

23 December 2024

More Than 600 Students Showcase Creativity and Environmental Awareness in Low-Carbon Invention Competition

The CLP Power Low Carbon Energy Education Centre (LCEEC), jointly established by CLP Power Hong Kong Limited (CLP Power) and City University of Hong Kong (CityU), organised the second "Low-Carbon Invention Competition" to promote decarbonisation and energy-saving among students in response to climate change. Primary and secondary school students unleashed their creativity by designing inventions for everyday life and used 3D printing technology to bring their designs to life.

The competition combined elements of creativity, STEM (Science, Technology, Engineering and Mathematics), and environmental awareness. In the first round of the competition, participants presented their inventions through drawings. In the second round, shortlisted students attended a 3D printing workshop organised by the LCEEC where they used software to transform their drawings into 3D images and compete for a total of 16 awards in primary and secondary school categories.

The competition attracted entries from more than 600 students across 54 schools. To celebrate the 30th anniversary of CLP Power's import of nuclear energy from the Daya Bay Nuclear Power Station, nuclear energy was added as a scoring criterion to encourage participants to incorporate nuclear elements into their inventions. Many winning entries deployed the principles of nuclear power generation creatively, while others effectively utilised renewable energy sources such as solar and wind power.

Winning entries were showcased at an award presentation ceremony held on 21 December. Primary six student Yeung Chi Yu from St. Francis of Assisi's Caritas School won the championship in primary school category with his invention titled Floating Nuclear Data Centre. The invention features two Linglong One small modular nuclear reactors developed by China and uses sea water for system cooling. Yeung said, "a large data center is essential for Hong Kong's transformation into a hi-tech city. Given the scarcity of land and energy, a floating nuclear data centre presents an ideal solution". The champion in the secondary school category was secondary four student Chow Tsan Hung from HKSYP & IA Chan Nam Chong Memorial College. His invention, titled Nuclear Energy Cooling Tower, generates energy

through the thermoelectric effect. Chow explained that converting residual heat from nuclear power stations into energy not only enhanced energy efficiency but also minimised the impact on environment.

CLP Holdings Senior Director – Nuclear Mr Eddie Wu said, “CLP Power is dedicated to promoting public education about nuclear energy – a non-carbon emitting energy source that provides safe and reliable electricity. Riding on the milestone of 30 years of the import of nuclear energy to Hong Kong, we hope to help young people better understand nuclear energy and its indispensable role in achieving decarbonisation goals.”

Head of Department of Mechanical Engineering of CityU, CLP Power LCEEC Director, and CLP Power Chair Professor of Nuclear Engineering Professor Pan Chin said, “CityU strives to promote sustainability, and the LCEEC has been committed to raising public awareness of various low-carbon energy sources, including nuclear energy. The first Low-Carbon Invention Competition held last year received an enthusiastic response, we therefore hold it again this year to inspire the next generation to understand the applications of low-carbon energy sources and their importance in achieving sustainable development.”

Hong Kong Meteorological Society Spokesperson and judging panel member for the second consecutive year Professor Leung Wing-mo remarked, “The quality of this year's entries was even higher than last year's. I particularly appreciate the efforts of many participants to incorporate nuclear elements in their inventions, which is challenging. This demonstrates the outstanding observational skills and creativity of Hong Kong students, as well as their understanding of energy conservation and decarbonisation issues.”

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 sources 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	Yeung Chi Yu	P6	St. Francis of Assisi's Caritas School	Floating Nuclear Data Centre
First runner-up	Lee Sum Yin Natan	P2	Baptist (Sha Tin Wai) Lui Ming Choi Primary School	Smart Rest Station
Second runner-up	Yeung Hiu Yuet	P6	Pui Ching Primary School	Nuclear Residual Heat Power Station
Merit	Chan Kok Tung	P6	Sharon Lutheran School	Energy-saving Water Window
	Zhao Jun Yi	P6	Po Leung Kuk Luk Hing Too Primary School	Power-Generating Elevator
	Stella Liu	P2	Sacred Heart Canossian School	Smart Pavilion
	Chan Yin Cho	P5	Ying Wa Primary School	Eco NuCargo
	Cheng Ching Tung	P6	SKH Chu Yan Primary School	Nuclear + Solar Energy Thermostatic System

Secondary school category:

Award	Name	Year	School	Winning Entry
Champion	Chow Tsan Hung	S4	HKSYC&IA Chan Nam Chong Memorial College	Nuclear Energy Cooling Tower
First runner-up	Charissa Chan	S4	Youth College - International YCI	Eco-Therm Spa
Second runner-up	Tsui Siu Fong	S1	Tsuen Wan Government Secondary School	Nuclear Residual Heat Generator
Merit	Wang Qimi Minnie	S5	St. Paul's Secondary School	Nuclear Energy Cycle Plant Cultivation System
	Hayley Wong Hoi Ying	S2	Hong Kong University Graduate Association College	Charging and Energy Generating 2 in 1
	Chan Ho Kiu Megan	S2	Hong Kong University Graduate Association College	WasteWise energy
	Wu Yat Sun Marcus	S2	Hong Kong University Graduate Association College	Sound Transmission System

	Lee Kwan Shing	S5	Hong Kong Baptist University Affiliated School Wong Kam Fai Secondary and Primary School	Nuclear Power Food Waste System
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Please click [here](#) to view the details of winning entries.

Most Supportive Educational Organisations:

1. Anglican (Hong Kong) Primary Schools Council Limited
2. Po Leung Kuk

Most Supportive Schools:

1. SKH Chu Yan Primary School
2. Kwun Tong Maryknoll College
3. Hong Kong University Graduate Association College
4. Pui Tak Canossian College
5. Sacred Heart Canossian 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 10 Colleges and Schools: 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 left from the second row) CLP Power Low Carbon Energy Education Centre Deputy Director Professor Wang Wei, CLP Holdings Senior Director – Nuclear Mr Eddie Wu, Hong Kong Meteorological Society Spokesperson Professor Leung Wing-mo, Chairman of Committee on the Promotion of Civic Education Mr Stanley Choi, CLP Power Director – Corporate Affairs (Business Operations) Ms Elizabeth Tai, join competition winners, representatives of winning schools, guests and Alien Fox, mascot of CLP Power Low Carbon Energy Education Centre.

Photo 2



Primary school category winners: champion Yeung Chi Yu (middle), first runner-up Lee Sum Yin Natan (first row), second runner-up Yeung Hiu Yuet (fourth from right).

Photo 3



Secondary school category winners: champion Chow Tsan Hung (fifth from right), first runner-up Charissa Chan (fourth from right), second runner-up Tsui Siu Fong (fifth from left).

Photo 4



Judging panel members Hong Kong Meteorological Society Spokesperson Professor Leung Wing-mo (right) and Chairman of Committee on the Promotion of Civic Education Mr Stanley Choi (left) commend the participants for their keen sense of environmental protection and creative designs for energy-saving ideas in daily life.

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