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**Paper for the House Committee meeting on 20 June 2008**

**Bills Committee on Air Pollution Control (Amendment) Bill 2008**

**Purpose**

This paper reports on the deliberations of the Bills Committee on Air Pollution Control (Amendment) Bill 2008 (the Bills Committee).

**Background**

2. To improve air quality, the Hong Kong Special Administrative Region Government (HKSARG) reached a consensus with the Guangdong Provincial Government (GPG) in April 2002 to reduce the emissions of sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), respirable suspended particulates (RSP), and volatile organic compounds by 40%, 20%, 55%, and 55% respectively by 2010 as compared to 1997.

3. Power generation is the largest emission source in Hong Kong, accounting for 89% of SO<sub>2</sub>, 44% of NO<sub>x</sub>, and 32% of RSP emitted locally in 2006. For Hong Kong to achieve the 2010 emission reduction targets, it is essential for the power companies to substantially reduce their emissions of SO<sub>2</sub>, NO<sub>x</sub>, and RSP by 2010. Since 2003, the Administration has been engaging the two local power companies regarding the imposition of emission caps in 2010. Emission caps on the power stations have been imposed since 2005 upon renewal of their respective specified process licences. These emission caps are being progressively tightened to ensure that Hong Kong can meet the 2010 emission reduction target.

4. To ensure a smooth, timely and transparent implementation of the emission caps for the power sector, the Administration proposes to stipulate by legislation the maximum quantity of emission permissible for the power plants, and allow them to use emission trading as an alternative means for achieving the emission caps. Opportunity is also taken to amend the appeal provisions under the Air Pollution Control Ordinance (Cap. 311) (APCO) to ensure the independent and impartial operation of the Appeal Board.

## **The Bill**

5. The object of the Bill is to amend APCO to –
- (a) cap the emissions of specified pollutants, namely SO<sub>2</sub>, NO<sub>x</sub>, and RSP of power plants in Hong Kong in 2010 and beyond;
  - (b) facilitate the use of emission trading as a means to comply with the emission caps for power plants;
  - (c) abolish the power of the Authority (i.e. the Director of Environmental Protection) to refer an Appeal Board's decision for review by the Chief Executive in Council; and
  - (d) bar public officers from servicing on an Appeal Board.

## **The Bills Committee**

6. At the House Committee meeting held on 22 February 2008, Members agreed to form a Bills Committee to study the Bill. Under the chairmanship of Hon Audrey EU Yuet-mee, the Bills Committee has held 13 meetings. The membership list of the Bills Committee is in **Appendix I**. Apart from examining the Bill with the Administration, the Bills Committee has also invited views from the trade and related sectors. 11 groups have made written and/or oral representation to the Bills Committee. A list of these groups is in **Appendix II**.

## **Deliberations of the Bills Committee**

7. Members generally support the policy intent of the Bill to cap the emissions of power plants with a view to improving air quality in Hong Kong and the Pearl River Delta (PRD) Region. In the course of deliberation, they have examined issues relating to the setting and allocation of emission allowances, adjustment to quantity of allocated allowances, non-compliance and penalty as well as regulation of carbon dioxide (CO<sub>2</sub>).

### Setting and allocation of emission allowances

8. To set a cap on the maximum emissions of the specified pollutants allowed for the power sector, the Secretary for the Environment (SEN) is empowered to set these out in a technical memorandum (TM). SEN will also set the emission allowances and the methodology for allocating these allowances to individual power plants in relation to each emission year commencing on or after 1 January 2010.

9. Members have studied how the emission allowances are set and allocated to individual power plants. The Administration's explanation is that based on the need to achieve the emission reduction targets under the 2002 consensus with Guangdong,

the best practicable emission reduction technologies and means available as well as emissions from other sources and sectors, the proposed 2010 emission allowances for the power sector are as follows –

	<u>1997 baseline emissions (tonnes)</u>	<u>2010 emission allowances (tonnes)</u>	<u>Reduction</u>
SO <sub>2</sub>	54 400	25 120	54%
NO <sub>x</sub>	56 100	42 600	24%
RSP	2 610	1 260	52%

To ensure that all power plants will receive the same quantity of emission allowances per unit of electricity generated, emission allowances will be allocated to individual power plants on a pro-rata basis in accordance with their respective share of the total amount of electricity generated for local consumption using the following formula –

$$A \times \frac{B}{C}$$

“A” *represents the total allowed emission mentioned above*

“B” *represents the electricity generated for local consumption from the power plant under consideration from 1999 to 2003 inclusive*

“C” *Represents the sum of the electricity generated for local consumption from all power plants under consideration from 1999 to 2003 inclusive*

