeting. The idea that AFEO should also look into the interest of young engineers was first introduced at the 11<sup>th</sup> AFEO government board meeting in Philippines in 1992. In 1993 the committee of young engineers was set up and in 1994, the bylaws of the formation of a young engineer group were approved and the definition of the Young

Engineer was agreed. The group name was the Young Engineers of ASEAN Federation of Engineering Organisation (YEAFEO). Its mission is to be a dynamic and progressive organisation that leads to the development of young engineers in the ASEAN region. YEAFEO represents the young engineers of the national engineering organizations under AFEO, comprising members engaged in the common professional interest of engineering, aware of the important role of engineering to the advancement of the social, economic, and industrial development of the ASEAN region; concerted in the effort to elevate and improve the quality of life of the ASEAN people's dynamic actions and productivity to increase employment opportunities and equitable distribution of wealth among the masses of the ASEAN nations, to participate actively in any industrial and technological programs of ASEAN, desirous of exchanging and sharing engineering technology; concerned in basic professional right, cognizant of the need to establish harmony and relationship among the members. This year is the 21<sup>st</sup> board meeting of YEAFEO.

The sharing of engineering solutions for energy, transportation and infrastructure developments with other countries is becoming a global issue that engineers should respond to. As such, an appropriate and timely theme has been chosen for CAFEO 32, "Integrated Solutions for Energy, Transport and Infrastructure", which aims to identify the engineering solutions for integrating energy, transport and infrastructure of the least developed ASEAN countries to more developed countries and to enhance communication and cooperation amongst ASEAN countries.

This year, four delegates, namely Ms Fung Man Yui, Candy (Committee Member), Ms. Ko Yik Yan, Yani (Committee Member), Mr Li Ming Ho, Sky (Helper) and Mr Tang Siu On, Antony (Helper) represented the Young Members Committee of the Hong Kong Institution of Engineers (HKIE-YMC) to attend the CAFEO 32 and YEAFEO 21.

## 1.2 Objective

The purposes and objectives of the conference are:

- To promote understanding, goodwill and co-operation among engineers in the member national engineering organizations;
- To promote and exchange ideas, experiences and discuss problems of common interest among national engineering organisations and their members; and
- To support and assist the purposes and objectives of the AFEO as stated in its Constitution and By-laws.

## 2 CAFEO 32 & YEAFEO 21

CAFEO 32 was held from 10 November to 13 November 2014 at Yangon, Myanmar. Details of the program are given in Appendix A.

### 2.1 10th November 2014 (Welcome Dinner)

#### Welcome Dinner

In the evening, the Myanmar Engineering Society (MES) graciously hosted a welcoming reception at Sedona Hotel, Yangon to welcome all CAFEO and YEAFEO delegates. The reception programme included welcome speeches from Myanmar government officials, and some elegant traditional dancing followed by energetic live music. The YEAFEO delegates took this opportunity to meet the new comers and reunion. Together with the fruitful sharing and exchanges with the delegates from other countries, there is no doubt that we had a very enjoyable and memorable night in the welcoming reception.

### 2.2 11st November 2014 (YEAFEO Meeting & Technical Seminar)

#### YEAFEO Meeting

Following the official opening ceremony, AFEO Institution Members presented their Country Reports in YEAFEO Meeting. Each of the members firstly presented their current population, economic situation and recent infrastructure developments etc. They then shared on their future plans on Engineering in Energy & Infrastructure and gave suggestions to the YEAFEO board on how to strengthen the cooperation among AFEO countries. They also developed initiatives to establish connection or visit between AFEO countries (e.g. Thailand and Singapore) for the Engineering Profession Development in the region while facilitating the mobility of Engineers within ASEAN states. The participating AFEO Institutions agreed that closer collaboration is a good idea to be promoted in the coming years. After the meeting, each ASEAN country and guest country exchanged gifts to connect with each other.



