

立法會
Legislative Council

LC Paper No. CB(1) 1229/10-11
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Panel on Environmental Affairs

Minutes of meeting
held on Monday, 20 December 2010, at 8:30 am
in Conference Room A of the Legislative Council Building

- Members present** : Hon CHAN Hak-kan (Chairman)
Hon Audrey EU Yuet-mee, SC, JP (Deputy Chairman)
Hon James TO Kun-sun
Hon Andrew CHENG Kar-foo
Hon LEE Wing-tat
Hon Jeffrey LAM Kin-fung, SBS, JP
Hon CHEUNG Hok-ming, GBS, JP
Hon KAM Nai-wai, MH
Hon Cyd HO Sau-lan
Hon CHAN Kin-por, JP
Hon IP Wai-ming, MH
Hon Tanya CHAN
Hon Albert CHAN Wai-yip
- Members absent** : Hon WONG Yung-kan, SBS, JP
Hon Miriam LAU Kin-ye, GBS, JP
Prof Hon Patrick LAU Sau-shing, SBS, JP
- Public officers attending** : **For item IV**

Dr Kitty POON
Under Secretary for the Environment

Mr Carlson K S CHAN
Deputy Director of Environmental Protection (3)

Mr MOK Wai-chuen
Assistant Director (Air Policy)
Environmental Protection Department

Mr Edmond HO
Principal Environmental Protection Officer (Mobile
Source)
Environmental Protection Department

For item V

Dr Kitty POON
Under Secretary for the Environment

Miss Vivian LAU
Deputy Secretary for the Environment

Miss Katharine CHOI
Principal Assistant Secretary for the Environment
(Energy)

Mr Frank CHAN
Deputy Director (Regulatory Services)
Electrical and Mechanical Services Department

Clerk in attendance : Miss Becky YU
Chief Council Secretary (1)1

Staff in attendance : Mrs Mary TANG
Senior Council Secretary (1)2

Miss Mandy POON
Legislative Assistant (1)4

Action

I. Confirmation of minutes

- (LC Paper No. CB(1) 644/10-11 — Minutes of the special meeting held on 22 October 2010
- LC Paper No. CB(1) 780/10-11 — Minutes of the meeting held on 25 October 2010)

The minutes of the special meeting and the regular meeting held on 22 and 25 October 2010 respectively were confirmed.

II. Information paper issued since last meeting

2 Members noted that no information paper had been issued since last meeting.

III. Items for discussion at the next meeting

(LC Paper No. CB(1) 782/10-11(01) — List of follow-up actions

LC Paper No. CB(1) 782/10-11(02) — List of outstanding items for discussion)

3 Members agreed to discuss the following items at the next regular meeting scheduled for Monday, 24 January 2011, at 2:30 pm -

(a) Update on the progress of the key initiatives in the "Policy Framework for the Management of Municipal Solid Waste (2005-2014)"; and

(b) Trial of hybrid buses by franchised bus companies.

IV. Pilot Green Transport Fund

(LC Paper No. CB(1) 782/10-11(03) — Administration's paper on Pilot Green Transport Fund

LC Paper No. CB(1) 782/10-11(04) — Paper on Pilot Green Transport Fund prepared by the Legislative Council Secretariat (background brief)

LC Paper No. CB(1) 836/10-11(01) — Submission from HK Bus Suppliers Association)

4. The Under Secretary for the Environment (USEN) briefed members on the proposed Pilot Green Transport Fund (PGTF). Subject to members' views, the relevant funding proposal would be submitted to the Finance Committee (FC) for approval in March 2011. The Assistant Director of Environmental Protection (Air Policy) (ADEP(AP)) explained the implementation framework of PGTF by highlighting the salient points in the information paper.

Green and innovative technology

5. Given that bicycle was a green transport means with zero emission, Mr KAM Nai-wai enquired whether transport operators using bicycles to provide services within districts, say Tin Shui Wai, could be eligible for PGTF.

USEN said that PGTF was meant to encourage the introduction of green and innovative transport technologies, such as alternative-fueled vehicles, after-treatment emission reduction devices and fuel saving devices. As bicycle was not new or innovative, this could not qualify for funding under PGTF.

