

For information

**LEGISLATIVE COUNCIL
PANEL ON TRANSPORT**

**Operation of Dedicated LPG Filling Stations
and Pricing Adjustment Mechanism**

PURPOSE

Further to our information paper to the meeting of the Panel on 16 December 2005, this paper reports on actions taken to improve the operations of dedicated LPG filling stations and the Government's plan to implement monthly LPG ceiling price adjustment mechanism with effect from 1 February 2006.

BACKGROUND

2. At the Panel meeting on 16 December 2005, we briefed members on the operations of dedicated LPG filling stations, the recent happenings and interim measures taken. Details are set out in LC Paper No. CB(1)503/05-06(3).

3. The cause of queuing of LPG vehicles at dedicated LPG filling stations was due to the time-lagging effect of LPG ceiling prices of dedicated LPG filling stations. As prescribed under the Design, Build and Operate (DBO) contracts between the operators and the Government, LPG ceiling prices at dedicated LPG filling stations are adjusted every six months. Owing to the recent surge of LPG international price, about 74% of LPG vehicles are refilled at the twelve dedicated LPG filling stations while the remaining 26% of vehicles are refilled at the 41 non-dedicated LPG filling stations.

4. The skewed balance between supply and demand has brought substantial pressure on the LPG filling facilities at dedicated LPG filling stations, especially those operated by the China Resources Petrochemicals (Group) Co. Ltd. (CRC) as the LPG pump prices at their dedicated stations are the lowest among all LPG filling stations in Hong Kong. Its seven dedicated stations are now serving 46% of LPG vehicles in Hong Kong and are supplying up to 15,000 fillings a day despite their original designed capacity to support

about 10,000 LPG vehicle fillings per day (see **Annex A**). Their LPG road tanker fleet, their oil terminal at Tsing Yi and even their LPG supply chain are being stretched to the limit. The same applies to ECO Energy Co. Ltd. (ECO) but to a lesser extent.

5. At the Transport Panel meeting on 16 December 2005, the Administration undertook to liaise with the operators to maintain LPG supply and improve their service level as much as practicable for the time being, and informed Members that the Administration plans to resolve the issue in the long term by revising the current LPG ceiling price adjustment mechanism for dedicated LPG filling stations.

ACTIONS TAKEN

6. Subsequent to the Panel meeting on 16 December 2005, Government had liaised with CRC and ECO with a view to ensuring a reasonable level of LPG filling service to meet the needs of the LPG vehicle trades. Despite the prevailing constraints, both CRC and ECO undertook to do their best to deploy as many as possible of their filling nozzles at dedicated LPG filling stations, and in any case not less than 70% during busy hours, with a view to minimising the queuing time for LPG vehicles. Both companies will also increase their LPG road tanker delivery frequency to dedicated LPG filling stations subject to safety and maintenance requirements.

7. We will continue to closely monitor the operation of dedicated LPG stations in accordance with the terms and conditions of the DBO contracts. Given the prevailing situation, we will continue to scrutinise the supply chain logistics of the two operators. EMSD's 24-hour hotline will continue to operate to solicit feedback from the LPG vehicle trades as well as to ensure timely intervention in case of need.

8. Apart from the aforementioned measures, quarterly customer liaison meetings among representatives of the LPG vehicle trades and the two operators will be conducted to foster communication and understanding between the two sides. Electrical and Mechanical Services Department (EMSD), Environmental Protection Department (EPD) and Transport Department (TD) will be represented at these meetings to gather feedbacks and suggestions.

REVIEW OF PRICING ADJUSTMENT MECHANISM

9. Under the DBO contracts for the dedicated LPG filling stations, a LPG pricing formula determines the LPG ceiling price (P) for dedicated LPG filling stations which comprises two elements, namely the LPG international price (A) and LPG operating price (B) as follows –

$$P = A + B$$

10. The LPG international price (A) is a pass-through element while the operating price (B) was submitted by the bidders during the tender stage. At the time of introduction of the Pricing Formula, the adjustment period of the LPG international price (A) was set at half-yearly interval. The LPG operating price (B), which in fact is the proposed operating cost plus profit margin of the contractor, is also fixed throughout the 21-year contractual period, subject to yearly adjustment according to the movement of the Composite Consumer Price Index. It should be noted that the LPG international price (A) had no bearing during tender evaluation. Instead, tenderers competed primarily by virtue of their proposed LPG operating price (B).

