

23rd APEC ENERGY WORKING GROUP MEETING

Statements on Notable Energy Developments

Hong Kong, China

The progress of energy developments and activities in Hong Kong, China (“Hong Kong”) since the 22nd meeting of the Energy Working Group is summarised below:

(1) Comprehensive Building Energy Codes

The Government of the Hong Kong Special Administrative Region (“Government”) has promulgated the Building Energy Codes (BEC) through “The Hong Kong Energy Efficiency Registration Scheme for Buildings” in 1998. The Scheme covers lighting, air-conditioning, electrical and lift & escalator installations. There are over 59 buildings registered as at early 2002.

To improve the BEC’s adaptation to innovative design and technological advancement, the Government commissioned in December 2001 a consultancy study on a performance-based BEC using total-energy-budget approach. The study is expected to complete by end 2002.

The BECs are also being reviewed to make sure that they will continue to meet the needs of the evolving building industry.

(2) Energy Efficiency Labelling Schemes

Under our Voluntary Energy Efficiency Labelling Schemes, we have already issued more than 1,300 labels to refrigerators, room coolers, washing machines, electric clothes dryers, compact fluorescent lamps, electric storage water heaters, photocopiers, electric rice-cookers and multifunction office devices as at end February 2002.

In order to raise public awareness in the energy (fuel) efficiency of vehicles, a voluntary Energy Efficiency Labelling Scheme for Petrol Passenger Cars was launched in February 2002, which is the first labelling scheme for vehicles in Hong Kong.

The Schemes will be extended to household dehumidifiers and laser printers in late 2002.

(3) Demand Side Management

The energy-efficient lighting rebate programmes for commercial sector launched by the two power companies in Hong Kong were very well received and the companies had stopped accepting new programme applications since July/August 2001 due to exhaustion of the programme budgets. As for the energy-efficient

heating, ventilating and air-conditioning rebate programmes, they are still ongoing. The need for implementing rebate programmes for residential customers is being reviewed by Government.

(4) Energy Audit Programme

The Government has implemented an Energy Audit Programme in selected government buildings since 1993. Up to March 2002, energy audits have been performed in 154 major Government energy-consuming buildings with the highest potential for energy savings.

The results of the pilot scheme for Energy Management Opportunities (EMO) have been satisfactory so far, with significant energy savings achieved. The Government has also published reports and application guidelines to promulgate the use of the EMOs. In addition, pilot tests on innovative energy efficient equipment relating to lighting, air conditioning and vertical transportation have been carried out in government buildings since 1999. The tests were very successful with substantial energy saving achieved, especially with the application of new T5 lamps in office and sports hall lighting, new lift drives system, and intelligent air-conditioning and digital lighting control system with occupancy and daylight sensors.

(5) Energy End-use Database

The Government has developed an energy end-use database and an energy supply and demand forecasting model for the territory. The database provides useful insight into the energy consumption patterns of different sectors and sub-sectors, and end uses in Hong Kong. The forecasting model projects the future energy supply and demand scene, and predicts the primary energy mix in Hong Kong. A basic data set from the database is available at www.emsd.gov.hk for public information.

A consultancy study was completed in January 2002 to track the usage patterns and to derive energy consumption indices of key household appliances in Hong Kong. Final results are being used to update and enhance the Hong Kong Energy End-use Database. The Year 2000 basic data set will be published by December 2002. In addition, another consultancy study on “Transport Energy Consumption Survey” will be commissioned in mid March 2002 to develop the Energy Use Intensities (fuel consumption rates, etc.) for public non-franchised buses, private light buses, medium goods vehicle (MGV) tractors, MGV non-tractors and heavy goods vehicles in the transport sector.

(6) Alternative Fuel Vehicles

The Government is working towards the replacement of all 18,000 diesel taxis with liquefied petroleum gas (LPG) models by the end of 2005. So far, over 14,500 or

80% of the diesel taxis have been replaced with LPG ones. Having completed the trial of LPG and electric public light buses, the Government has proposed an incentive scheme to encourage owners of existing diesel public and private light buses to replace their vehicles early with ones that run on LPG or electricity. The Electrical and Mechanical Services Department (EMSD), as Government's authority on gas safety, is closely involved in the safety control and approval of the LPG vehicles, LPG filling stations, LPG vehicle workshops, as well as establishing and maintaining registers of competently trained LPG mechanics. Furthermore, as the technical advisor to the Government, EMSD is taking a long-term view with its policy bureau in identifying and establishing incentives to motivate drivers to switch to vehicles that use clean alternative fuel and in developing the appropriate supporting infrastructures.

Furthermore, a local gas supply company is conducting a trial run of a natural gas vehicle. In this regard, EMSD will continue to play its role on the gas safety and advisory aspect.

(7) **Renewable and Clean Energy**

Several local institutions have received both direct and indirect funding from the Government to support their researches on the utilisation of renewable energy resources. The scope of research projects varies from the theoretical study of solar irradiation to the applications of both photovoltaic and fuel cell technologies.

The Government commissioned a consultancy study in November 2000 to investigate the viability of using new and renewable energy technologies in Hong Kong. Besides identifying the types of renewable energy that have the potential of wide application in Hong Kong, it will also examine the associated institutional, legal, regulatory and financial issues. The consultancy study also includes a pilot project to install building-integrated photovoltaic panels in an existing high-rise government building to demonstrate to the general public the applicability of renewable energy technologies.

Plans have already been made to install photovoltaic panels with capacity of about 690 kW in 10 Government projects in coming three years together with a project that will utilize fuel cells.

(8) **Consultancy Studies on Wider Use of Water-cooled Air Conditioning System (WACS)**

Recognizing the energy saving potential of WACS, the Government is conducting two consultancy studies: one on the territory-wide implementation of WACS and another one on the implementation of district cooling system in a newly developed area. They will be completed by mid 2002.

The Government has also commenced in December 2001 another study on the implementation of WACS in two developed districts in Hong Kong. The study will take 15 months to complete.

(9) Energy Consumption Indicators and Benchmarks

The consultancy study on the development of energy consumption indicators and benchmarks for selected groups in the commercial and transport sectors are scheduled for completion in second quarter of 2002. The study will establish energy consumption indicators to enable targeted groups to set improvement targets and to identify and implement improvement measures. A benchmarking tool will also be made available to enable individual operators to benchmark their energy consumption with others in the same group.