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800 Students Showcase Innovative Green Ideas in the 3rd Low-Carbon Invention Competition Daya Bay Study Tour Enhances Youth Learning about Nuclear Energy

The extreme weather driven by climate change is increasingly severe, with global temperatures reaching new highs. To enhance students' awareness on climate change and promote low-carbon living, the CLP Power Low Carbon Energy Education Centre (LCEEC), sponsored by CLP Power Hong Kong Limited (CLP Power) and established by City University of Hong Kong (CityU), organised the 3rd Low-Carbon Invention Competition. It received submissions from 800 students across more than 110 primary and secondary schools, showcasing innovative low-carbon inventions for a greener lifestyle.

The competition integrated creativity, STEAM (Science, Technology, Engineering, Art and Mathematics), and environmental elements to unleash students' innovative ideas. Participants first designed eco-friendly inventions for daily life in 2D drawings. Shortlisted candidates were invited to attend a 3D printing workshop to transform their drawings into 3D models. The award presentation ceremony was held on 24 January, presenting 16 awards in the primary and secondary school categories. The winning 3D-printed models were also showcased at the event.

A majority of this year's award-winning entries incorporated nuclear energy elements, while others integrated nuclear energy with other renewable energy to promote sustainable development. In the primary school category, Man Sze-tik from St. Paul's Primary Catholic School won the championship with her project "Go Green Water Sports". The design utilises residual heat from nuclear power generation to provide hot water as well as heating and cooling for an indoor water sports centre. The same heat is also used to warm greenhouse for growing crops to supply the centre's canteen, helping reduce carbon emissions.

In the secondary school category, the championship went to Yuen Sze-yan from Youth College (International) for her project "Autonomous EcoStorage Hub". The design integrates nuclear and solar energy to provide stable zero-carbon electricity for storage facilities. It also uses robotics for fully automated storage and management of resources, including documents and files, supported by drones and unmanned vessels for transportation.

To deepen students' understanding of nuclear energy, a one-day study tour to the Daya Bay Nuclear Power Station was introduced this year. On 31 January, 12 winning students visited the Daya Bay Nuclear Power Science and Technology Museum to learn about the power generation principles and safety design of the plant. They also viewed a model of Hualong One, China's self-developed third-generation nuclear reactor. The tour enriched students' knowledge of China's advanced development in nuclear energy and the role of Daya Bay in providing safe and reliable non-carbon energy for Hong Kong.

CLP Holdings Senior Director – Nuclear Mr Eddie Wu said, "Nuclear energy meets about a quarter of Hong Kong's electricity demand and is an indispensable non-carbon energy source in achieving the city's decarbonisation goals. CLP Power has been committed to promoting public education of nuclear energy and we are delighted that the competition has inspired young people to understand and apply nuclear energy. We will continue to join hands with the community as we advance towards carbon neutrality."

CityU Mechanical Engineering Department Head and LCEEC Director Professor Yang Yong said, "As a low-carbon energy education platform, the LCEEC has always been dedicated to enhancing public awareness of different low-carbon energy sources. The Low-Carbon Invention Competition has received overwhelming responses since its launch, attracting more than 2,500 participants over three years. It has successfully encouraged the younger generation to explore low-carbon energy and its importance to sustainable development."

Professor Leung Wing-mo, Hong Kong Meteorological Society Spokesperson and judging panel member for three consecutive years, remarked, "The diverse and highly creative entries for the competition reflect students' enthusiasm and innovative thinking in low-carbon energy. Young people are the future of our society, and this competition successfully raises their awareness of climate change. It also highlights the achievements of sustained public education over the years, contributing to the city's sustainable development."

Since its launch in 2017, the LCEEC has provided members of the public with the latest information about the role of low-carbon energy in combating climate change. It features interactive exhibits and five thematic zones showcasing nuclear energy, wind energy, solar energy, hydro energy and natural gas. By introducing the power generation principles of different low-carbon energy along with their applications, advantages and limitations, the LCEEC inspires visitors to reflect on energy-related issues and the prospects for future development.

CityU strives to fulfill its social responsibilities and attaches great importance to sustainable development, which it continues to put into practice, while promoting research in related fields. Other than promoting low-carbon energy with CLP Power, it also carries out various

initiatives on campus to encourage teachers and students to save energy and water resources, recycle and reuse, reduce carbon emissions etc., to contribute to a sustainable future.

For more information about the CLP Power LCEEC, please visit:

<http://www.cityu.edu.hk/lowcarbon>.

"Low-Carbon Invention Competition" Winner List:

Primary school category:

| Award | Name | Year | School | Winning Entry |
|-------------------------|---------------|------|--|---|
| Champion | Man Sze Tik | P6 | St. Paul's Primary Catholic School | Go Green Water Sports |
| First runner-up | Beverly Wan | P5 | Hong Kong Baptist Convention Primary School | Floating Integrated Energy Centre |
| Second runner-up | Marvin Tong | P4 | St. Paul's Co-educational College Primary School | Advanced Manufacturing Centre at Kwai Chung Container Terminals |
| Merit | Chan Yin Cho | P6 | Ying Wa Primary School | Solar - NuDrone with Charging Station |
| | Lee Sum Yin | P3 | Baptist (Sha Tin Wai) Lui Ming Choi Primary School | Smart Campus Umbrella |
| | Wong Chin Yiu | P5 | Hong Kong Baptist Convention Primary School | Eco-friendly Aircraft Carrier |
| | Wu Pak Ho | P4 | St. Paul's College Primary School | Smart Eco Home |
| | Ho Wan Kei | P5 | G.T. (Ellen Yeung) College Primary Section | iShade Energy-Saving Solar System |