## Technical Seminar

### Topic: Optimal Design of Electricity Supply with Power Quality for Telecommunication

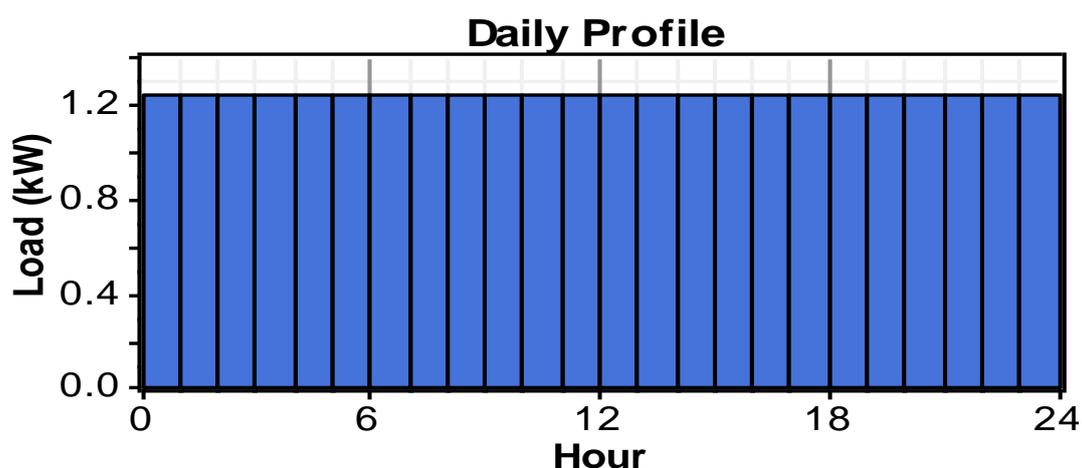
#### Station

*Zin Mar Nyo: Department of Electrical Power Engineering, Mandalay Technological University, Myanmar*

With most telecom equipment located in remote areas with no access to the grid, telecom companies are presented with the challenge on how to effectively supply electricity to these locations. Solar, wind and hybrid systems with batteries have proven to be the most cost-effective and reliable solution to power these remote communication devices. This paper presents the results of power quality based PV system carried out in the site of Sagaing Region. Four different configurations including a diesel-only, a fully renewable-based, a diesel-renewable mixed off-grid system for telecommunication station are designed, to compare and evaluate their economics, operational performance and environmental emissions.

The input data of the optimization model are electrical load (See Fig. 1) and Geographical location of implementation site. Renewable energy resources data (See Table 1) and specification of PV panel (e.g. size, cost and efficiency) are also factors to be considered. Then the optimization model ran with several including:

- Power Quality
- Fuel Savings
- Costs Minimization
- Pollution Reduction.



*Fig. 1 Daily load profile for the GSM tower*

Table 1: Clearness Index and average daily radiation for a year

Month	Clearness Index	Daily Radiation (KWh/m <sup>2</sup> /day)
January	0.611	4.400
February	0.607	5.000
March	0.558	5.300
April	0.534	5.600
May	0.474	5.200
June	0.397	4.400
July	0.346	3.800
August	0.358	3.800
September	0.383	3.750
October	0.466	4.000
November	0.540	4.000
December	0.569	3.900

To obtain the optimization result, different cases simulated with the model. Different types of possible single-source systems and hybrid system combinations were simulated with their costing and sizing compared with a PV/diesel/battery system. It can be seen from the simulation results in Table 2.

Table 2: Comparison results of Case I, Case II and Case III

\* DEG= Diesel Generator; BATT=Battery; PV=Solar Panel

Description	Case Study I	Case Study II	Case Study III
	DEG + BATT	PV+DEG+ BATT	PV + BATT
Total Net Present Cost (\$)	61187	42148	49741
Levelized Cost of Energy (\$/kWh)	0.494	0.340	0.401
Operation Cost (\$/yr)	5047	1574	640
Excess Electricity (kWh/yr)	-	441 (3.02%)	8373 (37.2%)

Description	Case Study I DEG + BATT	Case Study II PV+DEG+ BATT	Case Study III PV + BATT
PV array (kWh/yr)	-	11240 (77%)	22479 (100%)
Generator (kWh/yr)	14045	3338 (23%)	-
Total Load Consumption (kWh/yr)	10804	10804	10804
PV Penetration (%)	-	104	208

According to the evaluation results, the system performance mainly depends on the solar irradiance data and cost of the system components for this research work. Total net present cost of Case I is larger than the Case II and Case III. The levelized cost of energy of DEG+Batt is much more than PV+DEG+Batt system. On the other hand, the percentage of Excess electricity in Case II is about 34% less than the case III system. Therefore, according to the comparison results of these cases, finally the Case study II (PV+DEG+BATT) is selected and identified as the optimized model to implement.

This paper, one solution, is to use combinations of renewable and conventional power technologies, or hybrid systems, to provide electricity in off-grid areas where it is too expensive to extend the grid, or where the grid cannot operate without high losses. It gave us an insight of developing cost-effective and clean energy source at some of the remote area likes rural village or island in Hong Kong.

### 2.3 12nd November 2014 (Technical Seminar & Closing Ceremony)

#### Technical Seminar

##### **Topic: The Energy & CO2 Reduction Measures Applying the Kyoto Mechanism**

*Dr. Masaru Homma, PhD, PE Jp, Int PE, APEC Engineer, IPEN*

There were 54 nuclear reactors in Japan. No one was operating since Sept 16, 2013. The stop of nuclear reactors raised the issue on the most suitable source of electric supply. Speaker thought that a quality evaluation, namely “Environmental integrity” and “Safety” shall be taken into account when discussing the evaluating energy best mix.

