

**立法會**  
**Legislative Council**

LC Paper No. CB(1)307/14-15  
(These minutes have been seen  
by the Administration)

Ref : CB1/SS/2/14

**Subcommittee on Fourth Technical Memorandum for  
Allocation of Emission Allowances in Respect of Specified Licences**

**Minutes of first meeting on  
Wednesday, 5 November 2014, at 9:00 am  
in Conference Room 2B of the Legislative Council Complex**

- Members present** : Hon Cyd HO Sau-lan, JP (Chairman)  
Hon CHAN Hak-kan, JP  
Hon Frankie YICK Chi-ming  
Hon WU Chi-wai, MH  
Hon Gary FAN Kwok-wai  
Hon KWOK Wai-keung  
Hon TANG Ka-piu, JP
- Public officers attending** : Mr Andrew LAI, JP  
Deputy Director of Environmental Protection (3)  
Environmental Protection Department
- Mr MOK Wai-chuen, JP  
Assistant Director (Air Policy)  
Environmental Protection Department
- Mr Dave HO  
Principal Environmental Protection Officer (Air Policy)  
Environmental Protection Department
- Clerk in attendance** : Ms Annette LAM  
Chief Council Secretary (1)3

**Staff in attendance** : Ms Vanessa CHENG  
Assistant Legal Adviser 5

Miss Rita YUNG  
Council Secretary (1)3

Ms Yvonna HO  
Clerical Assistant (1)3

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Action

**I. Election of Chairman**

(LC Paper No. CB(1)184/14-15(01) -- Letter from Hon SIN  
(*Chinese version only*) Chung-kai dated 4  
November 2014 to  
withdraw his membership  
from the Subcommittee)

Election of Chairman

Ms Cyd HO, the member who had the highest precedence among members of the Subcommittee present at the meeting, presided at the election of Chairman of the Subcommittee. Ms HO invited nominations for the chairmanship of the Subcommittee.

2. Ms Cyd HO was nominated by Mr Frankie YICK and the nomination was seconded by Mr WU Chi-wai. Ms Cyd HO accepted the nomination.

3. There being no other nominations, Ms Cyd HO was elected Chairman of the Subcommittee.

4. Members agreed that it was not necessary to elect a Deputy Chairman.

Withdrawal of membership

5. Members noted that Mr SIN Chung-kai had written in to withdraw his membership from the Subcommittee (LC Paper No. CB(1)184/14-15(01)).

**II. Meeting with the Administration**

(S.S. No. 5 to Gazette No. 42/2014 -- Fourth Technical  
Memorandum for  
Allocation of Emission  
Allowances in Respect of  
Specified Licences

No reference number	-- Legislative Council Brief issued by the Environmental Protection Department
LC Paper No. LS6/14-15	-- Legal Service Division Report
LC Paper No. CB(1)174/14-15(01)	-- Paper on Fourth Technical Memorandum for Allocation of Emission Allowances in Respect of Specified Licences prepared by the Legislative Council Secretariat (background brief)

6. The Subcommittee deliberated (Index of proceedings attached at the **Appendix**).

Follow-up actions

7. The Administration was requested to provide:

- (a) the respective number and years of service of existing gas-fired and coal-fired generation units of The Hongkong Electric Company, Limited and CLP Power Hong Kong Limited, and whether all the units were included in the net asset value for calculating the ceiling of the permitted return of the two power companies;
- (b) the comparison of the proposed emission control under the Fourth Technical Memorandum for Allocation of Emission Allowances in Respect of Specified Licences ("the Fourth TM") with emission control for power plants in other environmentally advanced countries; and
- (c) information on the sulphur content of natural gas from various sources for power generation in Hong Kong.

*(Post-meeting note: The information provided by the Administration was issued to members vide LC Paper No. CB(1)247/14-15(02) on 18 November 2014.)*

### **III. Any other business**

#### Legislative timetable

8. The Subcommittee completed scrutiny of the Fourth TM, and would not propose any amendment to it. It was agreed that the Administration's written response as requested in paragraph 7 above would be circulated to members as soon as available. The Chairman said that if members had any views on the Administration's reply and considered it necessary to hold a further meeting, they were requested to inform the Clerk for arrangement.

9. The Subcommittee agreed that the Chairman would move at the Council meeting on 12 or 19 November 2014 a proposed resolution to extend the scrutiny period of the Fourth TM to the Council meeting of 10 December 2014. Members noted that upon extension of the scrutiny period, the Chairman would report the Subcommittee's deliberations to the House Committee on 28 November 2014. The deadline for giving notice to move amendments, if any, to the Fourth TM was 3 December 2014.