Secondary school category:

| Award | Name | Year | School | Winning Entry |
|-------------------------|----------------------|----------|--|------------------------------------|
| Champion | Yuen Sze Yan | Grade 10 | Youth College (International) | Autonomous EcoStorage Hub |
| First runner-up | Lee Kam Shing | S6 | HKSYC&IA Chan Nam Chong Memorial College | Hydrogen Generation Base |
| Second runner-up | Cheng Kin Tat Kinder | Grade 12 | Youth College (International) | Nuclear - Powered Autonomous Train |
| Merit | Lam Sum Kiu | S1 | St. Stephen's Girls' College | The Coral Guardian |
| | Wong Boonnisa Zeen | Grade 10 | Youth College (International) | PureCity GreenCycle |
| | Charissa Chan | Grade 11 | Youth College (International) | Black Soldier Fly Factory |
| | Liu Yuet Shun | S4 | Catholic Ming Yuen Secondary School | Hanging Garden |

| | | | | |
|--|-------------|----|------------------------------------|--------------------------------|
| | Lau Sing Yu | S2 | Lok Sin Tong Leung Kau Kui College | Smart Energy Generation System |
|--|-------------|----|------------------------------------|--------------------------------|

Please click [here](#) to view the design of the winning entries. (Chinese version only)

Most Supportive Educational Organisations:

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| 1. The Catholic Diocese of Hong Kong |
| 2. Po Leung Kuk |
| 3. The Baptist Convention of Hong Kong |

Most Supportive Schools:

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| 1. Kwun Tong Maryknoll College |
| 2. Po Leung Kuk Yao Ling Sun College |
| 3. Baptist Hung Hin Shiu Rainbow Primary School |
| 4. G.T. (Ellen Yeung) College Primary Section |
| 5. Carmel Bunnan Tong Memorial Secondary School |

About CLP Power Hong Kong Limited

CLP Power Hong Kong Limited (CLP Power) is the Hong Kong utility subsidiary wholly owned by CLP Holdings Limited, a company listed on the Hong Kong Stock Exchange and one of the largest investor-owned power businesses in Asia. CLP Power operates a vertically integrated electricity supply business in Hong Kong, and provides a highly reliable supply of electricity and excellent customer services to more than six million people in its supply area.

About City University of Hong Kong

City University of Hong Kong (CityUHK) is an innovative hub for world-class research and education. We have 11 Colleges and Schools: Biomedicine, Business, Computing, Engineering, Liberal Arts and Social Sciences, Science, Veterinary Medicine and Life Sciences, Creative Media, Energy and Environment, Law, and Graduate Studies, together with 28 academic units. CityUHK is the most International University in the world, ranked in the top 100 globally, top 10 in Asia and top 5 young universities under 50 years of history.

We aim to unleash our students' passion for learning through inspirational learning, help them to work as a team through inspirational, interactive, and innovative learning, and encourage them to explore outside the academic world and embrace their inspiration and inventions through innovative learning. Moreover, we pursue research that has a scientific, technological and social impact. For more information about CityUHK, please visit: www.cityu.edu.hk.

Photo Captions:

Photo 1



(Second row, from left) CLP Power Low Carbon Energy Education Centre Deputy Director Professor Ma Kan, CLP Power Low Carbon Energy Education Centre Director Professor Yang Yong, Committee on the Promotion of Civic Education Chairman Mr Stanley Choi, CLP Holdings Senior Director – Nuclear Mr Eddie Wu, Hong Kong Meteorological Society Spokesperson Professor Leung Wing-mo, CLP Power Chief Corporate Development Officer Ms Quince Chong, Council for Carbon Neutrality and Sustainable Development Member Professor Daniel Cheng, CLP Power Director – Corporate Affairs (Business Operations) Ms Elizabeth Tai, Education Bureau Senior Curriculum Development Officer Ms Chuang Yung-ping join competition student winners, representatives of winning schools, guests and Alien Fox, mascot of LCEEC.

Photo 2



Primary school category winners: champion Man Sze-tik (first row centre), first runner-up Beverly Wan (first row right), second runner-up Marvin Tong (first row left).

Photo 3



Secondary school category winners: champion Yuen Sze-yan (fifth left), first runner-up Lee Kam-shing (fifth right), second runner-up Kinder Cheng (fourth left).

Photo 4



Judging panel member Hong Kong Meteorological Society Spokesperson Professor Leung Wing-mo (left) and CLP Power Chief Corporate Development Officer Ms Quince Chong (right) praise the students for the creativity and functionality of their inventions and their use of innovative technology, hoping that their ideas will help drive decarbonisation.

Photo 5 & 6





Accompanied by their parents and teachers, the award-winning students visit the Daya Bay Nuclear Power Station on 31 January and tour the Daya Bay Nuclear Science and Technology Museum. The students say the visit is eye-opening, allowing them to learn about the power generation principles and safety design of the plant, as well as China's advanced development in nuclear energy.

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