Before the start of discussion, speaker firstly informed the audience that the percentage of the electric power in the whole primary energy usage in Japan was only around 50%. When generation capacity of the nuclear power exceeds approximately 20% of all the electric power generation capacity, a surplus electric power occurs at the time of low demand. While comparing with France, nuclear electric generation capacity became approximately 70% of all electric generation capacity, that’s thanked to the flexibility provided by inter Europe High Voltage DCG.

A nuclear power station could provide a great amount of electric power to a distant metro-polis area, but couldn’t provide any electric power to the power station itself. The risk of radioactivity leakage from the used nuclear fuel is higher than the leakage risk from the nuclear reactor itself. Several thousand tons of used nuclear fuels had been already accumulated in the whole country in Japan. Majority of them were in the water pool of nuclear reactor houses. The radioactivity leakage risk by the collapse heat of the used nuclear fuel was not reduced at all whether the nuclear power plant was in action or not. Besides, the major aimed to promote the nuclear power generation was a concern of the national security, rather than economic merits. It closely related to the constitution of Japan. Last time, Japanese Prime Minister Abe visited Nay Pyi Taw, capital of Myanmar. He intended to change the article 9 of Constitution of Japan, which declared the renunciation of war and prohibited Japan to maintain “land, sea and air forces, as well as other war potential”.

Apart from nuclear energy, Japan has the renewable energy occupied about 10% of all electric generation. Of which 9% is the conventional large-scale hydro-electric power generation, and the so-called renewable energy power generation was only 1%. The reason to exclude the large-scale hydroelectric power generation was that it used a great amount of fossil fuel energy for the dam construction.

In renewable energy power generation, the photovoltaic power has following merits in comparison with the wind power. There would be less trouble & no noise claims. It could be used without transmission facilities. The speaker shared with audience that he has installed a photovoltaic power generation system of capacity 3kW. Every day, he was enjoying the pride and joy of energy independence. Speaker believed that the photovoltaic power generation was the most stable electric source if people shall enlarge their view to the whole world and conceived a global smart grid. He then introduced an idea of electric power system management community. When people installed a small power system locally, they should better install it after bringing up a neighborhood association.

The speaker further talked about the consumption of the primary energy of the whole world, which was some 12,500 million tons. The world coal consumption occupies 29,9% of primary energy consumption of the world.

*Table 1 - Primary energy consumption of the world (in oil conversion)*

	Oil	Coal	Gas	Water	Nuclear	Renewable
100Mt	41.3	37.3	29.9	8.3	5.6	2.4
%	33.1	<b>29.9</b>	24.0	6.7	4.5	1.9

Whilst the coal consumption in China is 1,870 million tons, which represented 50.2% of the whole world coal consumption. The primary energy consumption in China was 2,730 million tons (in oil conversion). The ratio of the coal consumption of primary energy in China was approximately 70%.

*Table 2 - Primary energy consumption of China (in oil conversion)*

	Oil	Coal	Gas	Water	Nuclear	Renewable
100Mt	4.8	18.7	1.3	2.0	0.2	0.0
%	17.6	<b>68.5</b>	4.8	7.3	0.7	0.0

It was reported that in 2011, 9,900 people were killed by air pollution of the soot from the coal thermal electric generation in Beijing city, Tianjin city and Hebei country. This brought out the safety to live in ISOGO coal thermal electric power station of J-Power which let him away from exhaust gas or the soot mine dust. Isogo coal thermal power station achieved as high as 44% at designed thermal efficiency, using a method (USC) of raising pressure and temperature of the steam turbine to the limit. When they applied that best practice to American, Chinese & Indian PSs, the total reduction effect of greenhouse gas will be achieved approximately, 1,460 million t-CO<sub>2</sub>.

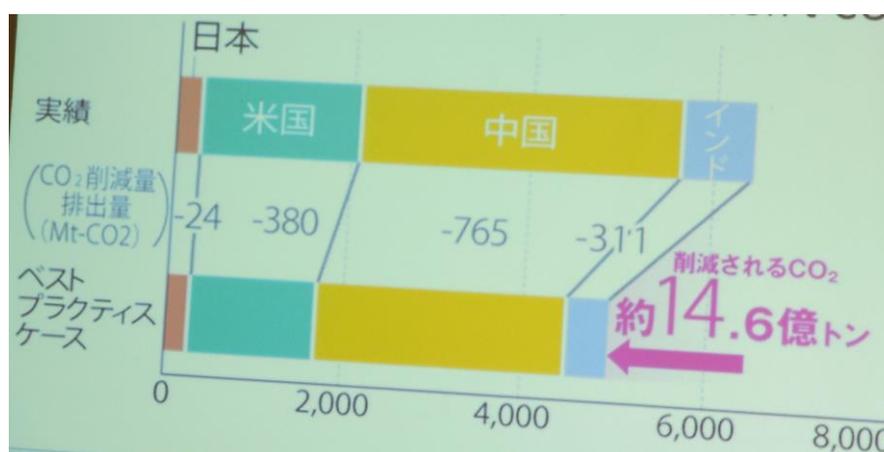


Fig. 1 Estimated CO<sub>2</sub> emission volume

The forum “Japna/China Energy Saving & Environmental Synthesis Forum” has been started in 2006 and continued after that. “The conventional notes of energy saving, environmental diagnosis and the facilities improvement of the Chinese coal-thermal power station” were concluded in 2007. Indonesia had introduced USC coal thermal power generation system from Japan in 2011, and Malaysia too, last year.