6. Ms Audrey EU said that it appeared that the Administration had already had in mind the types of green technologies to be promoted and supported under PGTF. Her views were shared by Mr IP Wai-ming. Given the diversity and continuous evolution of technologies, ADEP(AP) said that the Administration adopted an open mind on the types of green transport technologies to be funded under PGTF. At present, emerging technologies broadly involved electric vehicles, hybrid vehicles, plug-in hybrid vehicles and selective catalytic reduction (SCR) devices etc. Ms EU enquired whether the trial on SCR devices for franchised buses would be funded under PGTF. USEN answered in the negative as separate funding arrangements had been provided for the trial.

The Steering Committee

7. Noting that a Steering Committee would be set up to assess and advise on PGTF applications, Mr KAM Nai-wai questioned why green groups were not represented in the Committee. His concern was shared by Miss Tanya CHAN who pointed out that green groups also had experts on innovative transport technologies. Mr Jeffrey LAM also enquired whether consideration would be given to appointing overseas experts to the Steering Committee. USEN said that as the role of the Steering Committee was to assess and advise on PGTF applications, its members would be drawn from academic institutions and the transport trades as well as from the relevant Government departments. She nevertheless took on board members' suggestions of considering the inclusion of overseas experts and representatives of green groups in the Steering Committee.

8. Miss Tanya CHAN enquired about the duration of trials and the criteria for assessing whether a trial was successful. ADEP(AP) said that an applicant would need to indicate in the application the expected duration of the trial, which would normally last for at least 12 months depending on the nature of the transport technology. In assessing PGTF applications, the Steering Committee would take into account various factors, including whether the technologies would meet the operating needs of the transport trades, and whether these could be put to wider use.

9. While acknowledging the need to set up a Steering Committee to assess and advise on applications, Mr Jeffrey LAM stressed the need to avoid a long and cumbersome vetting process which might otherwise deter transport operators from applying for PGTF. Promotional efforts should be made to encourage more transport operators to apply for the Fund. He also enquired whether more funding would be injected into PGTF should the trials turn out to

be successful and well received. USEN said that efforts would be made to ensure that the application process would not be too troublesome. Besides, members of the Steering Committee drawn from the transport trades would provide useful advice on the vetting process. Publicity would be stepped up to promote the green technologies to the transport trades upon successful trials. A review of PGTF would be made based on the outcome of the trials before the Administration would decide on the way forward.

Potential applicants/Level of subsidy

10. Referring to the letter from HK Bus Suppliers Association (LC paper No. CB(1)836/10-11(01)), Ms Audrey EU sought the Administration's stance on the proposed extension of funding eligibility to suppliers and manufacturers, as well as the increase in level of subsidy from 50% to 75% of the cost of the alternative-fueled vehicle. USEN said that while suppliers and manufacturers could pair up with transport operators to apply for PGTF to test out green products, care had to be taken to avoid conflict of interest. On the level of subsidy, USEN said that this was set taking into the views of stakeholders during public consultation. The subsidy had to be set at an appropriate level to avoid abuse.

11. Miss Tanya CHAN enquired about the outcome of consultation with ferry operators on the implementation of PGTF. ADEP(AP) said that a positive response had been received from ferry operators. Some indicated interest in making use of the Fund to test the retrofitting of their ferries with devices to reduce air pollutant and/or carbon emissions. The level of subsidy would be set at 75% of the cost of the devices or engines including installation. As retrofitting devices and engines for ferries were much more expensive than that for vehicles, a cap of \$3 million would be imposed for each device or engine under test with upper limits of \$9 million for each application and \$12 million for each applicant.

12. Mr KAM Nai-wai was concerned that transport operators might submit multiple applications for PGTF under different companies in an attempt to get round the cap of \$9 million per application. ADEP(AP) said that the Steering Committee would screen the applications to ensure that funding would not be confined to one type of innovative transport technology. It would also assess the potential of putting the new technology under testing to wider use upon successful trial.