10. Members note that any change in the allocation of emission allowances in respect of an emission year will not have effect unless the TM for making the allocation has commenced to have effect at least four years before the commencement of the emission year. They question the rationale behind such arrangement. The Administration’s explanation is that to cater for the change of the market share in electricity generation for local consumption, the allocation will be updated regularly starting from 2010, but in any event not less than once every three years in accordance with their total amount of electricity generated for local consumption for the past 60 months. In addition to the regular updating according to individual power plants’ respective market share, the overall emission caps for the power sector may also need to be revised in future in view of the need to continuously improve air quality. In case of such revision, SEN will take into account –

- (a) the use of the best practicable means for the prevention of emissions;
- (b) the need to attain and maintain the relevant air quality objectives; and

- (c) whether the emissions would be, or likely to be, prejudicial to public health.

To provide sufficient time for power companies to adjust their operation, such as installation of emission abatement facilities and adjustment of fuel strategy, an advance notice of no less than four years will be given for any change in the allocation of emission allowances, including that resulted from the regular updating. However, such arrangement does not apply to the first TM since the power companies are well aware of the emission allowances to be allocated under the first TM, a draft copy of which has been submitted for reference by the Bills Committee.

11. In view of the significance of TM, members consider that any amendments to TM should be subject to the scrutiny of the Legislative Council (LegCo). According to the Administration, TM may be amended by LegCo through the vetting procedure as stipulated in section 37B of APCO, which follows the same way of how subsidiary legislation may be amended under section 34 of the Interpretation and General Clauses Ordinance (Cap. 1). However, such amendment must adhere to the applicable restrictions with regard to the scope and nature of TM as stipulated in APCO. A TM may not commence to have effect before the expiry of the period for LegCo to pass a resolution to amend TM or before the day of the publication in the Gazette of any such resolution (section 37C of APCO). The first TM will be published in the Gazette for introduction into LegCo at the beginning of the legislative year 2008-09.

12. The Bills Committee notes that to cater for the requirements of potential new comers, a small amount of emission allowances broadly equivalent to 1% of the total emission allowances for the power sector will be allocated to the new power plant entering the local electricity market. Members are concerned about the impact of such arrangement on the overall emission levels of Hong Kong. The Administration's explanation is that since all new power generation units in Hong Kong must use gas or cleaner fuels, the quantity of emission allowances required is small and should have little impact on the overall emission levels of Hong Kong.

13. Members have raised concern on the free allocation of emission allowances to power plants. The Administration's explanation is that the amount of emission allowances to be allocated to individual power plants reflects the emission caps imposed on them, and serves as a useful tool to facilitate assessment of compliance of power plants with the emission caps. Hence, emission allowances will be allocated to power plants without charge. This is in line with international practices adopted in advanced countries, such as the United Kingdom and Ontario of Canada. Besides, charging the emission allowances upon allocation is considered not appropriate because the cost will inevitably be passed on to the consumers, thereby unnecessarily increasing the financial burden of the public.

#### Adjustments to quantity of allocated allowances

14. Power plants are required to ensure that the actual emission of specified pollutants are not greater than the allowed emission in an emission year. To

determine if the actual emission are in compliance with the allowed emission, power plants need to monitor the emissions of SO<sub>2</sub>, NO<sub>x</sub> continuously and determine the RSP emission according to methods specified by the Authority, and implement quality assurance and quality control programme according to the European Standard EN 14181 for ensuring data reliability and accuracy. The monthly emissions of SO<sub>2</sub>, NO<sub>x</sub>, and RSP are required to be submitted to the Authority within 30 days after the concerned month ends. The quarterly data will also be posted and made accessible to the public at the power plants' websites. If a power plant contravenes the said terms and conditions in respect of the preceding year, the quantity by which the relevant actual emission exceeds the relevant allowed emission shall be taken as part of the actual emission of that type of pollutant in the following emission year. However, the Bill provides that the power plant may make adjustments to the quantity of allocated allowances under the following circumstances –

- (a) there has been a surplus in the year immediately preceding the relevant emission year (preceding year);
- (b) occurrence of special events and/or failure to acquire emission credits;
- (c) acquisition from or transfer to other local power plants; and
- (d) acquisition from or transfer to cross-boundary power plants under a recognized emission trading scheme.

*Increase in quantity of allocated allowances in case of surplus of allocated allowances in preceding year*

15. A power plant with surplus of allocated allowances in preceding year may increase the quantity of emission allowances by the quantity of the surplus, or 2% of the quantity of the allocated allowances of the preceding year, whichever is the lesser.