*(Post-meeting note: At the Council meeting on 12 November 2014, the motion to extend the scrutiny period of the Fourth TM to the Council meeting of 10 December 2014 was passed.)*

10. There being no other business, the meeting ended at 10:15 am.

Council Business Division 1  
Legislative Council Secretariat  
27 November 2014

**Proceedings of first meeting of  
the Subcommittee on Fourth Technical Memorandum for  
Allocation of Emission Allowances in Respect of Specified Licences  
on Wednesday, 5 November 2014, at 9:00 am  
in Conference Room 2B of the Legislative Council Complex**

Time marker	Speaker	Subject(s)	Action required
<b>Agenda Item I – Election of Chairman</b>			
000147 – 000259	Ms Cyd HO Mr Frankie YICK Mr WU Chi-wai	Election of Chairman  Ms Cyd HO was elected Chairman of the Subcommittee.	
000300 – 000310	Chairman	Withdrawal of membership of Mr SIN Chung-kai (LC Paper No. CB(1)184/14-15(01))	
<b>Agenda Item II - Meeting with the Administration</b>			
000311 – 001021	Chairman Administration	The Administration's briefing on the Fourth Technical Memorandum for Allocation of Emission Allowances in Respect of Specified Licences ("the Fourth TM"). (Legislative Council Brief issued by the Environmental Protection Department)	
001022 – 001523	Chairman Administration	<p>The Chairman's views and concerns –</p> <p>(a) sought clarification on the Administration's plan to conduct another review of the emission allowances in 2015 for 2020 and thereafter; and</p> <p>(b) expressed concern about the safety hazards that nuclear power might pose for Hong Kong, and urged the Administration to promote the greater use of renewable energy instead of increasing the share of nuclear power in the future fuel mix for electricity generation.</p> <p>The Administration's response –</p> <p>(a) the Environment Bureau was reviewing the fuel mix for power generation after 2020;</p> <p>(b) the Administration had put forward two fuel mix options for public consultation in March 2014. The first option was "grid purchase", under which electricity purchase from the</p>	

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		<p>Mainland power grid was proposed. The second option was "local generation", under which use of more natural gas for local generation was proposed. The Administration adopted an open position on the two options; and</p> <p>(c) since the findings of the consultation and the decision on the fuel mix in the long run would have significant implications for setting emissions allowances for electricity generation in 2020 and beyond, the Administration would review the Fourth TM in 2015 when the results of the fuel mix review were available.</p>	
001524 – 002249	Chairman Mr Frankie YICK Administration	<p>Mr Frankie YICK's views –</p> <p>(a) tightening of emission allowances for power plants might have tariff implications, and expressed concern that affordability of the public was not one of the factors of consideration in making emission allocations;</p> <p>(b) according to the Hedley Environmental Index established by the School of Public Health, The University of Hong Kong, the total economic loss attributable to air pollution in Hong Kong in 2012 amounted to \$40 billion; and</p> <p>(c) tightening the emission allowances would help improve local air quality which in turn would promote and protect the physical health of the people of Hong Kong, reducing the social cost in terms of healthcare expenses accordingly. As such, the Administration should bear part of the costs for achieving emission reduction targets.</p> <p>The Administration's response –</p> <p>(a) section 26G of the Air Pollution Control Ordinance (Cap. 311) empowered the Secretary for the Environment ("SEN") to allocate emission allowances for the three specified pollutants for power plants by way of a technical memorandum ("TM"). Under section 26G(2), SEN, in making emission allocations, should have regard to three</p>	

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		<p>considerations, i.e. the best practicable means for preventing the emission of that type of pollutant, whether the emission of that type of pollutant would be or be likely to be prejudicial to health as well as the attainment and maintenance of any relevant air quality objective;</p> <p>(b) acknowledged member's concerns about the affordability of the public and the possible impact on electricity tariff when emission allowances for power plants were to be further tightened. These concerns could be dealt with more effectively in the context of the formulation of a comprehensive energy policy; and</p> <p>(c) the Administration's energy policy was to ensure that the energy needs of the community were met safely and reliably at reasonable prices, while minimizing the environmental impact of electricity generation.</p>	
002250 – 003005	Chairman Mr WU Chi-wai Administration	<p>Mr WU Chi-wai's views –</p> <p>(a) in view that the majority of the existing coal-fired generation units had operated for about 30 years, expressed concern as to whether the two power companies would be able to attain the proposed emission caps with the existing aging generation units, given that there was no major changes in the fuel mix for local electricity generation before the completion of the fuel mix review; and</p> <p>(b) in view that the Administration planned to conduct another review of the emission allowances for 2020 and thereafter following the determination of the new fuel mix for power generation in the long run next year, questioned whether it was necessary to issue the Fourth TM, under which the proposed emission caps would be implemented for only one year.</p> <p>The Administration's response –</p> <p>(a) section 2.7 of the Third TM issued in 2012 required SEN to review the emission</p>	

