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Residential Customers Save 300,000 kWh of Electricity in 4 Hours Responding to CLP's Energy-Saving Missions in Hot Summer Evenings

CLP Power Hong Kong Limited (CLP Power) received an overwhelming response from customers invited to save electricity and combat climate change by taking part in its Energy-Saving Missions programme. Around 600,000 households were invited to reduce their consumption in two events in July under the programme, which provides incentives for residential customers with smart meters to adjust their consumption behaviour and reduce energy use during peak demand periods on hot summer days. A total of 300,000 kilowatt hours (kWh) of electricity was saved by 70% of the participating customers in 4 hours. The savings were equivalent to a reduction in carbon emissions of more than 110 tonnes¹.

The Energy-Saving Missions events were held on 12 and 25 July this year, Hong Kong's hottest July on record and encouraged customers to reduce their consumption and lower carbon emissions at the time of year when electricity demand traditionally soars because of sweltering weather and increased use of air conditioners.

A total of some 600,000 households with smart meters participated in the events and were notified by CLP App, SMS, or email to save energy during the peak consumption hours of 6:30 pm to 8:30 pm. Customers who reduced their energy use earned reward points, which can be redeemed for food coupons, supermarket vouchers and electrical appliances.

To calculate customer rewards, CLP Power looks at a household's electricity consumption for the 10 working days² preceding an Energy-Saving Missions event, and takes the average consumption for the three days of highest energy use as the baseline. For each unit of electricity saved against the baseline usage during the event, 200 points are awarded. Customers can check their saving results and reward points by logging on to

¹ Calculation based on the carbon intensity of the electricity sold by CLP Power in Hong Kong in 2021.

² The 10 working days cover Mondays to Saturdays, excluding public holidays and previous Energy-Saving Missions event days.

their online electricity accounts. Practising energy conservation can be simple. For instance, every hour an air conditioner is switched off saves about a unit of electricity, depending on the brand and model.

In addition to the reward points, CLP Power introduced an innovative artificial intelligence (AI) tool called Smart Air Conditioner (AC) Control to help customers reduce their consumption during Energy-Saving Missions events. The device has in-built sensors to continuously detect the temperature and humidity levels at homes while collecting users' feedback on comfort levels under different environmental conditions through a mobile app.

Using AI technology, the Smart AC Control produces personalised profiles for users and intelligently controls the air conditioner temperature, avoiding energy waste through overcooling while maintaining the comfort level. The device makes it easier for customers taking part in Energy-Saving Missions to reduce their energy use. The results showed that the energy savings of participating customers using AI-powered Smart AC Control were 30% higher than those of other participants during the events.

Mr Frankie Yip from Tuen Mun used the AI-powered Smart AC Control on Energy-Saving Missions events. He said, "The automatic control function of the device made it almost effortless for me to save energy and earn reward points by keeping a comfortable room temperature." Another participating customer Ms Yuen, a Tung Chung resident who took part in the Energy-Saving Missions on July 12, said, "I put labels on different appliances during the event to remind members of the family not to use them if they don't really need to. With a little effort, we managed to save energy and earn 600 reward points despite the very hot weather."

CLP Power Customer Success and Sales Director Dr Anthony Lo said, "I am delighted that the Energy-Saving Missions programme has been embraced by our smart meter customers. The weather in July was exceptionally hot this year, but customers still managed to reduce their energy use and save an impressive total of 300,000 kWh of electricity over two events in just 4 hours."

Dr Lo hopes the programme can be expanded in the future so that more smart meter customers can take part, leading to year-round changes in habits. "We want to change the everyday consumption behaviour of our customers in the long run so as to lower the peak electricity demand of the entire community, achieving an overall reduction in carbon emissions and paving the way for Hong Kong to be a low-carbon city," he explained.

By the end of September 2022, CLP Power had installed and connected over 1.63 million smart meters for more than half of its customers. By 2025, all customers will have their smart meter installed. The smart meters allow them to view their hourly consumption up

to as recently as four hours ago by logging into their CLP Online Account on either the CLP app or CLP’s website. They can also see their projected consumption and receive consumption alerts to help them manage their electricity usage and better understand their energy usage patterns, making it easier for them to reduce consumption and carbon emissions, and play a role in combating climate change.

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.

Photo Captions:

Photo 1



CLP Power Customer Success and Sales Director Dr Anthony Lo (right) and customer Mr Frankie Yip celebrate the success of using AI-powered Smart AC Control device in reducing household consumption at the Energy-Saving Missions events.

Photo 2



Customer Mr Frankie Yip demonstrates the AI-powered Smart AC Control device.

Photo 3



Ms Yuen, a Tung Chung resident who took part in the Energy-Saving Missions, put labels on different appliances to remind members of the family not to use them if they don't really need to.

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