16. Members have studied the basis upon which the “banking” of 2% of the allocated allowances is arrived at. They express concern that such limitation will discourage power plants to further reduce their emissions. The Administration’s explanation is that the “banking” provision allows greater flexibility for power plants to deal with the possible slight variance of emission performance. In general, a more lenient “banking” arrangement is applied if the proposed emission control framework is to address issues with a more long-term impact, such as acid rain and global warming, in which the timing is less critical, while a tighter “banking” arrangement is adopted to deal with issues with more immediate health impacts. As the quantity of the allocated allowances will have already been made known to the power plants well in advance, it is expected that they will make adequate advance planning to ensure full compliance. A small scale of “banking” is considered sufficient, as otherwise this would upset the Administration’s capability of achieving the 2010 emission reduction targets. Besides, the “banking arrangement, even with less limitation, should not provide any major or sustainable incentive for power plants to embark on additional emission reduction measures, as the “banked” emission allowances will still be used eventually. Furthermore, if the additional emission reduction measures continue to

operate satisfactorily, the need to use the banked-in allowance will be low. To encourage further reduction of emissions, the more appropriate measure is to provide bonus or additional incentives to award over-achievements on the part of power companies. In the post-2008 “Scheme of Control Agreement” signed with the two local power companies, the Government has included a provision to allow for an award of 0.05 to 0.1 percentage point in permitted return as an incentive to encourage power companies to “over-achieve” the emission caps imposed under APCO.

*Increase in quantity of allocated allowances upon occurrence of special event/failure to acquire emission credits*

17. The Authority may, upon application by a power plant, increase the quantity of allocated allowances for a type of specified pollutant, if that type of pollutant has been emitted in an emission year as a result of the occurrence of a special event or the failure to acquire the emission credits, which is beyond the control of the applicant who has exercised all due diligence to prevent the occurrence of such event or such failure.

18. The Bills Committee notes that special events refer to force majeure or cases which are beyond control, such as natural disasters or strike. To reflect such policy intent, members hold the view that the Administration should specify in the Bill the scope for special events, and limit this to events which occur for reasons beyond the control of and unforeseen by the applicant. They also consider it necessary for the applicant to notify the Authority the occurrence of a special event within a specified time frame, and to take remedial/mitigation measures promptly to minimize the quantity of pollutant being emitted as a result.

19. According to the Administration, special events are restricted to those exceptional circumstances which occur for reasons beyond the control of the applicant, and could not be prevented even if all due diligence has been exercised. Since different power plants have different operational modes and needs, it is necessary to consider the circumstances which may be classified as special events on a case-by-case basis. A list of special events will be included in the specified licences of individual power plants. In the light of members’ concerns, the Administration agrees to move Committee Stage amendments (CSAs) to make it clear that the occurrence of a special event must not reasonably have been foreseen by an applicant, or if the occurrence of the event could reasonably have been foreseen by applicant, he must have exercised all due diligence to prevent the occurrence of such event. In addition, an applicant is required to notify the Authority within five working days after the occurrence of a special event, and to promptly exercise all due diligence to minimize the quantity of pollutant being emitted as a result.

20. Members have raised concern on whether the increase in quantity of allocated allowances upon occurrence of special events would be subject to charges. The Administration’s explanation is that as the occurrence of a special event is beyond the control of the applicant, if he has exercised all due diligence to prevent the occurrence of such event and thereafter promptly minimize the increase of emissions, it is appropriate to increase the quantity of allocated allowances without charge. Besides,

if a charge is imposed on emission allowances, the cost of which would inevitably be passed on to the consumers.

*Increase or reduction in quantity of allocated allowances further to acquisition or transfer*

21. A power plant may acquire from or transfer to another power plant any quantity of allocated allowances for a type of specified pollutant as applicable in respect of an emission year.

22. Members are concerned about the time frame within which the Authority should be notified of the acquisition. They are also concerned how the allocated allowances can be transferred among individual power plants of the same power company, given that the specified licences of these power plants are held under the name of the power company. According to the Administration, any acquisition has to take place between 1 January in the emission year and ending on 31 March in the year immediately following the emission year. Both the transferor and the transferee are required to jointly notify the Authority of the acquisition with supporting documents or information as may be required by the Authority within five working days after the relevant acquisition. This general requirement is however subject to an overriding requirement that such notification must be given on or before 31 March in the year immediately following the relevant emission year. In the case where the transferor and the transferee are under the same power company, the transfer could be completed by providing a confirmation of the transaction in writing to the Authority within five working days after the transfer is made.

23. The Bills Committee has studied the consequences which a power plant will face, in the event of failure to transfer the agreed quantity of allocated allowances to another power plant. The Administration's explanation is that transfer of allocated allowances between power plants is a commercial activity. In case a transfer is agreed but eventually failed to realize, the concerned parties may settle the matter through civil actions.