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		<p>allowances not less than once every two years after its commencement. Therefore the Administration was required to review the Third TM within 2014 and work out the new emission allowances for the emission years starting from 1 January 2019 under the Fourth TM;</p> <p>(b) the two power companies had been consulted on the Fourth TM. Both companies consider that the proposed new emission allowances were extremely challenging. They were however committed to working closely with the Administration to ensure compliance while maintaining a reliable supply of electricity to customers; and</p> <p>(c) the emission reduction devices retrofitted in the coal-fired generation units did not have many moving parts and were relatively easy to maintain. As such, their performance would not be affected significantly by normal wear and tear provided that the power companies continued to upkeep good maintenance for the generation units.</p>	
003006 – 003711	Chairman Administration	<p>The Chairman's views and enquiries –</p> <p>(a) in view that the Administration planned to conduct another review of the emission allowances next year for 2020 and thereafter, and that the current Scheme of Control Agreements ("SCAs") with the power companies would expire in 2018, expressed concerns whether there would be any implications on electricity tariff by then; and</p> <p>(b) echoed Mr Frankie YICK's views that the savings in social cost due to the overall reduction in healthcare costs should be used to offset the possible tariff implications in attaining tightened emission caps.</p> <p>The Administration's response –</p> <p>(a) the Environment Bureau was reviewing the fuel mix for power generation in the long run, and the SCAs with the power companies beyond 2018 had yet to be concluded. Therefore, it was premature to say if there</p>	



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		<p>would be significant implications for electricity tariff in the future;</p> <p>(b) acknowledged members' views that improving air quality would help reduce healthcare costs of society. It was also important to consider the costs and benefits of various measures to improve air quality so that efforts and resources could be deployed efficiently; and</p> <p>(c) the Administration had commissioned a local university to develop a method for assessing the cost of air pollution in Hong Kong.</p>	
003712 – 004456	Chairman Mr TANG Ka-piu Administration	<p>Mr TANG Ka-piu's concerns and enquiries –</p> <p>(a) in view that the electricity demand forecast for the Hong Kong Island in 2019 would be reduced by around 4% as compared to the projection for 2017 when setting the Third TM, expressed concern whether there would be excessive generation units in The Hongkong Electric Company, Limited ("HEC"), which in turn would affect the calculation of the Basic Tariff Rates in future;</p> <p>(b) enquired whether new generation units would be required for the CLP Power Hong Kong Limited ("CLP") to meet the forecasted increase in electricity demand in 2019; and</p> <p>(c) asked for the respective number and years of service of existing gas-fired and coal-fired generation units of HEC and CLP, and whether all the units were included in the net asset value for calculating the ceiling of the permitted return of the two power companies.</p> <p>The Administration's response –</p> <p>(a) achieving the proposed emission caps starting 2019 did not involve new capital investment by power companies nor major changes on the fuel mix of power companies; and</p> <p>(b) the Environment Bureau had been monitoring the power companies' generating capacity and investment on generation facilities. The power companies would present their tariff</p>	The Administration to follow up as stated in paragraph 7(a) of the minutes.

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		assessment to the Environment Bureau annually in accordance with the prevailing regulatory mechanism under the SCAs.	
004457 – 004719	Chairman Mr Frankie YICK	<p>Mr Frankie YICK enquired about the comparison of the proposed emission control under the Fourth TM with emission control for power plants in other environmentally advanced countries.</p> <p>Mr Frankie YICK reiterated that the Administration should bear part of the costs for achieving emission reduction targets. He suggested that if the emission allowances for 2020 and thereafter were to be further tightened, the Administration should consider providing direct funding to the two power companies for the investment in new generation units. As such, no new capital investment by power companies would be required to attain the tightened emission caps, thus reducing the impact on electricity tariff.</p>	The Administration to follow up as stated in paragraph 7(b) of the minutes.
004720 – 005604	Chairman Mr WU Chi-wai Administration	<p>Mr WU Chi-wai's enquiries –</p> <p>(a) whether the two power companies could import natural gas from sources other than the West-East Gas Pipeline II ("WEP II"); and</p> <p>(b) whether the Administration had taken into consideration the sulphur content of natural gas from other sources when determining the emission allowances under the Fourth TM.</p> <p>The Administration's response –</p> <p>(a) for natural gas supply, apart from importation through the WEP II, the two power companies had been importing gas from the Yacheng gas field off Hainan Island, as well as liquefied natural gas from Australia and Qatar; and</p> <p>(b) the Administration had taken into consideration the sulphur content of natural gas from sources other than WEP II when determining the emission allowances under the Fourth TM.</p>	
005605 – 010314	Chairman Mr TANG Ka-piu Administration	<p>Mr TANG Ka-piu's enquiries –</p> <p>(a) in view of the projected increase in CLP's</p>	