13. While acknowledging that the cost-sharing basis of PGTF was to avoid possible abuse, Mr CHAN Kin-por expressed concern that it might deter participation of transport operators as new and innovative transport technologies were quite expensive. Besides, applicants would need to undertake to make public the trial findings and share them with interested parties as directed by the

Environmental Protection Department. He opined that a better alternative was for the Administration to identify the suitable innovative transport technologies, and provide incentives for the transport trades to test out these technologies. USEN said that it would be more effective for the trades to identify and test suitable technologies that best suit their operational needs. Key stakeholders had been consulted on the proposed implementation framework of PGTF and they were supportive of PGTF as a positive step to encourage the wider use of green transport technologies in Hong Kong. Operators were encouraged to pair up with potential suppliers of green transport technologies, research institutes or other relevant stakeholders to test out the technologies in Hong Kong. Applicants were expected to share their experience in the use of green technologies so that these could be put to wider use.

Independent third-party assessor

14. Miss Tanya CHAN enquired about the role of the independent third-party assessor. ADEP(AP) said that to ensure the trial was conducted in accordance with the application and approval conditions, an independent third-party assessor would be appointed to verify and evaluate the environmental performance of the innovative green product(s) under trial, including conducting visits to approved applicants and collating data. The independent assessment would help the transport trades in understanding the environmental performance of new product(s).

Guiding principles on the operation of the Fund

15. Apart from encouraging transport operators to test out green transport technologies, Ms Cyd HO pointed out the need to support research and development (R&D) of these technologies in Hong Kong, adding that local tertiary institutions had the capability of developing new and green technologies as evidenced by the successful development of the Smart electric car. She asked if consideration could be given to using the \$300 million PGTF to support research and development of green transport technologies in Hong Kong. Expressing similar views, Ms Audrey EU considered the scope of PGTF too narrow which only accepted applications from the transport sector, but not academics and researchers who had the expertise in identifying suitable green and innovative technologies for testing out by transport operators. USEN explained that the purpose of PGTF was to encourage the transport sector to test out green and innovative technologies. PGTF was not intended for supporting research of new green technologies as separate funding under the Innovative Technology Fund (ITF) had already been provided for R&D activities, including the development of charging facilities for electric vehicles. However, the green technologies developed under ITF could be tested out using PGTF. More efforts would be made by the Steering Committee in match-making transport operators with the green and innovative technologies available in the market.

16. Ms Cyd HO expressed concern that PGTF would only benefit major transport enterprises rather than individual operators. In this connection, more efforts should be made to encourage participation of individual operators in PGTF. She was also concerned about the difficulties for an applicant to spell out and provide full justifications in the application for the choice and cost associated with the testing of product(s) involving proprietary technology available from a single supplier. Mr IP Wai-ming enquired about possible legal disputes over copyright if the product to be tested involved proprietary technology. USEN said that PGTF aimed to encourage transport operators, including individual operators, to test out the new transport technologies. Operators were expected to identify suitable green transport technologies which would meet their operational needs. On copyright, USEN said that there would unlikely be any dispute over the copyright of proprietary technology as this remained with the manufacturer. PGTF was only meant to fund the testing of green transport technologies that were available on the market. Nevertheless, the Administration would relay members' concern about protection of copyright of the products to be tested to the Steering Committee. Ms Audrey EU pointed out that legal disputes over copyright infringement were not uncommon. More information on the copyright of the new technology should be provided for consideration by the Steering Committee.

17. While welcoming the establishment of PGTF, the Chairman was concerned that the Fund would be misused by bus companies in acquiring new and more environment-friendly buses, which was at variance with the intended purpose of PGTF to test out new transport technologies. He stressed the need to foster a closer cooperation between researchers of transport technologies and the transport trades so that emerging green transport technologies could be tested out in local conditions. USEN said that PGTF was meant to encourage the testing of green and innovative transport technologies in Hong Kong. It was hoped that academics, researchers, suppliers could pair up with transport operators to make the best use of PGTF in testing out green and innovative transport technologies in Hong Kong.

