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Panel on Security

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for the special meeting on 17 January 2011**

Review on procurement of fire services equipment

Purpose

This paper summarizes past discussions of the Panel on Security ("the Panel") on the updating and replacement of fire services equipment and apparatus.

Existing procedures for procuring fire services equipment and apparatus

2. According to the Administration, the Fire Services Department ("FSD") attaches great importance to ensuring the safety of frontline personnel, and has frequently updated and replaced fire services equipment. As fire services equipment are required to suit the actual environment and needs of different places, there is no internationally common set of specifications for such equipment. On the whole, the existing equipment of FSD compare favourably with those used by fire brigades in other places. FSD adopts a forward-looking procurement strategy by closely monitoring new developments in fire services equipment and the availability of new products in the market, so as to further enhance the safety of frontline personnel in fire-fighting and rescue operations. In this respect, the Standard Stowage Review Committee ("SSRC") was re-organized in 2008 to evaluate and review all equipment relating to rescue and fire fighting operations on a regular basis.

3. Generally, fire services equipment can be categorized into fire appliances, protective equipment, fire-fighting equipment, rescue equipment and communication systems. In deciding whether to update or replace its equipment,

FSD will give regard to a number of factors, including the availability of new products in the market and their reliability, relevant international standards, as well as the service life and maintenance records of the existing equipment. Where necessary, FSD will bid for funding for the procurement following the established mechanism.

4. The replacement of fire services equipment normally involves a number of steps, including drawing up specifications, tendering, manufacture, installation, testing and training. The time required for the entire process depends on factors such as the complexity of the equipment, its specifications, price and the quantity procured. For the procurement of equipment with relatively simple specifications and readily available stock, such as fire fighting hose and protective gloves, the entire procurement process will normally be completed in around six months. As regards fire services equipment which are purchased for the first time, replacement of existing equipment that requires substantial upgrading or changes to the specifications, or procurement of equipment with no readily available stock and where time is needed for manufacturing, the time required to complete the procurement process would be relatively longer. Using the procurement of common fire appliances as an example, the normal lead time required for completing the procurement process would be about 27 to 36 months.

5. Under the World Trade Organization ("WTO") Agreement on Government Procurement ("GPA") and the Government's Stores and Procurement Regulations, the procuring departments should not specify the manufacturer(s) or model(s) for the apparatus and equipment to be acquired. The requirements under the GPA are part of the major measures by WTO for encouraging fair and open global trade. Open tendering is more cost-effective than reliance on a single supplier or purchase of a specific model. However, if the equipment or services to be acquired are required to be compatible or interchangeable with the existing ones, the departments concerned may consider inviting single or restricted tenders. As a matter of fact, FSD has made procurement by single tender due to operational needs in recent years.

6. According to the Administration, the need to comply with GPA makes it unavoidable that equipment or apparatus with the same function but supplied by different manufacturers may need to be used concurrently during the replacement cycle. The same situation is commonly encountered by other fire-fighting brigades worldwide. The principles of operation for the same type of apparatus supplied by different manufacturers should be very similar. FSD will provide frontline staff with explanatory notes or operating manuals for their reference, and offer relevant training according to their needs. For apparatus with more complex operation, FSD will arrange training for frontline staff by the

manufacturer concerned or trained professionals. Therefore, the use of apparatus with the same function but purchased from different manufacturers should not affect the operational efficiency or safety of frontline staff.

7. Between 2008-2009 and 2009-2010, the Administration allocated a total of about \$600 million for the purchase of fire services equipment, including breathing apparatus, a radio communications system, fire appliances, fire-fighting equipment and rescue equipment. In 2010-2011, the Administration has earmarked about \$170 million for the procurement of various fire services equipment, including fire appliances and rescue equipment. The replacement of 13 000 sets of fire tunics and over trousers for all fire personnel is one of the items included in the earmarked funding, and the number of fire tunics and over trousers provided for each fireman will be increased from one to two sets. Such new gear with better protective functions is expected to be delivered to Hong Kong in batches between October 2010 and March 2011, and distributed for use by frontline staff at the same time.

Involvement of frontline staff in procurement

8. According to the Administration, a number of channels are in place for FSD frontline staff to give views and make requests on equipment or apparatus for the management's consideration. For new equipment, FSD will arrange trial use of samples by frontline staff to collect comments from users, and will consult the trade unions and staff relations units through SSRC. SSRC, which includes rank and file frontline staff and representatives of staff unions as members, meets bimonthly to discuss the introduction of new technology, equipment and apparatus. In addition, FSD management also invites frontline personnel and representatives of staff unions to attend international exhibitions on fire services apparatus to search for advanced equipment.