The outbreak of “the debt” would not be ceased, even if they stopped operation of all nuclear power station immediately. The collapse heat of the worn-out nuke puke didn’t stop anymore. In addition, people couldn’t reduce already emitted carbon dioxide CO<sub>2</sub>, sulfur oxide SO<sub>x</sub>, nitrogen oxide NO<sub>x</sub>, etc. The speaker concluded with the next best policy is to reduce effluent gas, improve thermal efficiency of the fossil fuel combustion, promote, research & development of the renewable energy and no longer increase the nuke puke.

## Closing Ceremony

In the evening, we attended the closing ceremony at which a summary report of CAFE0 32 and a closing speech were given to mark the official end of the conference. This was followed by a farewell banquet, Presentation of ASEAN Engineering Achievement Award, Flag Hand over to the incoming President of CAFE0 33 and Performance of delegates from ASEAN Countries and other foreign delegates, in which there were many highlights, especially the performance part that each ASEAN country and guest country would have performance, which serving as a cultural exchange. We, the Hong Kong delegates, gave a singing performance. The Hong Kong delegates have sung a few dynamic and trendy songs to represent Hong Kong. Delegates were appreciated much on the style of Hong Kong songs. Through this singing performance, we introduced Hong Kong and China to the other delegates in ASEAN countries. It is a very meaningful and interesting experience for us.



## 2.4 13rd November 2014 (Technical Visit)

### Technical Visit –Bayint Naung Bridge and Nyaung Done Bridge

The Bayint Naung Bridge is actually 2 adjacent bridges running across the Hlaing River of Yangon, Myanmar. These 2 bridges are important roads connecting the Ayeyawaddy division to the west of city center of Yangon. This is the area having major rice production in Myanmar. Rice production accounts for about 60% of the GDP of Myanmar and it helps ones to understand how important these 2 bridges is.



The new and old Bayint Naung bridges

They originally have a single 2-lane steel bridge (The old Bayint Naung Bridge) in operation, but it is far from the satisfactory of the truck drivers and traffic jam occur every day. They decided to solve the problem as soon as they could and they decided to use steel structures again.

As they previous have experience in bridges made up of steel truss, they adopted it again. It is also aesthetically decent. Myanmar has been constructing steel bridges back to 1900s and they have certain expertise in doing so. Over the century, they built a few remarkable steel bridges like the Gokteik Viaduct, the AVA Bridge and Thaketa Bridge. They started using reinforced concrete to build bridges in 1960s.



The first steel bridge in Myanmar, Gokteik Viaduct

During the engineering development history of Myanmar, they incorporated with Japanese engineers and set up the Bridge engineering training center through the help of Japan International Cooperation Agency (JICA). This is how they started to nourish their own bridge professional engineers.

Nowadays, Myanmar has their own bridge designers and engineers and is able to construct bridges on their own. The new Bayint Naung Bridge is a 4-lane bridge just next to the old Bayint Naung Bridge. It is designed to be constructed in a short time and to ease traffic congestion in the overcrowded old Bayint Naung Bridge. It also provide a pedestrian walkway on its side to facilitate the residents living on both sides of the bridge.

The bridge is supported by bored piles constructed by reverse circulation drilling (RCD) method which is also common in Hong Kong. The diameter of the bored piles were 1.8m. The bed rock level is about 60m below the ground level and so it was feasible for them to construct end-bearing bored piles. The size of bored piles in this project is much smaller when compared with their previous project “Ygn-Thanlyin Bridge”, where they used caissons of 16m diameter. In their bridge design, they must cater for earthquake loading. In 2012, one of the steel bridges under construction was collapsed under earthquake. Therefore, they realized that earthquake design should also be considered on temporary work.

Besides all these technical issues they entered, they also took environmental impact into their consideration. For example, as the low-lying area on both side of the river is living habitat of many animals as well as human, they on purposely constructed high-rise approach bridges connecting the Bayint Naung Bridge from area away from the riverside, so as to protect the environment on the riverside.