18. In concluding, the Chairman said that members did not object to the submission of the funding proposal to FC for consideration.

V. District Cooling System at the Kai Tak Development

(LC Paper No. CB(1) 782/10-11(05) — Administration's paper on District Cooling System at the Kai Tak Development

LC Paper No. CB(1) 782/10-11(06) — Paper on the provision of a District Cooling System at the Kai Tak Development prepared by the Legislative

19. USEN briefed members on the latest development of the District Cooling System (DCS) at the Kai Tak Development (KTD) by highlighting the salient points in the information paper. Subject to members' views, the proposal to increase the approved project estimate (APE) for implementing Phases I and II of DCS from \$1,671 million to \$1,870 million would be submitted to the Public Works Subcommittee (PWSC) and FC for funding approval.

Project estimate for DCS

20. Mr KAM Nai-wai said that the DCS project, with the original APE of \$1,671 million, had the initial support of Members belonging to the Democratic Party. However, the current estimated cost of Phases I and II of about \$1,870 million had already exceeded the APE for the whole DCS project. The current estimated total project cost of about \$3,650 million had far exceeded the original APE, let alone the operating cost which was unknown at this stage. He was concerned that with the commitment of funds for Phases I and II, there would be no choice but to proceed with Phase III. While supporting DCS which should be implemented in all new districts, Mr Jeffrey LAM was also concerned about the significant increase in the project cost of DCS which was expected to be further increased in the event of delay. He enquired about the causes for the increase in project cost.

21. In response, USEN explained that the significant increase in the estimated project cost was due to the latest market situation for major material, electrical and mechanical equipment and construction works which were specifically adopted for DCS, as well as the additional cost of works due to project design development and changes in construction requirements. Based on the returned tenders for Phases I and II, the estimated cost for Phase III was about \$1,780 million. Notwithstanding, there might be adjustments to the design and implementation schedule of various projects given the scale of KTD, which might vary the cost of works under Phase III. Funding approval for Phase III would be sought from FC at an appropriate time. The Deputy Director of Electrical and Mechanical Services (Regulatory Services) (DDEMS(RS)) added that the revised estimates had taken into account the higher provision of price adjustment as a result of the increase in the overall project estimate and rising adjustment factor. The additional costs of works due to project design development and changes in construction requirements, such as additional structural reinforcement works for the underground plant rooms to allow for future ground developments which had not been allowed for in the original estimate, as well as the unexpected site constraints (including additional interfacing between the underground DCS pipes and other existing underground facilities at KTD requiring deeper excavation for DCS pipes

laying and additional pipe jacking below utilities), had given rise to about 20% increase in costs.

22. Ms Audrey EU said that she would support the early commencement of Phase III if this was an essential part of DCS as further delay would only result in higher costs. Mr CHAN Kin-por echoed that the cost of Phase III would far exceed the estimated APE if it was tendered years later. The Deputy Secretary for the Environment (DS(Env)) explained that Phase I would be dealing with the works contract for the pipe laying work for part of KTD Package 1 to meet the roadwork programme in the North Apron. Phase II would be dealing with the design for the whole DCS, the building and engineering works for DCS core services, laying of chilled water distribution pipes not covered in Phase I for Package 1 users, as well as electrical and mechanical (E&M) equipment for KTD Package 1 users. Phase III would be dealing with E&M installation and pipe laying for KTD Packages 2 and 3 users. The commencement date of the works under Phase III would be subject to the finalized timetables for projects under KTD Packages 2 and 3. The phased approach would allow for the integrity of the system and better cater for progress of major development and infrastructural projects at KTD.

Need for DCS

23. Mr Albert CHAN said that he had all along supported for the provision of DCS as this would bring about significant environmental benefits. However, the rising project cost of DCS had given rise to much concern. He held the view that a review of the cost effectiveness of DCS should be conducted. USEN confirmed that a review of the cost and benefits of DCS had been made which had concluded that DCS was worthwhile to proceed with. Implementation of DCS in KTD would bring about significant environmental benefits. Given its high energy efficiency, the maximum annual saving in electricity consumption would be 85 million kilowatt-hour or about \$85 million if translated into monetary terms, with a corresponding reduction of 59 500 tonnes of carbon dioxide emission per annum for the planned total public and private non-domestic air-conditioned floor area of about 1.73 million square metres.