Inspection and acceptance of equipment

9. To ensure that all fire services equipment and apparatus delivered are in compliance with the specifications, FSD will assign officers to perform inspection and acceptance tests. Each officer so assigned must possess the relevant qualifications or required expertise. To enhance the ability of its staff to perform such duties, FSD will from time to time send officers abroad to receive technical training from the manufacturers. For major equipment, FSD may send its officers to perform inspection and acceptance tests overseas as and when required.

Chinese operational instructions

10. According to the Administration, FSD has stipulated in its procurement contracts for all new apparatus from 2007 onwards that suppliers should provide operational instructions in both Chinese and English. At present, there are 120 different types of apparatus in use by FSD, of which 100 types are already provided with Chinese operational instructions. Operational instructions for the remaining 20 types of apparatus are being translated into Chinese, and should be available within 2010.

The Administration's proposed measures for expediting the procurement process

11. When the Public Accounts Committee ("PAC") of the Legislative Council discussed the procurement of ambulances in 2009, the Administration indicated that it would adjust the procurement procedures in order to shorten the lead time required for procuring ambulances, and similar arrangements would apply to the procurement of fire services equipment. Using the procurement of common fire appliances as an example, the following measures to expedite the procurement would be adopted -

- (a) before funding is approved, FSD and relevant departments would make an early start in drawing up the design and specifications for the equipment;
- (b) after finalizing the design and specifications, FSD and relevant departments would immediately kick off the tendering process, with a view to completing all tendering procedures and securing the approval of the tender board before funding is available;
- (c) when funding is available, FSD and relevant departments would award the procurement contract as soon as possible; and
- (d) where possible, FSD would request the manufacturer to advance the delivery of some of the equipment so as to facilitate the provision of training at an earlier time. This would enable frontline personnel to become familiar with the operation of the new equipment before full delivery.

12. According to the Administration, the new arrangements serve to expedite the entire procurement process by making an early start on the time-consuming but unavoidable procedures, such as drawing up tender specifications, preparing tender documents and tendering. With the adoption of the above improvement measures, the entire process for procuring fire appliances can be shortened by about a year. These measures will also apply to most fire services equipment, especially those requiring frequent replacement.

Consultancy study

13. To further improve the procurement process of fire services equipment and apparatus, the Security Bureau and FSD have co-commissioned the Government's Efficiency Unit ("EU") to conduct a study with the following terms of reference -

- (a) examine the existing procurement arrangement of FSD with a view to speeding up the process and ensuring timely delivery of new equipment;
- (b) review the existing organization and manpower for procurement at FSD, examine roles and responsibilities of the staff involved, and see if they are equipped with the requisite skills and knowledge to perform their roles effectively and efficiently;
- (c) explore potential application of information technology management systems in support of a more effective logistics and supply chain management; and
- (d) review the training arrangement for frontline staff in the use of newly procured equipment.

14. The study is in progress and is expected to be completed within the second half of 2010. During the course of the study, EU will consult and visit the relevant units within FSD (e.g. those responsible for procurement and acceptance tests, as well as the end users). EU will also take into account the views of staff representatives.

Deliberations of the Panel

15. At its meetings on 4 May and 6 July 2010, the Panel discussed the existing procedures for procuring fire services equipment and apparatus, and the Administration's proposed measures for expediting the procurement processes. The Panel also received views from the Hong Kong Fire Services Department Staffs General Association ("FSDSGA") and the Hong Kong Fire Services Officers Association ("FSOA") on the matter. Members' views and concerns are summarized in the following paragraphs.

Lengthy time and process for the procurement and updating of fire services equipment

16. Members expressed grave concern about the work safety of firemen. Some members considered the procedure for procurement of various fire services equipment, including new breathing apparatus, new digital radio communication system and fire tunics and over trousers for replacement, cumbersome. Citing the new breathing apparatus as an example, they considered it unacceptably long for the Administration to have taken more than three years to put the new apparatus into full operational use since the time they were identified as suitable for use by FSD. These members asked whether FSD would consider adopting a more flexible arrangement for the introduction of new equipment in future and accord priority to those firemen stationed in high-risk areas for receiving training and using the new equipment, instead of waiting for all staff to have been trained before using the new equipment.