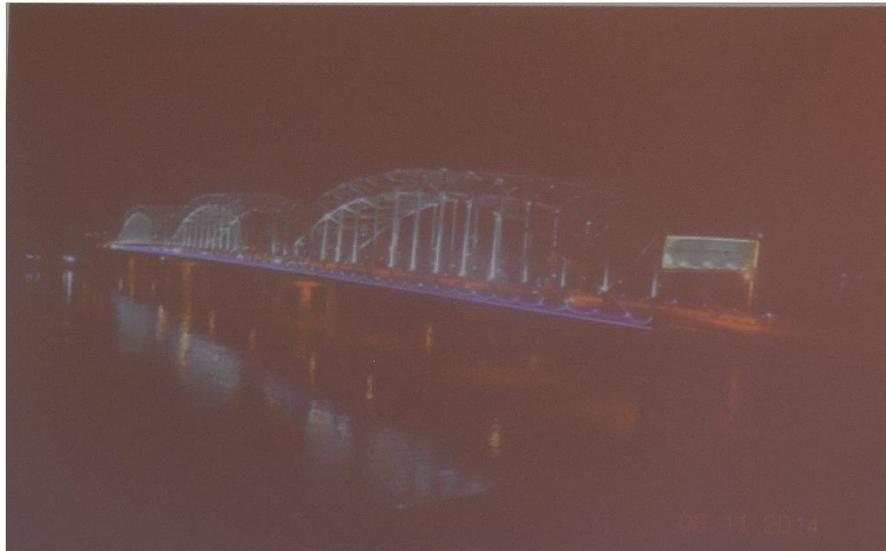


The high-rise approach bridge

It is worth highlighting that the new Bayint Naung Bridge is just 60m away from the old one. As the old one continued to operate during the construction of the new one, it was a challenge for them to avoid disturbance, especially to geotechnical engineers. Any excavation being done near the existing bridge may induce differential settlement and can damage it. End bearing piles was then selected rather than friction piles. It was also challenging for them to construct bored piles with large machinery on a flowing river and not disturbing the nearby existing bridge.

For the span of the bridge, they made it enough to allow large ships to pass through under the bridge.

In this trip, we also visited the Naung Done Bridge; it is also running across the Hlaing River of Yangon. It is another steel bridge supported on End-bearing bored piles. It just finished recently in Nov 2014. This project used a minimal time during its construction.



The Naung Done Bridge

When more and more mature technology they have, they are going to build 5 large bridges connecting Yangon areas before 2040. It includes some suspension bridge design.



Future bridge design in Yangon

### **3 HKIE-YMC's PARTICIPATION IN YEAFEO 19**

In the past few years, delegates from the HKIE-YMC have attended the conference as guests and observers. Other invited guests and observers include engineering organisations of young engineers from Japan, Australia and Canada. Over the past years, by attending the conference, young engineers from the HKIE-YMC gained valuable exposure to international conference as well as experience sharing opportunities with young engineers from the various participating countries.

In YEAFEO 21, the YMC delegates attended the YEAFEO board meeting as observers and several issues (such as the cooperations amongst ASEAN countries) were discussed. The YEAFEO Country Report Session was held before the board meeting. Representatives from all countries, including Hong Kong, took turns to give a brief introduction on their organizations. Our Honorary Treasurer, Ms Candy FUNG and our Committee Member, Ms Yani KO, grasped the opportunity to introduce the HKIE and the HKIE-YMC to the audience. Yani presented the structure of the HKIE-YMC and the past HKIE-YMC activities and upcoming events to all other countries and invited them to visit Hong Kong and the HKIE in the future. We received cordial welcome from the other delegates. Some countries such as Japan and Malaysia had even shown immediate interest to visit Hong Kong.

The delegates have also attended the technical seminar and technical visit of the conference. Different speakers were invited to present the topics related to Research, Education and Capacity Building; Transportation and Logistic; Energy and Environmental; and Disaster Preparedness, Mitigation and Management. The four young engineers have learned new technical knowledge and ideas in these areas.

There was a closing ceremony on the evening of 12<sup>th</sup> Novemeber 2014. After the ceremony, each country needed to conduct a performance during the farewell dinner. The Hong Kong delegates sang the songs that were representing the energetic city, the Hong Kong SAR.

In all, the YEAFEO 21 is really a splendid occasion for young engineers to expose themselves to new experiences, to learn more and to contribute their knowledge.

## **4 BEHIND THE CONFERENCE**

During our free time on 9<sup>th</sup> and 10<sup>th</sup> Nov, we went to some famous sightseeing spots. After the helper in hotel advised us to take taxi to go to these sightseeing points, we designed to take a bus so as to experience the true Myanmar. At first, we were a bit worried about who we could tell the driver to get off. But it was surprising to us that the locals were very polite and they even spare their seats for us. When we needed to get off, the crowds in the bus were too kind that every single persons were trying to alert us. The bus drivers were all very patient to wait until we had a seat before he start the car again.