24. Mr LEE Wing-tat questioned the cost-effectiveness of DCS if the annual electricity savings to be achieved was only \$85 million as opposed to the total project cost of DCS at around \$3,650 million. He opined that apart from DCS, efforts should be made to identify other equally environment-friendly options, particularly those which could be applied on a localized basis rather than a district basis. These might include the provision of financial incentives to encourage users to reduce energy consumption. Given the high cost of the DCS project, Mr CHAN Kin-por considered it necessary for the Administration to assess the viability of investing in other more cost-effective emission

reduction measures. He was concerned that with the evolving technology in cooling system, Phase III might become obsolete. He therefore enquired about the consequences of not proceeding with Phase III.

25. In reply, USEN reiterated that in addition to annual saving in electricity consumption, DCS could help reduce carbon dioxide emissions. Overseas experience also found DCS to be both cost-effective and energy-efficient. Hence, it was unlikely that DCS would become obsolete in a few years' time. Apart from DCS, the Administration had also invested in many emission reduction measures. DS(Env) added that in the public consultation document on Hong Kong's climate change strategy and action agenda, the Environment Bureau had outlined a package of measures to maximize energy efficiency, green road transport, use cleaner fuels and turn waste into energy. A multi-pronged approach was being adopted to combat climate change and conserve energy. DCS was among the many measures proposed for implementation. DDEMS(RS) supplemented that there were justifications for proceeding with DCS on account of the environmental benefits it would bring. Preparation for Phase III works would be carried following funding approval for Phases I and II. At members' request, the Administration would provide more detailed breakdowns on the costs and benefits of DCS as well as the overseas experience in the implementation of DCS in the submission of the relevant funding proposal to PWSC.

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Financial viability

26. USEN said that in the light of members' suggestion at the meetings in July 2010 that all private non-domestic projects in KTD should be obliged to subscribe to the DCS service, the Administration had actively explored the feasibility of the suggestion and considered it viable to prescribe a requirement for connection to DCS in appropriate provisions in the land lease conditions. The Administration had started to gauge views from relevant stakeholders on the proposed requirement and arrangements. Initial feedback mainly concerned about service quality and tariff rates. DDEMS(RS) supplemented that relevant stakeholders had been consulted at the Lands Sub-Committee of the Land and Development Advisory Committee on 14 December 2010. Members of the Sub-Committee, including representatives from the Real Estate Developers Association of Hong Kong and professional bodies (e.g. the Hong Kong Institution of Engineers, the Hong Kong Institute of Surveyors, the Hong Kong Institute of Planners, the Hong Kong Institute of Architects etc.) had been consulted on the proposed inclusion of a requirement for connection to DCS in the land lease conditions. They indicated no objection to the proposal in principle as DCS would bring about significant environmental benefits.

27. Given the uncertainties over the proposed mandatory subscription to DCS by private non-domestic projects in KTD, and the compatibility of

construction requirements for buildings at KTD and the back-up systems for DCS had yet to be resolved with developers, Mr KAM Nai-wai questioned the basis upon which the projection that DCS was expected to break even within 25 years was arrived at. USEN said that according to the latest review, if all air-conditioned floor area of private non-domestic projects in the KTD used the DCS service, DCS would be able to break even within 25 years. DDEMS(RS) added that under the alternative procurement strategy, a reduction in capital cost by over \$150 million and a significant reduction in the operation cost by about \$280 million for the whole operation period of DCS could be achieved. DS(Env) supplemented that this had not taken into account the annual saving of \$85 million in electricity consumption. Mr Albert CHAN requested that more information be provided on the cost recovery of the DCS project.