*Increase or reduction in quantity of allocated allowance further to acquisition or transfer of emission credits under recognized emission trading scheme*

24. A local power plant may, subject to the approval of the Authority, acquire from or transfer to a thermal power plant in the PRD Region any quantity of emission credits under a recognized emission trading scheme (ETS). The term "emission credits" is used to distinguish this from the allocated allowances.

25. Members have no strong views on the transfer of emission credits by local power plants to their Mainland counterparts because this represents over-achievement by the former. However, they could not agree to the reverse lest this would have adverse impact on the air quality of Hong Kong. They point out that local power plants would have no incentive to improve their emission performances, if they are allowed an easier and cheaper alternative to increase their quantity of allocated allowances through acquisition of any quantity of emission credits under a recognized

ETS. As a result, there would be increase in localized pollution in Hong Kong. According to the Administration, ETS aims at providing a more flexible and cost-effective alternative for power plants in the PRD Region to meet the emission caps imposed by the two governments, which will continue to be tightened over time, thereby helping to improve the regional air quality. Local power plants cannot simply acquire emission credits from their Mainland partners. They have to implement an additional emission reduction project under the Emission Trading Pilot Scheme for Thermal Power Plants in the Pearl River Delta Region jointly announced by the Environmental Protection Department and the Guangdong Environmental Protection Department in January 2007. Upon receipt of an application for emission trading, the two governments will jointly determine the base emission targets of the power plants concerned for assessment of the emission credits to be achieved from the proposed emission reduction project. For those power plants acting as sellers of emission credits, they have to reduce their emissions on top of their statutory baseline emission performances in order to generate emission credits. There would not be any net increase in pollutant emissions on a regional basis, because the increase or decrease in emissions from local power plants under a recognized ETS would be offset by the corresponding decrease or increase in emissions from their Mainland partners. On the local front, the Authority, in approving the use of emission credits, may impose additional terms and conditions to ensure the increase of emissions from the local power will not give rise to any adverse impact on the local air quality in the vicinity of the power plant.

26. The Bills Committee notes that unlike the allocation of emission allowances for local power plants, which is set out in TM and subject to the vetting procedure, the allocation of emission credits under a recognized ETS is unknown to neither the public nor LegCo. Given the significant impact of emission trading between power plants in Hong Kong and the PRD Region on the air quality of Hong Kong, some members consider that the allocation of emission credits should be included in TM. Local power plants should only be allowed to acquire emission credits from their Mainland partners only if they are not able to meet the emission caps with all due diligence. There is also a need to set a limit on the quantity of emission credits to be acquired. The Administration takes note of members' view and will move CSA to stipulate that the Authority should consult the Advisory Council on the Environment (ACE) as soon as practicable upon receipt of an application for acquisition of emission credits, and that in any emission year, a local power plant may only acquire a total quantity of emission credits which is no more than 15% of the quantity of emission allowances allocated to it at the beginning of that emission year. The Administration also agrees to include in the speech to be delivered by SEN at the resumption of Second Reading debate on the Bill, that the consultation with ACE in respect of an application for acquisition of emission credits will be conducted in accordance with the established procedure of ACE, under which all relevant papers will be made available for public inspection, and that the Panel on Environmental Affairs will also be consulted accordingly.

27. Some members consider it unacceptable if local power plants are allowed to use the emission credits in respect of a project under a recognized ETS to meet the emission caps for an indefinite period. In this connection, Miss CHOY So-yuk has



indicated that she will move a CSA to limit the validity period of a emission reduction project to, say, three years.

28. The Bill provides that a local power plant shall make an application to the Authority on or before 31 December in the emission year for acquisition of emission credits for the purpose of increasing the quantity of allocated allowances. The Authority shall notify the power plant in writing of the decision within 20 working days after receiving the application.

29. Members are concerned about the long lead time allowed for the power plant to make an application, while the Authority is only given 20 working days for making a decision upon receipt of the application. The Administration has taken aboard members' view and will move CSAs to require an applicant to make an application on or before 30 June in the emission year, and the Authority to notify the applicant of the decision as soon as reasonably practicable, but in any event within 180 days after receiving the application to allow sufficient time for consultation with ACE.

30. The Bills Committee has also studied the circumstances of non-delivery of the emission credits. According to the Administration, if the shortfall of emission credits is solely due to the non-delivery of the Mainland partner, which has already exercised due diligence to ensure the timely delivery of the said emission credits, the local power plant may apply to the Authority, together with the supporting evidence and/or documents showing that the failure is beyond its control, and that it has exercised all due diligence to prevent the failure, for increase in the quantity of allocated allowances for the unexpected increase of emissions. The Authority will notify the local power plant in writing of his decision within 10 working days after receiving the application. If the Authority is satisfied that the failure is beyond the control of the local power plant, and that it has exercised all due diligence to prevent the failure, an increase in the quantity of emission allowances under application will be granted upon the payment of \$20,000 per emission allowance sought to be increased by the local power plant. SEN is empowered to amend the prescription of fee by a notice published in the Gazette, which is subject to the negative vetting procedure.

