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## CLP Power's Decarbonisation with the Rise of New Energy

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### Abstract

CLP Power is a vertically integrated power supply business in Hong Kong, covering electricity generation, transmission and distribution, and marketing and customer services. CLP Power provides a world-class electricity supply with a reliability rate of over 99.999% to about 2.86 million customers.

In support of Hong Kong's transition to a sustainable future, the Government of the Hong Kong Special Administrative Region (HKSAR) has promulgated the Hong Kong Climate Action Plan 2050, which sets out the city's commitment to achieving net-zero electricity generation by 2050. The plan outlines the strategic pathways for building a low-carbon, resilient, and sustainable city.

Aligned with this vision, CLP Power's decarbonisation strategy is structured in three phases. In the near term, the strategy focuses on leveraging natural gas and progressively reducing coal usage to lower carbon emissions. In the medium term, enhanced regional cooperation will enable the import of zero-carbon energy, facilitating the phase-out of coal and a gradual optimisation of natural gas use. In the longer term, CLP Power aims to decarbonise natural gas generation in the 2040s through technically and economically viable solutions.

Fuel diversification will play a pivotal role in this transition, including expanded imports of zero carbon energy, alongside the potential adoption of green fuels such as hydrogen or ammonia. Carbon removal technologies, including carbon capture, utilisation and storage (CCUS), may also contribute to the decarbonisation of existing generation assets. CLP Power is undertaking a range of studies to assess infrastructure requirements for hydrogen and ammonia, as well as the feasibility of deploying CCUS for existing combined-cycle gas turbine units.

Low-carbon technologies continue to evolve rapidly at the global level. Hydrogen energy is progressing steadily, with future deployment expected to be influenced by its relative cost competitiveness compared with other green and low-carbon solutions. As multiple technologies advance in parallel, CLP Power will continue to monitor technological developments closely and maintain flexibility in its long-term planning to adopt the most suitable solutions as they mature.

Currently, Hong Kong does not have dedicated legislation regulating the use of hydrogen as a fuel. To enable its safe and orderly adoption, proposed amendments to the Gas Safety Ordinance aim to establish a comprehensive regulatory framework covering gas quality, installations, personnel competency, and emergency response arrangements.