

Enclosure

LegCo Panel on Environmental Affairs

**Summary of views of the Hong Kong Institution of Engineers
on Administration's proposal to implement the Emissions Trading Pilot Scheme for
Thermal Power Plants in the Pearl River Delta Region**

1. The Hong Kong Institution of Engineers (HKIE) refers to the captioned (the Paper) by Environmental Protection Department (EPD) on the implementation framework of the Emissions Trading Pilot Scheme (the Scheme) for Thermal Power Plants in the Pearl River Delta (PRD) region, and is pleased to offer our views as below.

General

2. The trading of emissions is an administrative measure for the exchange of designated pollutants as commodities to improve ambient air quality by providing economic incentives for achieving reductions in the emissions of such pollutants.

3. The trading itself is primarily based on market models to determine how to deal with the problem of pollution. The simplicity of this pursuance is that it does not demand Government to regulate any specific practice of each polluting source and hence easier to enforce. However, monitoring of actual emissions is still required, which can be costly.

4. A market, if to be sustainable and self-perpetuating, must be free, open, fair and transparent, absent from intervention, with sufficient participants of similar bargaining power and adequate options and alternatives for choosing.

5. The market of emissions trading is however controlled and not entirely free. The governance is on setting the parameters and scope and their enforcement, and it should not be exposed to random interventions or threats of such actions.

6. Because the core of the trading arrangement would require a central authority to set a limit or the cost on the amount of a pollutant that can be emitted, the market of emissions trading could be distorted if the setting of such limits were arbitrary and inconsistent.

7. Noting the Scheme was meant to be a pilot scheme and hence details of arrangement were yet to be formulated, HKIE views its operation must still be transparent for the public to determine its success in terms of the effectiveness of the trading administration and the resulting benefit to HKSAR. As such, HKIE would examine it in this light when assessing its harbinger role towards a truly sustainable and viable market model of emissions trading in the region.

Assessment of the Paper

8. HKIE notes reference was made to year 1997 as the base year to reduce the emission of four major air pollutants in the PRD region by 2010. For the power sector,

only percentages of reduction were quoted but not the information of how such values were derived from raw data to serve as the targeted baseline. Nor the apportionment of the ultimate reduction from various polluting sectors that would collectively contribute to the emissions in the region .

HKIE views prompt assessment of such calculations would be essential to evaluate whether alternative for improvement would also be viable economically and technically at the present state to justify whether the proposed level of standing start would be fair and attractive enough for envisaged trading activities.

9. Obviously, the most effective means to reduce emissions is by legislature. Effectively, through the granting of the power plant licenses or emission permits under the Air Pollution Control Ordinance of Hong Kong (APCO), meeting the annual emission cap is a statutory obligation for the power plant operators in Hong Kong.

It is not known from the Paper what role a commercial contract of emissions trading would play in meeting this statutory compliance. It is not desirable to find that the local power plant operators would not be penalised for not meeting the emission cap as specified under the permits by simply holding out a commercial contract, whether void *ab initio*, voidable, frustrated or otherwise. It also appears the Panel would only act as a facilitator.

10. At present the allowed levels of emission in Hong Kong are much lower and more stringent than the corresponding value set for power plants in the PRD Economic Zone of the Guangdong Province. It can be expected the rate of and room for improvement over the next decade would be greater in Guangdong than that in Hong Kong.

HKIE accepts consideration of equal footing in emissions cap may not play a part in determining the overall potential improvement of the PRD region. But with such steep variants, the Scheme might very well offer an option for the local operators continuing to pollute the atmosphere immediate above our heads by paying a price instead of struggling with investment against diminishing gain. This is not an option desirable for Hong Kong.

Steep variants and the lesser marginal cost for improvement could also drive up the supplies of available credits in the PRD region, reducing the cost of credits and diminishing the influence of the intended market force. HKIE also considers it is not unlikely with only 2 participants from HKSAR *vis-à-vis* potentially more in the PRD region to find abundance of credits at relatively painless prices to combat emission unless the Panel drastically revises the cap from time to time, distorting the true meaning of a market.

11. Tables delineating targeted baselines of emissions were included in the Paper for the Guangdong Province but no information was provided for levels that would be attached to permits granted over the next decade for plants in Hong Kong.

This transparency is required not only for the local operators to consider inducting plans of long term investment for ultimate emission reduction but also to establish the certainty and reliability of the Scheme in its pivotal role as a market force.

12. HKIE noted the Administration is in the process to negotiate the next Scheme of Control with the local power operators in which terms and conditions that might include the inter-linked issues of the rate of investment return and emission target. HKIE considers the effectiveness of the Scheme could only be assessed when outcome of the negotiation was made and details were known.

13. Perhaps purely reflecting the aspiration of the general public, HKIE also noted EPD is a party proposing terms of emission level and associated rate of return to the above negotiation. At the same time, EPD is also the authority of making grant and administrating enforcement of emission permits. It appears to HKIE EPD may now be acting somewhat as a promoter of the Scheme, participation of which, although voluntary, involves monetary transfers.

HKIE accepts it is appropriate for EPD proposing performance parameters that might directly affect returns of operating huge investments, and at the same time holding the authority to grant and enforce a permit vital for such operations. However HKIE is not comfortable, during this period of negotiation, to find EPD advertising a Scheme involving monetary value that may defeat the terms and conditions of the Scheme of Control and bypass the statutory compliance, unless the Scheme is detailed enough for prompt evaluation and assessment. HKIE does not find it so from the information at hands.