31. Members have raised concern on the cost for acquisition of emission allowances. The Administration's explanation is that to facilitate the use of emission trading as an alternative means for a power plant to comply with the emission caps, the cost of purchasing allocated allowances/emission credits to enable the power plant to meet such statutory requirement each year could be treated as its operating cost. By the same token, if a power plant fails to acquire allocated allowances/emission credits from its emission trading partner for reasons beyond its control albeit it has exercised all due diligence to prevent such failure, the fee to be paid for acquiring additional allocated allowances from the Authority could also be treated in the same manner.

#### Non-compliance and penalty

32. Under the Bill, a power plant shall ensure that the actual emission of a type of specified pollutant in an emission year is not greater than the allowed emission of that

type of pollutant as applicable to its specified licence in respect of the emission year. Prosecution under section 30A of APCO will be initiated in the event of non-compliance. A fine of \$100,000 will be imposed on conviction for a first offence and \$200,000 and imprisonment for six months for a second or subsequent offence. In addition, if the offence is a continuing offence, a fine of \$20,000 will be imposed for each day during which it is proved to the satisfaction of the court that offence has continued.

33. Members have pointed out that section 30A only sets out the general penalty arrangement for contravention of terms and conditions of specified process licences, which may not be appropriate for non-compliances with the emission caps. By way of illustration, the fine of \$100,000 for a first offence is far too low to have a deterrent effect on excessive emissions, or reflect the impact of excessive emissions on public health. They consider that separate penalty arrangement should be provided for non-compliance with the emission caps. The Administration takes note of members' view and will move CSAs to include a new penalty section such that on conviction, a fine of \$30,000 will be imposed on each tonne of actual emission in excess of the allowed emission. On a second or subsequent conviction, a fine of \$60,000 per tonne of actual emission in excess of the allowed emission and imprisonment for six months will be imposed. In addition, a new offence with a fine at level 6 will be included for the provision of incorrect information in relation to a type of specified pollutants. Miss CHOY So-yuk has indicated that she will move a CSA to include imprisonment, in addition to a fine, as penalty for the provision of incorrect information.

34. The Bills Committee has raised concern whether a fine for non-compliance with the emission caps by a power plant will form part of its profit/loss or operating expenditure, the latter of which will enable the cost being passed on to the consumers. According to the Administration, the shareholders of the power company should bear the fine for non-compliance with the emission caps rather than the consumers. The Administration will conduct annual Auditing Review and Tariff Review jointly with the respective power companies as part of the monitoring mechanism. During these exercises, the company's expenditure will be carefully reviewed to ensure that any payment of fine in case of non-compliance with the emission caps shall not be taken to be part of the operating cost and passed on to their electricity customers. A CSA to that effect will be moved by the Administration accordingly.

### Regulation of carbon dioxide

35. Apart from the specified pollutants, power generation is also the major source of greenhouse gas (GHG)<sup>1</sup> emissions, accounting for over 60% of the total GHG

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<sup>1</sup> Greenhouse gases (GHG) are components of the atmosphere, including water vapour, carbon dioxide, methane, nitrous oxides and ozone. Some GHG occur naturally in the atmosphere while others result from human activities, such as burning of fossil fuels, deforestation and agriculture. GHG act like a blanket around the earth, trapping heat and keeping the planet warm. If the concentration of GHG in the atmosphere increases, the average surface temperature of the earth will increase, thereby giving rise to global warming. Associated with global warming are other changes in the climate system, including changes in the frequency and intensity of extreme weather and cyclone as well as rise in the sea level, which have profound adverse impacts on natural and human systems.

emissions in Hong Kong. The level of GHG emissions per capita in Hong Kong were around 6.5 tonnes in recent years. The carbon intensity, as measured in terms of GHG emissions per unit of Gross Domestic Product (GPD), was 27.6 kilograms per HK\$1,000 of GPD in 2005. Approximately, 85% of the total global warming potential-weighted GHG emissions in Hong Kong are CO<sub>2</sub>.