During our bus trips, we found that most of the buildings in Yangon were only 1 to 3 stories high and wood is one of the major construction materials. It was also observed that better off household has their own electricity generator as Yangon's electricity supply is not very stable. This is really different from Hong Kong as we might be living in apartment on 30<sup>th</sup> floor and take stable electricity supply as granted. It is trivial that we might be able to do more to exchange knowledge on clean water supply, electricity supply and earth-quake resisting structural use of timber.

We went to the Kandawgyi Palace, Shwedagon Pagoda and national museum of Myanmar. The Shwedagon Pagoda is a tower with a height around 112m and it is said that it already existed for 2600 years. This tower was constantly destroyed by earthquake during its history and it is getting more and more stable. It reminds us the importance to design earthquake resistance structures in earthquake zones and the possible design life span of structure is certainly much shorter than this.

The Kandawgyi Palace was located inside an artificial lake made for the purpose of clean water reservoir during the British colonial period of Myanmar. It reminds us how important clean drinking water is.

Beside all these visits, we had drinks at night with delegates from all south east asia. It was enjoyable and we got chance to communicate, e.g. on issue about how they become professional engineers. We all enjoyed a lot.

## 5 CONCLUSION

Delegates from HKIE-YMC have fulfilled the following objectives when participating in the CAFEO 32 and the YEAFEO 21:

- To gain exposure to large scale international conference;
- To nurture the leadership and communication tactics of our younger generations;
- To gain knowledge on sustainable development and the current practice of other countries;
- To broaden knowledge through sharing with young engineers from other countries;
- To have technical knowledge / ideas / cultural exchanges with engineers worldwide;
- To extend the network of our young engineers with delegates from other countries;
- To increase the horizon of young engineers through the participation;
- To promote the Hong Kong Institution of Engineers (HKIE) to other countries; and
- To promote the Young Members Committee of HKIE to other countries.

The initiative of the participation of CAFEO 32 and YEAFEO 21 of HKIE-YMC was in line with the President in his HKIE Presidential Address 2014/2015 and his three goals to sustaining excellence in the engineering profession: membership, professional, and global excellence. In the past few years, delegates from the HKIE-YMC attended the conference as guests and observers. The CAFEO 32 and YEAFEO 21 this year was a valuable experience for professional engineers, especially young engineers. The four YMC delegates have gained exposure to attending large scale international conference, increased their engineering knowledge, improved communication skills and developed inter-personal qualities to work with engineers of different countries. Next year, CAFEO 33 and YEAFEO 22 will be held in Malaysia in November 2015. The HKIE-YMC will continue to encourage more young engineers to attend this meaningful event.

## **6 ACKNOWLEDGEMENT**

We would like to express our sincere gratitude to HKIE by sponsoring our delegates to attend the CAFEO 32 and YEAFEO 21 held in Myanmar. We would also like to give thanks to the Myanmar Engineering Society (MES) for their excellent arrangement of the conference. They have planned an itinerary rich in content for all the delegates to enjoy a wonderful, memorable and educational conference.

## 7 FEEDBACK

### Antony Tang's Feedback

Mingalabar! ("Hello" in burmese), it was the first sentence i heard when we landed at Yangon. It was my first time to have been to Myanmar. I need to thank Myanmar for bringing us a wonderful time there. But i would like to say a big thank you to HKIE and YMC to give me this precious chance to exchange knowledge with young engineers around south East Asia.

Myanmar people are patient, polite and helpful. It was very nice to travel around there. It was also our great chance to learn the problems they facing as it allows us to think whether Hong Kong is also at risk of facing these potential problems in future. For example, Philippines and Thailand suggested they had serious flooding and landslide problems each year and the situation gets better with technology. Singapore shared their experience of producing fresh water by desalination in an economical way. It has an effect of alerting our engineers to prepare these problems in our future design and learn from the areas where others are in advance technology.

We all enjoyed very much the trip, it was not some strictly formal conference and it was like a party where everyone shared both technical knowledge and cultural difference in a relaxed manner. But by looking at other places' representatives, we know we could do better.

We had only 4 delegates from Hong Kong, in which 3 of us joined the annual conference for the first time; it was a challenge for us to plan ourselves on items like transportation, hotel and visa in a very short time. It would be great if more support could be obtained, not only from HKIE, but also from the large number of young members of YMC and HKIE. For example, Malaysian team got over 20 members and some of them managed to take part in CAFEO or YAEFEO for few times already. The old members have undoubtedly played a key part to bring young members get to know their 'old friends' from other countries.

On the other hands, as Hing Kong is still an observer to the conference or group, it sometimes limited our chance to say or to request further discussion with other member states. It can a chance for us to exchange knowledge or topics that we can learn from others, without the need to establish relationship when problems come. If

in future, i have a chance to join the CAFEO or YAEFEO meeting again in future, I would not hesitate to be the first one to apply and so we could meet our old friends again! Ta tar! ("See you" in Burmese)

### **Candy Fung's Feedback**

This is my great pleasure to have another chance to join the YEAFEO conference. This is my first time to be Myanmar and the second time to join YEAFEO. As being delegate in the 2 conferences, I was excited and I learned a lot.