Admin

28. Mr LEE Wing-tat opined that DCS would not be financially viable in the event of unsatisfactory subscription rate. Given that Members would have no choice but to proceed with Phase III once funds for Phases I and II had been committed, he found it difficult to support the funding proposal in the absence of assurance on the financial viability DCS. There was a need to justify the huge investment in DCS. Noting that the Administration would be funding both the construction and operating cost, Mr LEE enquired about the operation of DCS. USEN said that she hoped Members would lend its support to DCS as a major project for environmental protection. On the operation of DCS, DDEMS(RS) said this would be outsourced to a private contractor under the oversight of the Electrical and Mechanical Services Department (EMSD). The estimated operating cost was around \$900 million to \$1,000 million for a project period of 16 years. A more accurate estimate would be made available upon completion of tender. At members' request, the Administration would provide the capital and recurrent operating cost of DCS in the submission of the relevant funding proposal to PWSC..

Admin

29. While supporting the implementation of DCS which would bring about significant environmental benefits, Ms Audrey EU was gravely concerned about the high project cost and the consequence if Phase III had to be aborted due to high cost. She enquired if the projection that DCS would be able to break even within 25 years was premised on the condition that all three phases would be completed. She also enquired about the potential users under DCS Phases I, II and III. Given the environmental benefits and the electricity saving to be achieved by DCS, Mr CHAN Kin-por considered that the investment was justified and it might not be necessary for the project to break even. Besides, it would be very difficult to break even if the majority of residential developments did not subscribe to DCS. DDEMS(RS) explained that the cost recovery period of 25 years was based on the estimated number of users for the three phases, the majority of which would move in after completion of Phase III. Phases I and II would mainly serve the Package 1 users, including the Cruise Terminal and the non-domestic areas of a public housing estate, while Phase III

would serve Package 2 and 3 users, such as the Tourism Node, hotels, private commercial and residential developments, etc. The revised procurement strategy would allow greater scope to adjust the DCS schedule in line with changes in the development schedule of KTD. It would also minimize idling of early investment in pipe layings and electrical and mechanical equipment installations.

30. Ms Audrey EU questioned why DCS was not extended to residential premises, including public housing estates. DDEMS(RS) said that DCS was an energy-efficient system for high demand users such as commercial buildings in KTD which provided for central air-conditioning. Given the higher capital cost of central air-conditioning and the relatively low demand for cooling services in public housing estates, connection to DCS might not be cost-effective. However, residential developments with central air-conditioning systems could still apply for DCS connection.

31. Mr Jeffrey LAM was concerned about possible legal challenges by private developers who were unwilling to abide by the mandatory subscription to DCS under the land lease. He also enquired about the consequences if private non-domestic projects did not connect to DCS. USEN said that legal advice would be sought from the Department of Justice on the inclusion of the requirement for subscription of DCS service in the land lease conditions. On the other hand, the Administration was consulting developers on the proposed requirement. With the provision of DCS, user buildings would no longer need to install their own chillers and associated electrical equipment, thus allowing more flexible building designs. Given the significant benefits of DCS, it was expected that developers would be incentivized to subscribe to the service which was more adaptable than individual air-conditioning system to the varying demand for air-conditioning. Besides, the service quality and reliability would be overseen by EMSD. DDEMS(RS) added that discussion had been held with the Lands Department on the inclusion in the land lease the requirement for all private non-domestic projects in KTD to connect to DCS. The arrangement was considered viable and there were precedent cases where requirements were imposed as part of the land lease conditions. At members' request, the Administration agreed that written legal advice from the Department of Justice confirming the legality of proposed requirement would be obtained before submitting the funding proposal to PWSC.

Admin

Tariff rates

32. On the level of tariff, DDEMS(RS) said that the tariff for the use of DCS would be set at a competitive level comparable to the cost of individual water-cooled air-conditioning systems using cooling towers, which was one of the most cost-effective air-conditioning systems available in the market. Legislation would be introduced for the charging of tariff for DCS. Members

would be able to scrutinize the legislation upon its introduction.

33. In concluding, the Chairman said that members did not object to the funding proposal being submitted to PWSC for consideration.

VI. Any other business

34. There being no other business, the meeting ended at 10:35 am.

Council Business Division 1
Legislative Council Secretariat
2 February 2011