36. The Bills Committee holds the view that as a global citizen, Hong Kong has an obligation to reduce GHG emissions, particularly CO<sub>2</sub> emissions, with a view to tackling climate change as a result of global warming. According to the Administration, how to tackle global warming has become a major challenge to the international community. International efforts to tackle climate change have been spearheaded under the 1992 United Nations Framework Convention on Climate Change (UNFCCC). The 1997 Kyoto Protocol to UNFCCC further assigned mandatory emission targets to Annex I Parties to UNFCCC (comprising mainly developed countries). For non-Annex I Parties (comprising mainly developing countries, including China), this quantitative emission reduction target does not apply. The UNFCCC and its Kyoto Protocol were extended by the Central People's Government to Hong Kong with effect from 5 May 2003. While Hong Kong is not required to commit to any limits or reduction of GHG emissions, it has been working closely with the international community to cope with and mitigate the impact of climate change. Alongside some other 20 member economies of the Asia-Pacific Economic Co-operation (APEC), Hong Kong has adopted the APEC Leaders' Declaration on Climate Change, Energy Security and Clean Development (the Declaration) announced at the APEC Leaders' Meeting held in Sydney in September 2007. The Declaration calls upon APEC economies to achieve a reduction in energy intensity of at least 25% by 2030 (with 2005 as the base year). It is expected that approximately 20 million tones of GHG emissions will be avoided every year in 2030 by achieving this goal. Hong Kong has also joined the C40 Large Cities Climate Leadership Group (C40) in October 2007 to combat climate change with C40 cities, including London, New York, Tokyo, Beijing and Shanghai.

37. Given that the Bill aims at capping the emissions of power plants, members consider it opportune to include CO<sub>2</sub> under the regulation of the Bill. The Administration's explanation is that the objective of the Bill is to ensure a smooth, timely and transparent implementation of the emission caps for the power sector, with a view to meeting the 2010 emission reduction targets agreed with GPG. CO<sub>2</sub> is not one of the air pollutants specified in the emission reduction targets. Besides, there is no mature and commercially viable technology in the world that could reduce, capture and store CO<sub>2</sub> discharged from the burning of fossil fuels from power sector. The measures adopted by other advanced countries/economies for reducing CO<sub>2</sub> emission from power generation are –

- (a) changing the fuel mix i.e. substantial reduction in coal-fired power generation by increase the use of natural gas;
- (b) use of nuclear power for electricity generation;
- (c) promotion of the use of renewable energy; and

- (d) decrease of electricity demand by energy conservation and demand side management.

38. The Administration has also explained that in Hong Kong, changing the fuel mix for power generation is probably the most promising technical option for significant reduction of CO<sub>2</sub>, since gas-fired units emit only about 50% of the coal-fired units for same quantity of electricity generated. However, this would involve important and complicated issues, such as energy policy, energy security, stability in power supply etc, and would have impact on the tariff level. By way of illustration, with natural gas price generally higher than that of coal, the fuel cost for power generation by gas-fired plants will be significantly higher. As the bulk of power generation capacity comes from coal-fired power plants, any significant increase in the proportion of electricity generated by natural gas will likely call for capital investment in gas-fired power generation and relevant infrastructural facilities. These new plants/facilities will form part of the power companies' Fixed Assets, the relevant depreciation and the permitted return allowable under the Scheme of Control Agreements signed by the Government and the power companies, which will have a significant impact on the tariff level.

39. Members are not convinced of the Administration's explanation. They point out that the inclusion of CO<sub>2</sub> as one of the specified pollutants in the Bill will demonstrate the Government's commitment in tackling climate change. Besides, the control on CO<sub>2</sub> emissions will only take effect four years from now. According to the Administration, it is not the policy intention to regulate GHG by way of the Bill. As a service economy with relatively low per capita emissions, the best way for Hong Kong to reduce CO<sub>2</sub> emissions is through energy conservation and enhancing energy efficiency. The Government is taking the lead in this front and has implemented a range of energy saving projects, such as reducing and switching off unnecessary electrical appliances and lightings, raising the air-conditioned room temperature to 25.5°C during summer months, installing energy efficient lighting devices etc. Other new measures in the pipeline include rolling out the mandatory Energy Efficiency Labelling Scheme and Building Energy Codes, encouraging the power companies to implement energy efficiency and conservation measures. Both companies have agreed to set up a loan fund over a five-year period to provide loans to non-government customers to implement energy saving initiatives, and an education fund for energy efficiency and promotion activities. In March 2008, the Administration has appointed ERM-Hong Kong, Ltd. to conduct a "Study of Climate Change in Hong Kong". The study will review and update the local inventories of GHG emissions and removals, project the future trends in GHG emissions under different scenarios, characterize the impacts of climate change in Hong Kong, recommend additional strategies and measures to further control GHG emissions and adapt to climate change, as well as evaluate the cost-effectiveness of these measures. The study is expected to take around 18 months to complete and cost about \$8 million.