We built up a good friendship with participants from other ASEAN countries in those few days. Through cultural and technical exchanges, we shared different experiences and challenges on our work; meanwhile, we discussed our daily lives. The 3-day conference gave us a platform to flow across the thoughts; furthermore, we took advantage of the occasion to strengthen the connection among ASEAN countries. I do believe this will provide convenience when we visit these countries in the future.

There were technical visit and seminar sections for participants. We appreciated the arrangement which let us enhance our knowledge. On the last day of the conference, we enjoyed some fun during the dinner as well.

I am really appreciative to have this rare opportunity to encounter so much different engineers from Asian countries, strengthen our connections and share experience with them. This trip is really unforgettable and remarkable; I enjoyed it and had a lot of fun. I'm awaiting the next conference already. This event is strongly recommended, on behalf of our personal development and network expansibility. Simultaneously, the HKIE and all engineering disciplines in Hong Kong shall be promoted to other ASEAN countries. Last but not least, please let me take this opportunity to send my gratitude to the HKIE to provide this chance to us. Thanks to the host country for taking care of us. Thank you to my partners, Yani, Sky and Antony; this trip let me know more about them. Thank you. I'm looking forward to our next congregation.

### **Sky Li's Feedback**

This year was my first time participating in the CAFEO and YEAFEO, and what an experience it was! Being one of the representatives of HKIE-YMC, I was glad to meet engineers from the ASEAN countries and share my knowledge and experience with them during the conference.

Promoting the theme of integrated solutions for energy, transport and infrastructure, the conference was well-organised and provided a platform for engineers to share cultural and engineering experience. Through the session of country report, I learned about what obstacles and challenges each country were encountering due to its location and culture, and what feasible solutions representatives voiced out for tackling those obstacles.

It was an honour to have attended CAFEO 32 and YEAFEO 21 as a representative of HKIE-YMC, and to have worked together with my fellow representatives Candy, Yani and Antony. In the future, I hope that more young engineers will have the chance to take part in international conferences like this, so that they can gain more experience and inspiration to contribute to society.

### **Yani Ko's Feedback**

Similar to Sky and Antony, this year was my first time participating in the CAFEO and YEAFEO, and it really impressed me much. Meeting engineers from the ASEAN countries was a delight, as we enthusiastically shared the culture and engineering experiences of our respective countries. Everyone became fast friends, despite our differing backgrounds and language barriers.

YEAFEO is a valuable platform for us to share our ideas, and also help us to broaden our social network, which I believe the friendships we gained are long-lasting. While delegates are of similar ages, we had soon become good friend in the first few days of the conference. It was my pleasure to listen their sharing and unique experience inside and out the conference, which helps me to know one nation better, and facilitate my thoughts of being a better engineer.

Feeling the strong passion and hospitality from the delegates, I had a memorable experience with all conference delegates. Even though the backgrounds of all the delegates are different, we shared the same thought, "We are engineers!". And that is what we are, to have obligation to build a better world.

I strongly recommend other Hong Kong Young engineers to join the future international conference and I would like to take this opportunity to thank my teammate Candy, Sky and Antony for sharing this unforgettable memory with me.

## Appendix A

# Conference Programme

**Appendix A - Programme Summary of CAFEO 32 and YEAFEO 21**

<b>Sunday, 9 November 2014</b>		
<b>09:00 – 20:00</b>	<b>Arrival for Golfers at Yangon; Registration of Non-Golfers</b>	
<b>23:30</b>	Arrive Yangon Airport and ride to Hotel for check-in	
<b>Monday, 10 November 2014</b>		
<b>06:30 – 12:30</b>	<b>Golf Competition</b>	
<b>10:00 – 14:00</b>	<b>Bowling Competition for YAEFEO</b>	
<b>09:00 – 18:00</b>	<b>Arrival of Officials, Foreign Delegations, Presidents and etc AFEO/YEAFEO/AER/WE-AFEO Registration of Conference Delegates and Participants</b>	
<b>07:30 – 13:00</b>	<b>Free and Easy (Own Lunch)</b>	
<b>13:00 -15:00</b>	<b>Combined with FEIAP Green Design Workshop and Energy and Environmental Workshop and Presentation</b>	<b>Technical Seminar</b>
	Ahlon	Dagon
<b>15:00 – 15:30</b>	<b>Tea Break</b>	
<b>15:30 – 16:30</b>	<b>Combined with FEIAP Green Design Workshop and Energy and Environmental Workshop and Presentation</b>	<b>Award Meeting</b>
	Ahlon	Dagon
<b>16:30 – 18:30</b>	<b>Free and Easy</b>	
<b>18:30 – 21:00</b>	<b>Welcoming Reception AER/AAE/AET/AAET/AT/AAT Certificate Presentation</b>	
	<b>Rehearsal by Presidents</b>	
	<b>End of Programme</b>	