Without prompt assessment of the targeted baseline, uncertainty in the range of emissions allowed that would follow as well as other unknown factors, and the imminent closure of the negotiation of the Scheme of Control, HKIE finds it premature to introduce the Scheme. In a bid not to simply dispense the Paper it deserves, HKIE would take this opportunity to include our other observations below.

The Emissions trading Management Panel and its Term of Reference

14. A Management Panel (the Panel) is to be set up to manage the Scheme. The full composition of the Panel is however unknown.

15. It is vital that the roles of such authority should include the assessment of the pre-set baselines of emissions and their on-going revisions as well as the associated monitoring during implementation. All these were absent.

16. HKIE notes from its Term of Reference that the Panel is "*to assist the environmental protection authorities of the two government...*" It appears the Panel is simply a forum for information exchanges instead of acting as an outright authority. In this respect, HKIE suggests that the Panel should play a more active and crucial role on the management of the Scheme to ensure both governments adhering to agreed arrangements.

17. HKIE views, in order to ensure the success of the Scheme, professional views must be consulted on a regular basis. To this end, HKIE recommends that the membership list of the Panel should include members from a range of professional bodies capable of providing expert advice on the technicalities.

18. A wider representation with scholars and professionals lends the needed more open and transparent rendition to the public. HKIE would be pleased to participate.

19. HKIE believes that such composition of the membership not only ensures the successful monitoring of the overall operation of the Scheme itself but would also play a paramount role in developing the framework for future applications in reducing emissions of major pollutants in the PRD region.

20. Apart from the membership and the lack of concrete details of its role, HKIE also views the Terms of Reference of the Panel would also need to be strengthened before the endowment of the task of recommending and setting up future framework.

Operations of the Scheme

21. First and foremost, HKIE noted the consensus reached between HKSAR Government and Guangdong Province to reduce emissions was made on a best endeavours basis. Without a fixed value, it would be difficult to exploit the full potential of the market and to gauge performance of a contract accurately.

22. HKIE notes the Generation Performance Standard (GPS) were cited as the basis for plants in PRD region. It is not known whether it carries the same legal binding as the corresponding permits issued by EPD under APCO. If not, this would further complicate the matter.

23. Clarification of the legitimacy of the GPS basis data is essential for cross border transfer. In particular with the difference of limits set between plants in PRD region and that in Hong Kong, it is likely credits transfer would only be one way for the near future.

24. HKIE notes the Panel would assess the suitability of monitoring system installed for participants. HKIE opines the same standard and method should be adopted for all players, in particular, emission of RSP was basically by estimation since there is not yet proven technology for its continuous monitoring in power plant emissions. As it stands, Appendix 7 only gives the performance standards and testing for continuous emission monitoring of flue from Power Plants in Hong Kong only.

Apart from adopting the same and unified quality assurance standards and methods for reduction of emissions in PRD, HKIE views the involvement of acknowledged professionals in the design, installation, operation, maintenance and monitoring of such emission reductions were indispensable.

25. Clause 1.5 of Appendix 6 does not specify the qualification requirement for a professional consultant as the independent third party for acceptance and periodic verification. HKIE stresses the need for such professional consultant who could understand the complex technical nature of power plant emissions and testings to prepare reports for both PRD and Hong Kong power plants. As recognised professionals with expert members in these areas, HKIE wishes to reiterate we are in a formidable position to assist.

Conclusion

26. The overall goal of emissions trading is to reduce pollution. The Paper suggests further reduction would be envisaged by lowering the cap over time.

27. The Paper proposed step reductions by policy decision. This model is different from some of the others where a portion of traded credit would expire causing a gradual net reduction in emission each time a trade occurs. There are pros and cons of between these two models, depending on the circumstances of each unique market.

28. For Hong Kong where there are only two operators, the impact from step reduction is intensified and would put the operators on a continual trail to meet the cap and the Scheme is no longer serving as a self-correcting market force, *per se*. To some extent, banking of credits that would help bridging temporary shortfalls from step reductions is not mentioned in the Scheme.

29. In theory, under the market of emissions trading, firms will have the option to choose the least cost method to comply with the pollution cap, or if they will reduce their emissions at all by relying procurement of available credits. The local operator at Hong Kong island has more coal-fired plants than gas and any significant self induced improvement in emission would have to switch to gas-fired plants, which economically, is practically not a choice.

30. HKIE opines the Paper is not really about a cap and trade system. Hence the Scheme is not really one for trading but as an option for failure to meet the cap.

31. Nonetheless, HKIE agrees a viable scheme of emissions trading creates an incentive for companies to take effort in further reducing emissions bringing benefits to the whole PRD region in long term and should be encouraged.

32. However, HKIE views many conversant factors were not fully covered in the Paper. This might point the Scheme to a wrong direction, and would unfortunately lead to inaccurate conclusions .

33. In this connection, HKIE fears any ill-prepared pilot scheme will do a great disservice in promoting and developing emissions trading as a long term tool for cost-effective reduction of power plant emissions in the PRD region.

Recommendation

34. HKIE recommends revisiting the Scheme only after the Schemes of Control with the two operators are finalised. In particular when the balance of security of the electricity market and the need to fuel the economic growth is reached and where a clear fuel strategy would significantly affect what model that would be suitable for deployment.

35. The Panel should be vested with more authority in setting clear parameters and enforcement. Resolution to contracted parties in case of breach is not enough. The resolution should be gauged in the context of the regional compliance.

36. Clear data and their projections as well as methodology adopted should be transparent and consistent.

37. Where the Administration wishes to run the Scheme on a trial basis, HKIE recommends to conduct an interim review on the Scheme and the Terms of Reference of the Panel to ensure a proper skeleton is in place to come forth with recommendations in future.