17. The Administration responded that it attached great importance to ensuring the safety of frontline fire-fighting personnel and providing firemen with safe and reliable equipment and facilities. Besides taking measures to ensure that fire services equipment were under proper maintenance and in effective operation, the Administration regularly replaced and procured more advanced equipment taking into account FSD's suggestion, so as to further enhance the protection for frontline personnel. Generally, the existing equipment of FSD compared favourably with those used by fire brigades overseas.

18. The Administration advised that in order to expedite the procurement process, FSD and relevant departments had reached a consensus to make an early start on the initial procurement procedures, including the drafting of specifications and tendering. This would enable FSD and relevant departments to award the procurement contract as soon as possible upon securing funding approval, which would in turn allow the suppliers to commence the manufacturing or delivery procedures immediately. With the adoption of the improvement measures as mentioned in paragraph 11 above, the entire process for procuring fire equipment or appliances could be shortened by about a year.

To further expedite the procurement process, FSD would, whenever possible, adopt a phased delivery approach for large-scale procurement of equipment to enable early commencement of training. In this regard, the Administration would request suppliers to deliver the new equipment by batches whenever practicable. FSD would conduct testing on the new equipment that arrived in early shipments and, depending on operational need and the actual situation, distribute them for use by firemen who had already been trained. In deciding whether the new equipment could be introduced in batches, FSD would consider a number of factors, including the need to maintain uniformity in overall operation; whether the parallel use of old and new equipment could be accommodated in actual operation and whether such arrangement would seriously affect the operational procedures; as well as its impact on training, maintenance, logistics support and use of resources.

19. Some members were very concerned about the interoperability among different makes/models of the same equipment/apparatus produced by different manufacturers. They sought clarification on whether there were any issues of incompatibility between different makes/models of the same equipment/apparatus currently in use.

20. In reply, the Administration reiterated that FSD kept on reviewing and identifying more advanced tools and equipment to improve the efficiency and effectiveness of fire fighting and rescue operations and to enhance the safety of frontline personnel. The Administration stressed that in the procurement of new fire services equipment to replace existing equipment, it was necessary to observe the established procedures for procurement in order to ensure fairness and impartiality. While procurement had to be carried out through a worldwide tendering to comply with the Government's Stores and Procurement Regulations, there was a possibility that the same type of equipment acquired at different times might be supplied by different manufacturers. However, there should not be any incompatibility in the functions of the equipment.

21. Members noted that FSDSGA and FSOA had for years been urging the FSD management to provide the operational/training manuals on various fire fighting and rescue equipment in both Chinese and English, so as to help frontline personnel to familiarize themselves, in the shortest possible time, with the principles and detailed operation of the equipment and apparatus. Members expressed concern about the slow progress in the preparation of the Chinese translation of the manuals. Some members considered that the Administration should explore the option of outsourcing, in order to speed up the preparation of the Chinese translation of the operational/training manuals on various fire fighting and rescue equipment.

22. The Administration responded that FSD had acknowledged the requests of the two staff associations, and requested the suppliers to provide both Chinese and English versions of operation manuals along with the new equipment.

Shortage of manpower and expertise for undertaking procurement-related duties

23. Members noted from the deputations that at present, the procurement of fire-fighting and rescue equipment was handled by only two staff specifically and exclusively for such duties. The procurement of other equipment was part of the duties of some staff holding regular office in different divisions or units while taking up the procurement-related work as extra responsibilities. There were cases where user acceptance tests on new products and equipment were neither conducted by professionals nor technically qualified personnel. Members were deeply concerned about the way how FSD assigned the duties of testing and commissioning of new equipment to different units, and the serious shortage of manpower and expertise for undertaking the testing, commissioning and training of frontline personnel in the use of new equipment and apparatus upon their delivery.

24. In response, the Administration explained that the procurement-related duties were mainly distributed amongst a number of administrative and support units under the Headquarters Command, and the personnel assigned to undertake the checking and testing had been trained in the relevant fields with technical knowledge and practical experience to carry out the acceptance tests of specific equipment. The Administration informed members that FSD would review its procurement strategies and procedures. Where necessary, it would consider applying for provision of additional resources in accordance with the established procedures so as to increase the manpower support for handling procurement-related duties.

25. Notwithstanding the response of the Administration, members considered that the FSD management should show its determination to solve the workload problem of its staff. Some members called on the Administration to take into account the views and suggestions of FSDSGA and FSOA, notably the provision of additional manpower and the setting up of a dedicated team for handling procurement-related work.