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		<p>local electricity generation in 2019, whether the CLP would be able to keep the share of natural gas in the fuel mix of local electricity generation close to 50% for achieving the 2017 emission caps stipulated in the Third TM issued in 2012;</p> <p>(b) sought clarification on the phasing out of heavy fuel oil for assisting coal-burning by 2019; and</p> <p>(c) whether the tightening of emission allowances for power plants would help relieve the ozone pollution problem.</p> <p>The Administration's response –</p> <p>(a) to meet the proposed emission caps, the two power companies had to maximize the use of natural gas for local electricity generation and upkeep their emission control equipment. The two power companies had been consulted on the proposed emission allowances, and they were committed to working closely with the Administration to ensure compliance while maintaining a reliable supply of electricity to the customers;</p> <p>(b) by 2019, the power sector would complete the phasing out of heavy fuel oil by ultra-low sulphur diesel for assisting coal-burning in the existing coal-fired generation units; and</p> <p>(c) ozone pollution and haze problem were major air pollution problems in the Pearl River Delta region, and volatile organic compounds and nitrogen oxides were the culprits. Reducing nitrogen oxides emission from power plants would help alleviate the ozone pollution problem in the region. The Administration would continue to collaborate with the relevant Mainland authorities to tackle the problems.</p>	
010315 – 010742	Chairman Mr WU Chi-wai Administration	<p>Mr WU Chi-wai's concerns and enquiries –</p> <p>(a) whether the proposed emission caps worked out with reference to the sulphur content of the natural gas delivered so far from WEP II would restrict the power companies' choice of</p>	

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		<p>procurement of natural gas for power generation; and</p> <p>(b) asked for information on the sulphur content of natural gas from various sources for power generation in Hong Kong.</p> <p>The Administration's response –</p> <p>(a) it supported diversification of fuel sources. The proposed emission caps would not restrict power companies' choices of supply of natural gas. For natural gas supply, apart from importation through China's WEP II, the two power companies had been importing gas from Yacheng gas field off Hainan Island, as well as Australia and Qatar for electricity generation; and</p> <p>(b) the Administration would assess any gas supply proposals from power companies having regard to relevant factors that would have implications for reliability, safety, environmental performance and affordability of electricity supply.</p>	<p>The Administration to follow up as stated in paragraph 7(c) of the minutes.</p>
010743 – 010924	Chairman Mr Frankie YICK Administration	<p>In response to Mr Frankie YICK's enquiry, the Administration advised that currently there was no internationally recognized standards (similar to that of low or ultra-low sulphur diesel) regulating the sulphur limit of commercially available natural gas.</p>	
010925 – 011150	Chairman Administration	<p>The Chairman enquired about the feasibility of setting emission caps for PM2.5.</p> <p>The Administration's response –</p> <p>(a) it had explored the feasibility of setting emission caps for PM2.5 having regard to the latest international practices. At present, environmentally advanced countries such as the United States, the European Union, etc had not set limits on PM2.5 emissions from power plants;</p> <p>(b) the measurement of PM2.5 in power plant emissions was still under development. As such, it would not be practicable to set limits on PM2.5 emissions at this stage;</p>	

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		<p>(c) as PM2.5 was a fraction of respirable suspended particulates ("RSP", also known as PM10), the emission caps for RSP set in the Fourth TM could indeed effectively limit the emissions of PM2.5 from power plants. Also, the emission control technologies on particulate matters installed in the major coal generation units in the two power companies would also reduce the emissions of PM2.5; and</p> <p>(d) the Administration would monitor closely the relevant technological developments for reviewing the feasibility for setting emission caps for PM2.5.</p>	
<b>Agenda Item III – Any other business</b>			
011151 – 011535	Chairman Clerk Mr TANG Ka-piu	<p>The Subcommittee completed scrutiny of the Fourth TM, and did not propose any amendment to it.</p> <p>Extension of the scrutiny period and legislative timetable.</p>	