

HKIE 40th Anniversary Solar Power Model Car Design Competition

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The Electrical Division of the Hong Kong Institution of Engineers has organized a solar power model car design competition on 8 May 2016 to promote awareness of energy saving and understanding on renewable energy among lower form students. This competition was also selected as one of the special events in celebrating the 40th Anniversary of the HKIE. The competition named “HKIE 40th Anniversary Solar Power Model Car Design Competition” was co-organized by the Education Bureau and the Hong Kong Polytechnic University with the generous support from the HK Electric and the CLP Group.

This was the fifth year that the Electrical Division has organized the same competition and solar power was chosen as the main theme of this year. Unlike hydro power chosen last year, participants of this year were required to design and fabricate a model car powered by solar energy for competition. To promote creativity and fair competition among participated teams, there are basically no constraints on how to design and fabricate the model car except the completed model, including its charging station and other decorations, shall be within the size of 600mm (l) x 600mm (w) x 600mm (h). All necessary components such as solar panels, capacitors and motors should be selected and procured by each team, but with the expenditure limit of HK\$1,000. A special setup consists of three artificial light sources are turned on according to a pre-defined program to simulate sun rise and sunset. Participants should design their model to harvest the most energy from the artificial light sources and convert them into useful mechanical energy. Model cars with longer distance travelled in shorter time per charge will score higher marks.

This year we had a total of 34 secondary schools participated in the competition at the Hong Kong Polytechnic University. A judging panel consisting of Ir Thomas Chan, Vice President of HKIE, Mr. Garrick Tsui of the Education Bureau, Ir Dr. Edward Lo, Associate Professor of Electrical Department of the Hong Kong Polytechnic University, Ir Steven Ho of HK Electric and Ir P K Chan, Chairman of Electrical Division was formed. The team with the best energy output, creativity, workmanship, presentation skill and team-work will become the winners. After two rounds of exciting and yet interesting competition, CNEC Christian College won the champion as well as the “My Favourite Model” prize, TWGHs Mrs Fung Wong Fung Ting College won the first runner-up, NLSI Peace Evangelical Secondary School won the second runner-up and the three merit awards went to Tin Shui Wai Government Secondary School, CCC Tam Lee Lai Fun Memorial Secondary School and Shun Lee Catholic Secondary School. Tin Shui Wai Government Secondary School also won the “Best Workmanship” prize, Stewards Pooi Kei College won the “Best Presentation” prize, Workers' Children Secondary School won the “Best Creativity” prize and Hong Kong Red Cross Margaret Trench School won the “Best Team Work” prize.

It is more than meaningful this year to have one special school joining us to demonstrate that everyone can enjoy equal opportunity to learn and be creative. The judges were not only amazed by the creativity and enthusiasm of each team, but also the positive attitude towards continuous improvement. They wish this experience can enhance their knowledge for future and increase their interest to engineering field.



The champion as well as “My Favourite Model” prize winner CNEC Christian College and the prize presenter Ir Thomas Chan



The “Best Team Work” prize winner Hong Kong Red Cross Margaret Trench School and the prize presenter Ir Dr. Edward Lo



Group photo of the winning teams with the judges



Group photo of all the students, judges and organizing committee members