26. The Administration responded that the FSD management was fully aware of the pressure and heavy workload faced by frontline personnel, which had been brought about by rising public expectation for better services. In reviewing its

procurement strategies and procedures, FSD would consider all relevant issues including the merits and the viability of setting up a dedicated team to cope with the workload arising from procurement and replacement of fire services equipment. FSD would continue to monitor closely its manpower requirement and service needs and explore ways to optimize the deployment of resources to meet future challenges. In the process, FSD would enhance communication with the staff side.

Reduction of conditioned hours of work for staff of the Fire Services Department's Fire Stream

27. Members generally shared the views of FSOA and FSDSGA regarding the need to increase FSD's manpower. Some members considered that the conditioned hours of work of FSD staff should be reduced from 54 to 48 hours per week. They were of the view that additional resources should be provided to FSD for addressing its manpower shortage problem. They considered that the three pre-requisites for reducing the conditioned hours of work should be abolished. Those three pre-requisites, as recommended by the Standing Committee on Disciplined Services Salaries and Conditions of Service in its Report on the Grade Structure Review of the Disciplined Services in respect of reducing the conditioned hours of work for staff of FSD's Fire Stream from 54 to 48 hours per week, were -

- (a) cost neutrality;
- (b) non-involvement of additional manpower; and
- (c) maintenance of the same level of service to the public.

28. The Administration advised that the Standing Committee on Disciplined Services Salaries and Conditions of Service adopted an open attitude towards proposals to reduce the conditioned hours of work of FSD staff in the Fire Stream, bearing in mind the three pre-requisites it laid down. FSD would continue its discussion with FSD staff unions on how the conditioned hours of work could be reduced, such as whether it could be made through the reduction of fire appliances or the scaling down of standard manning of fire appliances, or revision of the shift pattern.

29. Some members were concerned that according to FSDSGA's submission, the number of firemen deployed for each fire appliance was one fireman less than the standard manning. They enquired about the number of additional firemen

needed if their conditioned hours of work were to be reduced to 48 hours per week. They further enquired about the additional numbers of fire appliances and firemen needed to meet the original plan of deploying sufficient firemen, i.e. seven firemen, for each fire appliance. They suggested that the Security Bureau should give priority to increasing FSD's manpower in the following financial year.

30. The Administration advised that, as a rough estimate, about 800 firemen were needed if the conditioned hours of work of firemen were to be reduced to 48 hours per week and that standard manning was to be fully deployed for fire appliances. While there was standard manning for each fire appliance, a minimum manning for each fire appliance was allowed to cater for temporary absence of staff due to training, sickness, injuries, etc.

Efficiency and effectiveness of the Fire Services Department's existing procurement management system

31. Some members noted that the existing computer system in FSD only captured raw data and failed to consolidate the data submitted by different divisions or Fire Commands to give a full and coherent picture of the flows and availability of various fire services equipment, as in the case of fire tunics and over trousers for all firemen. These members considered FSD's existing stores procurement and stock management systems far from efficient and effective. They suggested that FSD should establish an integrated computer system to centralize the information on the usage, stocking and distribution of various equipment, which would in the end allow information exchange and data analysis. In addition, FSD should develop a new computerized procurement and supply system with enhanced functionalities which could help improve FSD's efficiency and effectiveness in inventory management.

32. The Administration responded that FSD was reviewing its existing procurement management system to see whether the system could cope with the prevailing needs of the department. If justified, FSD would propose to replace the existing system with a new procurement system with enhanced functionalities which would enable FSD to better monitor and control the stock of equipment and improve its capability in data retrieval, so as to facilitate management decision-making and strategic planning.

Need for an independent study on the procurement and management issues of FSD

33. Some members expressed serious concern as to whether the inefficiency and confusion in the procurement of fire services equipment was only a manifestation or symptom of a broader and more fundamental problem in FSD with its management and administration. These members proposed that EU could conduct a study on the procurement and management issues for FSD.

34. The Administration advised that in the light of the recommendations made by PAC and with a view to strengthening FSD's internal information and resource management functions, the assistance of EU had been enlisted to conduct a study on another related subject of improvement to the processes and procedures regarding the procurement of ambulances. The study, which commenced in September 2009, had been completed. The Administration had taken on board the advice of EU and FSD had adjusted the procurement procedure in order to shorten the lead time required for procuring ambulances. Similar arrangements also applied to the procurement of fire services equipment. Citing the procurement of fire tunics and over trousers as an example, the drawing up of tender specifications had been done well in advance, such that the procurement contract could be awarded right after funding approval.

Relevant papers

35. Members are invited to access the website of the Legislative Council at <http://www.legco.gov.hk> to view the relevant paper and minutes of meeting.