Subcommittee on the Fifth Technical Memorandum for Allocation of Emission Allowances in Respect of Specified Licences

Follow-up actions arising from the discussion at the meeting on 17 November 2015

The information requested by Members at the Subcommittee meeting on 17 November 2015 is as follows –

(a) the installed capacity of each power generation unit and the total installed capacity in respect of each electricity works of the two power companies.

CLP Power Hong Kong Limited (CLP)

CLP conducts electricity works at Black Point Power Station (gas-fired), Castle Peak Power Station (coal-fired) and Penny's Bay Gas Turbine Power Station (oil fired). The installed capacity of its electricity generation units is as follows:

Black Point Power Station

Gas-fired Generation Units	
Unit Name	Capacity in Megawatts (MW)
C1	312.5
C2	312.5
C3	312.5
C4	312.5
C5	312.5
C6	312.5
C7	312.5
C8	312.5
Total Capacity	2,500

Castle Peak Power Station

Coal-fired Generation Units		Oil-fired Generation Units [a]	
Unit Name	Capacity (MW)	Unit Name	Capacity (MW)
A1	350	CG1	60

A2	350	CG2	60
A3	350		
A4	350		
B1	677		
B2	677		
B3	677		
B4	677		
Total Capacity	4,108	Total Capacity	120
Note [a]: Oil-fired generation units are for emergency use.			

Penny's Bay Gas Turbine Power Station

Oil-fired Generation Units [b]	
Unit Name	Capacity (MW)
PG1	100
PG2	100
PG3	100
Total Capacity	300
Note [b]: Standby units for peak lopping and emergency use.	

The Hongkong Electric Company, Limited (HEC)

HEC conducts electricity works at Lamma Power Station and Lamma Power Station Extension. The installed capacity of its electricity generation units is as follows:

Lamma Power Station and Lamma Power Station Extension

Coal-fired Generation Units		Gas-fired Generation Units		Oil-fired Generation Units [c]	
Unit Name	Capacity (MW)	Unit Name	Capacity (MW)	Unit Name	Capacity (MW)
L1	250	GT57 [d]	365	GT1	55
L2	250	L9	335	GT2	125

L3	250			GT3	125
L4	350			GT4	125
L5	350			GT6	125
L6	350				
L7	350				
L8	350				
Total Capacity	2,500	Total Capacity	700	Total Capacity	555

Note [c]: Standby units for peak lopping and emergency use.

[d]: GT57 is a combined cycle gas-fired generation unit with its generators and associated electrical plants taken from two oil-fired generation units in Ap Lei Chau Power Station.

(b) the plan, if any, for connecting the surplus electricity generated by the Integrated Waste Management Facilities ("IWMF") at Shek Kwu Chau to the existing power grids, including the estimated amounts and prices of the surplus electricity from IWMF to be purchased by the power companies and the possible implications on electricity tariffs.

After meeting the plant's internal power consumption, it is estimated that the IWMF can supply about 480 million kilowatt-hours (kWh) of surplus electricity to the power grid per year, which is equivalent to the power consumption of about 100,000 households in Hong Kong. We are discussing with a power company on the technical arrangements and requirements for the grid connection and power export. The discussion will also cover other details, such as selling price and detailed implementation arrangements. In our negotiation with the power company on the terms of sales, we will strive to ensure that the sale of surplus electricity to the power company would not have any tariff implication on the public.

(c) the Administration's study/assessment about the effectiveness of Advanced Metering Infrastructure ("AMI", also known as smart meters) for managing electricity demand in Hong Kong, and whether the Administration would consider playing a more proactive role to promote AMI on a wider scale in the territory.

AMIs are systems that measure, collect, and analyze energy usage, and

communicate with metering devices such as electricity meters either on request or on a schedule. They form part of the "Smart Grid" system and provide two-way meter communications, allowing commands to be sent toward the consumer for multiple purposes, including "time-of-use" pricing information, demand-side response, etc. Some overseas utilities have adopted AMIs to help consumers use information provided by the system to change their normal consumption patterns with a view to taking advantage of lower prices offered for different time periods. Incentive pricing may be used to curb growth of peak consumption. The two power companies in Hong Kong have started to study the application and technologies of AMI for their customers. The CLP Power Hong Kong Limited launched in 2013 a pilot scheme involving the provision of timely energy consumption data to some 3,000 residential customers and some 1,400 small to medium-sized enterprise (SME) customers, as well as alert signals if usage approached the selected level. Whether AMI technologies should be introduced into Hong Kong on a wider scale will be subject to any AMI development proposal from the two power companies, as well as our assessment of the feasibility, costs and benefits and tariff implications of the proposals. We keep an open mind and would welcome public views on this issue.

(d) how the Administration sets energy saving targets for new government buildings and public facilities, and ensures/ascertains that these targets can/will be achieved.

The Administration has promulgated a circular on Green Government Buildings which provides the environmental performance framework for Government buildings, and sets out the best practicable environmental targets to be achieved by Government buildings. As far as energy efficiency and conservation is concerned, the framework stipulates that all new Government buildings should aim to outperform the Building Energy Code by 3-10% depending on the building types. Works departments are required to report the adoption of energy efficient features to the Electrical and Mechanical Services Department.

As for existing buildings, we set in 2009 a target of 5% saving in the electricity consumption in government buildings in five years under comparable operating conditions in 2007-08. The Government attained the electricity saving target in 2013-14. Building on our experience of attaining the electricity saving target set in 2009, we set a new target of reducing the electricity consumption of government buildings by 5% in the next five financial years from 2015-16 to 2019-20 under comparable operating conditions, using the electricity

consumption in 2013-14 as the baseline. To achieve this target, we will introduce a series of measures, including the conduct of energy audits for major Government buildings with comparatively high annual electricity consumption to identify energy management opportunities, and implementation of electricity saving measures and projects identified in the energy audits.

Environmental Protection Department
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