<b>21:00 – 22:00</b>	Free and easy
<b>22:00</b>	Return to Hotel

<b>Tuesday, 11 November, 2014</b>				
<b>08:00 – 09:00</b>	<b>Arrival of delegates, Registration of Conference Delegates and Participants</b> <b>Arrival of VIP Guests</b> <b>Arrival of Guest of Honour</b>			
<b>09:00 – 11:00</b>	<b>Official Opening of CAFEO 32</b> <b>Speeches, Keynote Address and Visit Exhibition Hall</b> <b>Sedona Hotel</b>  Grand Ball Room			
<b>11:00 – 11:30</b>	<b>Tea Break</b>			
<b>11:30 – 13:00</b>	<b>Country Report</b>			
<b>13:00 – 14:00</b>	<b>Lunch</b>			
<b>14:00 – 15:30</b>	<b>Working Group D</b> <b>Disaster Preparedness, Mitigation and Management Session</b> Mindon - 1	<b>Working Group B</b> <b>(Education and Capacity Building)</b>  Mindon - 2	<b>Working Group C</b> <b>Transportation and Logistic</b>  Mindon - 3	<b>Technical Seminar</b>  Dagon
<b>15:30 – 16:00</b>	<b>Tea Break</b>			
<b>16:00 – 17:30</b>	<b>AER Meeting</b>  Mindon – 1	<b>YEAFEO Meeting (Young Engineers)</b> Mindon – 2	<b>WEAFEO Meeting (Woman Section)</b> Mindon - 3	<b>Technical Seminar</b>  Dagon
<b>17:30 – 18:30</b>	<b>Business Networking Session</b> Mindon – 1			
<b>End of Programme</b>				
<b>18:30 – 20:00</b>	Have Dinner			
<b>20:00 – 22:00</b>	Free and Easy			
<b>22:00</b>	Return to Hotel			

<b>Wednesday, 12 November 2014</b>					
<b>09:00 – 11:00</b>	<b>FEIAP Meeting</b>  Mindon - 1	<b>YEAFEO Young Engineers Activities</b>  Mindon – 2	<b>WE – AFEO (Woman Section)</b>  Mindon - 3	<b>Technical Seminar</b>  Dagon	<b>Technical Seminar</b>  Ahlon
<b>11:00 – 11:30</b>	<b>Tea Break</b>				
<b>11:30 – 12:30</b>	<b>AFEO Governing Board</b>  Mindon -1	<b>YEAFEO Young Engineers</b>  Mindon -2	<b>WE-AFEO Forum (Woman Section)</b>  Mindon - 3	<b>Technical Seminar</b>  Dagon	<b>Technical Seminar</b>  Ahlon
<b>12:30 – 13:30</b>	<b>Lunch</b>				
<b>13:30 – 16:00</b>	<b>Technical Seminar</b>  Mindon -1	<b>YAEFEO Young Engineers Activities</b>  Mindon – 2	<b>WE-AFEO Forum (Woman Section)</b>  Mindon -3	<b>Technical Seminar</b>  Dagon	<b>Technical Seminar</b>  Ahlon
<b>16:00 - 16:30</b>	<b>Tea Break</b>				
<b>16:30 – 18:00</b>	<b>Fee and Easy</b>				
<b>18:00 – 22:00</b>	<b>Closing Ceremony</b> <b>Closing Banquet</b> <b>Presentation of ASEAN Engineering Achievement Award</b> <b>Conferment of Distinguished Hon Fellow</b> <b>Conferment of Hon Fellow</b> <b>Conferment of Hon Member</b> <b>Flag Hand over to the incoming President of CAFEO 33</b> <b>Performance of delegates from ASEAN Countries and other foreign delegates</b>				
	<b>End of Programme</b>				
<b>22:00</b>	Return to Hotel				

<b>Thursday, 13 November 2014</b>	
<b>CAFEO delegates to attend Technical Visit to</b>	
<b>07:30 – 14:00</b>	<b>1) Nyaung Done Bridge and Bayint Naung Bridge (By Coach)</b>
<b>07:00 – 18:00</b>	<b>2) Mini Hydro Power Improvement Project - Bago Division (By Coach)</b>
<b>07:00 – 18:00</b>	<b>3) Thaukyegat 120MW Hydro Power Station - Bago Division (By Coach)</b>
<b>End of Programme</b>	
<b>18:00 – 19:30</b>	Have Dinner
Check out and ride to Yangon Airport for flight back	
Option for some to stay back in Yangon for extended two days stay and take flight back from Yangon to home destination.	

## Appendix B

### Financial Report