40. Members have studied whether the Bill can be amended to regulate CO<sub>2</sub> emissions of power plants. According to the legal adviser to the Bills Committee,

the requirement of relevance for amendments to bills is laid down in Rule 57(4)(a) of the Rules of Procedure (RoP) of the Legislative Council. If a proposed amendment is made by a member, the Administration is given an opportunity to comment on such amendment, including the question of scope, as a matter of established practice. The member will be asked to respond to any view expressed by the Administration. A ruling will be made by the President on whether the proposed amendment is admissible after she has considered all the representations and advice and formed her own views, having regard to previous rulings. In the case of the Bill, it is observed that item (a) of its long title provides, inter alia, that the Bill is to amend APCO to “regulate the emission of SO<sub>2</sub>, NO<sub>x</sub> and RSP as a result of the conduct of certain electricity works by measures including...”. There is nothing in the explanatory memorandum or the LegCo Brief to suggest that the substances, the emission of which is to be regulated by the Bill, could or are intended to include any other substances. Hence, the subject matter of the Bill would appear to exclude any other substances. Notwithstanding, it is for the President to make the ruling on any proposed amendment, having considered its actual wording and all relevant factors in the normal way.

41. After discussion, members agree that the Chairman shall move a CSA on behalf of the Bills Committee to include regulation of CO<sub>2</sub> in the Bill.

42. The Bills Committee has also examined other technical aspects of the Bill.

### **Committee Stage amendments**

43. A set of Committee Stage amendments to be moved by the Administration is in **Appendix III**.

### **Recommendation**

44. The Bills Committee supports the resumption of Second Reading debate on the Bill on 9 July 2008.

### **Advice sought**

45. Members are requested to support the recommendation of the Bills Committee in paragraph 44 above.

**Bills Committee on  
Air Pollution Control (Amendment) Bill 2008**

**Membership list**

<b>Chairman</b>	Hon Audrey EU Yuet-mee, SC, JP
<b>Members</b>	Ir Dr Hon Raymond HO Chung-tai, SBS, S.B.St.J., JP Hon Martin LEE Chu-ming, SC, JP Hon SIN Chung-kai, SBS, JP Hon Howard YOUNG, SBS, JP Hon Emily LAU Wai-hing, JP Hon CHOY So-yuk, JP Hon Abraham SHEK Lai-him, SBS, JP Hon LEE Wing-tat Hon Alan LEONG Kah-kit, SC Hon WONG Ting-kwong, BBS Hon Mrs Anson CHAN, GBM, JP

(Total : 12 Members)

<b>Clerk</b>	Miss Becky YU
<b>Legal Adviser</b>	Miss Winnie LO
<b>Date</b>	10 April 2008

## Appendix II

### **List of organizations which have made written and/or oral representations to the Bills Committee**

- (a) Advisory Council on the Environment
- (b) Association of Engineering Professional in Society Ltd
- (c) Civic Party
- (d) Clear The Air
- (e) CLP Power Hong Kong Ltd, Castle Peak Power Co Ltd and ExxonMobil Energy Ltd
- (f) Greeners Action
- (g) Greenpeace
- (h) Green Sense
- (i) The Hongkong Electric Co Ltd
- (j) The Hong Kong Institution of Engineers
- (k) Mr David RENTON of Baker Botts L.L.P.

AIR POLLUTION CONTROL (AMENDMENT) BILL 2008

COMMITTEE STAGE

Amendments to be moved by the Secretary for the Environment

<u>Clause</u>	<u>Amendment Proposed</u>
5	In the proposed section 26G(5), in the Chinese text, by deleting everything after “凡” and before “第(4)款” and substituting “局長藉着為施行第(1)款而具有效力的首份技術備忘錄，而作出任何分配，則”.
5	In the proposed section 26I – (a) in subsection (1), by adding “of a specified licence” after “any term or condition”; (b) in subsection (1), by deleting “to the specified licence” and substituting “to the licence”; (c) in subsection (2), by deleting “section 30A” and substituting “section 30B”.
5	In the proposed section 26K – (a) in the heading, by deleting “etc.” and substituting “ <b>or failure to acquire emission credits</b> ”; (b) in subsection (2)(b), by deleting “and”; (c) by deleting subsection (2)(c) and substituting – “(c) (i) in the case of a special event, the occurrence of the event could not



reasonably have been foreseen by the applicant, or if the occurrence of the event could reasonably have been foreseen by the applicant, the applicant exercised all due diligence to prevent the occurrence of the event; or

(ii) in the case of a failure, the applicant exercised all due diligence to prevent the failure; and”;

(d) in subsection (2), by adding –

“(d) in the case of a special event, the applicant has also –

(i) within 5 working days after the occurrence of the event, notified the Authority in writing of the occurrence of the event; and

(ii) from promptly after the occurrence of the event, exercised all due diligence to minimize the quantity of that type of pollutant being emitted in the emission year from the licensed premises as a result of the occurrence of the event.”.

5 In the proposed section 26L(3)(b), in the Chinese text, by adding “或” after “3 月 31 日”.

5 In the proposed section 26M –

(a) in the heading, by adding “**under recognized**

**emission trading scheme”** after **“emission credits”**;

- (b) in subsection (2), by deleting “Where” and substituting “Subject to subsection (4A), where”;
- (c) in subsection (4)(a), by deleting “31 December” and substituting “30 June”;
- (d) by adding –

“(4A) For the purposes of a specified licence, the total quantity of allocated allowances that may be increased under subsection (2) for a type of specified pollutant in respect of an emission year may not exceed the quantity obtained by multiplying the quantity of the allocated allowances for that type of pollutant as applicable to the licence in respect of the emission year by the percentage specified in Schedule 2C.

(4B) The Authority shall as soon as reasonably practicable after receiving an application referred to in subsection (4)(a), consult the Advisory Council on the Environment for the purpose of making a decision in respect of the application.”;

- (e) in subsection (5), by deleting “subsection (4)” and substituting “subsection (4)(a)”;
- (f) in subsection (6), by deleting “20 working days” and substituting “180 days”;
- (g) in subsection (6), by deleting “subsection (4)” and substituting “subsection (4)(a)”;
- (h) by adding –

“(6A) A specified licence holder who has, in respect of an emission year, transferred to another

person any quantity of emission credits as described in subsection (3) shall notify the Authority in writing of the transfer and accompany the notification with such supporting documents or information as may be required by the Authority, within 5 working days after the transfer, and in any event not later than 31 March in the year immediately following the emission year.”.

6 By deleting everything after “is amended” and substituting “by repealing “A licence holder who contravenes any term or condition subject to which the licence is granted to him by the Authority” and substituting “Subject to section 30B, a licence holder who contravenes any term or condition of the licence”.”.

New By adding –

**“6A. Section added**

The following is added immediately after section 30A –

**“30B. Contravention of terms and conditions of specified licence for excessive emission or supply of incorrect information, etc.**

(1) A person who contravenes any term or condition of a specified licence that requires him, as a specified licence holder, to ensure that the actual emission of a type of specified pollutant from the licensed premises in an emission year is not greater than the allowed emission of that type of pollutant as applicable to the licence in respect of the emission year commits an offence and is liable –

- (a) on a first conviction, to a fine of \$30,000 in respect of each tonne of the relevant actual emission in excess of the relevant allowed emission, after taking into account the adjustments under section 26I(1) for the purpose of determining that there has been the contravention; and
- (b) on a second or subsequent conviction –
  - (i) to a fine of \$60,000 in respect of each tonne of the relevant actual emission in excess of the relevant allowed emission, after taking into account the adjustments under section 26I(1) for the purpose of determining that there has been the contravention; and
  - (ii) to imprisonment for 6 months.

(2) Where –

- (a) any term or condition of a specified licence requires a person, as a specified licence holder, to make any statement, or give any particular or information, in relation to a type of specified pollutant; and
- (b) the person, in purported compliance with the term or condition –
  - (i) makes any statement, or gives any particular or information, which he knows to be incorrect in a material respect;
  - (ii) recklessly makes any statement, or gives any particular or information, which is incorrect in a material respect; or
  - (iii) makes any statement, or gives any particular or information, from which he knows that any material particular has been omitted,

the person commits an offence and is liable on conviction to a fine of level 6.

(3) Where a person is liable for the payment of a fine imposed under subsection (1) or (2) in relation to a specified licence, for the purposes of a scheme of control agreement, the fine is not to be taken to be part of the operating cost incurred by the person in relation to the specified process to which the licence relates.

(4) For the purposes of subsection (3) –  
“operating cost” (經營費用) means any cost directly or indirectly incurred in relation to –

- (a) the generation, transmission, distribution or sale of electricity;
- (b) energy efficiency or conservation; or
- (c) reduction of air pollution;

“scheme of control agreement” (管制計劃協議) in relation to a person, means an agreement entered into by the Government with the person (whether or not with any other person) that, among other things, provides for the calculation of the amount of return allowed to the person by reference to matters including the operating cost incurred by the person in relation to the specified process to which the relevant specified licence relates.”.”.

7 In the proposed section 31(1)(na), by deleting “etc.” and substituting “or failure to acquire emission credits”.

12 In the proposed section 37D(1), by deleting “and 2B” and substituting “, 2B and 2C”.

13 By deleting everything after “varied” and substituting “, transferred or cancelled, or that any exemption is granted, continued or cancelled,”.

15 (a) In the heading, by deleting “**2A and 2B**”.

(b) By adding –

“**SCHEDULE 2C** [ss. 26M & 37D]

**PERCENTAGE SPECIFIED FOR PURPOSES OF  
SECTION 26M(4A) OF THIS  
ORDINANCE**

15%.”.