11. At **Annex B** are charts showing the movement of international LPG prices and LPG pump prices at dedicated and non-dedicated stations since the introduction of the Pricing Formula for dedicated LPG filling stations in November 2000. It should be noted that the Pricing Formula which caps the LPG prices at dedicated stations has restrained prices hikes at non-dedicated stations –

- (a) the differential between prices at non-dedicated stations and international prices was \$1.90/L in November 2000. The differential has narrowed to \$0.97/L (-51%) in December 2005 though international prices has increased by 55% from \$1.48/L to 2.30/L during the same period; and

	November 2000	December 2005
Average LPG Pump Price at Non-dedicated Stations	\$3.38/L	\$3.27/L
LPG International Price	\$1.48/L	\$2.30/L
Price Differential	\$1.90/L	\$0.97/L

- (b) had the price differential (at 228%) between international prices and prices at non-dedicated stations been maintained as at November 2000 without the introduction of dedicated stations, prices at non-dedicated stations could have gone up to \$5.25/L in December 2005.

12. At the time when the LPG Taxi Scheme was introduced in 1999, there was no precedent of prior DBO contracts for LPG filling stations. The DBO contract has therefore included a provision that a review of the Pricing Formula shall be conducted at five-yearly intervals. The pricing review mechanism was included in the tender document and was highlighted during the tender briefing to potential bidders during the tender exercise.

13. Right from the beginning of the review process, a joint departmental Working Group comprises representatives of EMSD, EPD, TD and Census and Statistics Department (C&SD) was set up to examine the issue. As regards the adjustment frequency of the Pricing Formula, legal advice confirmed that the change of review frequency from half-yearly to monthly is in order. The joint departmental Working Group also considered that if the revision is to be carried out in batches for the twelve dedicated LPG filling stations, the queuing of LPG vehicles would worsen at the remaining stations. Legal advice confirmed that subject to agreement between the operators and Government, the revised LPG ceiling price adjustment mechanism can be applied to all the twelve dedicated LPG filling stations at the same time.

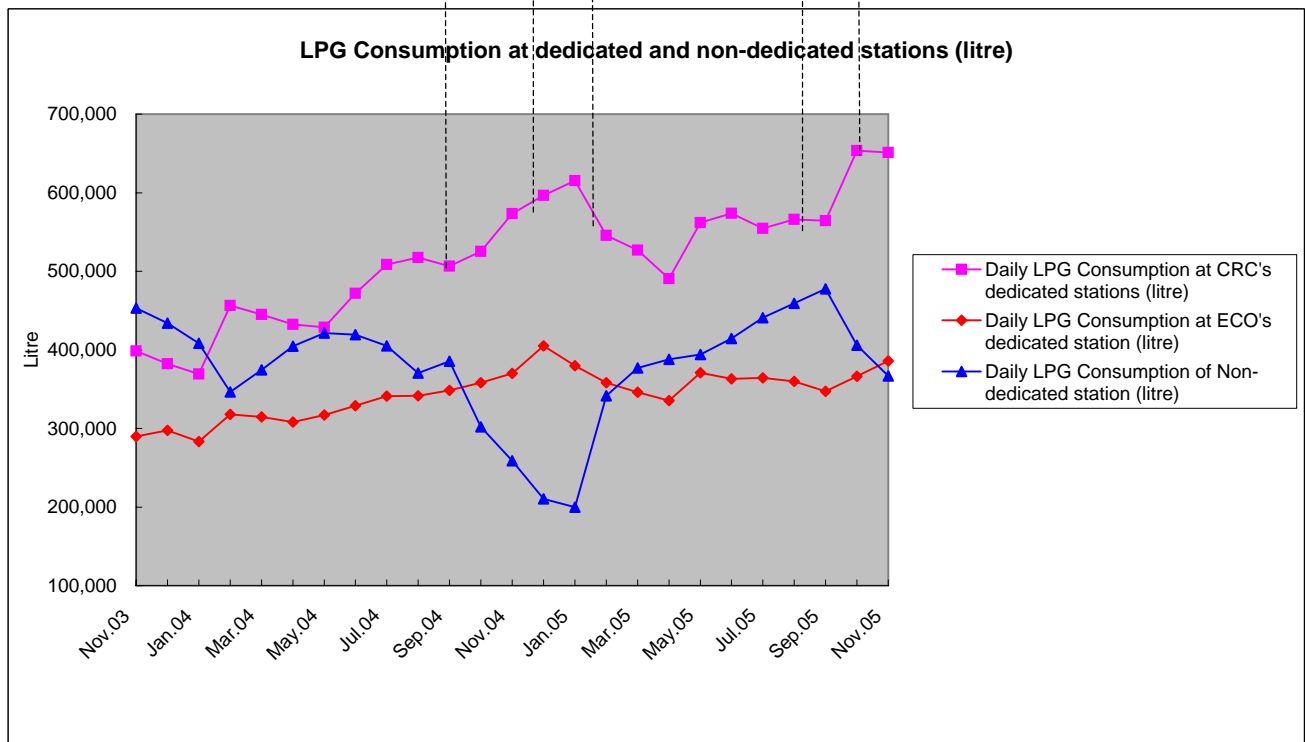
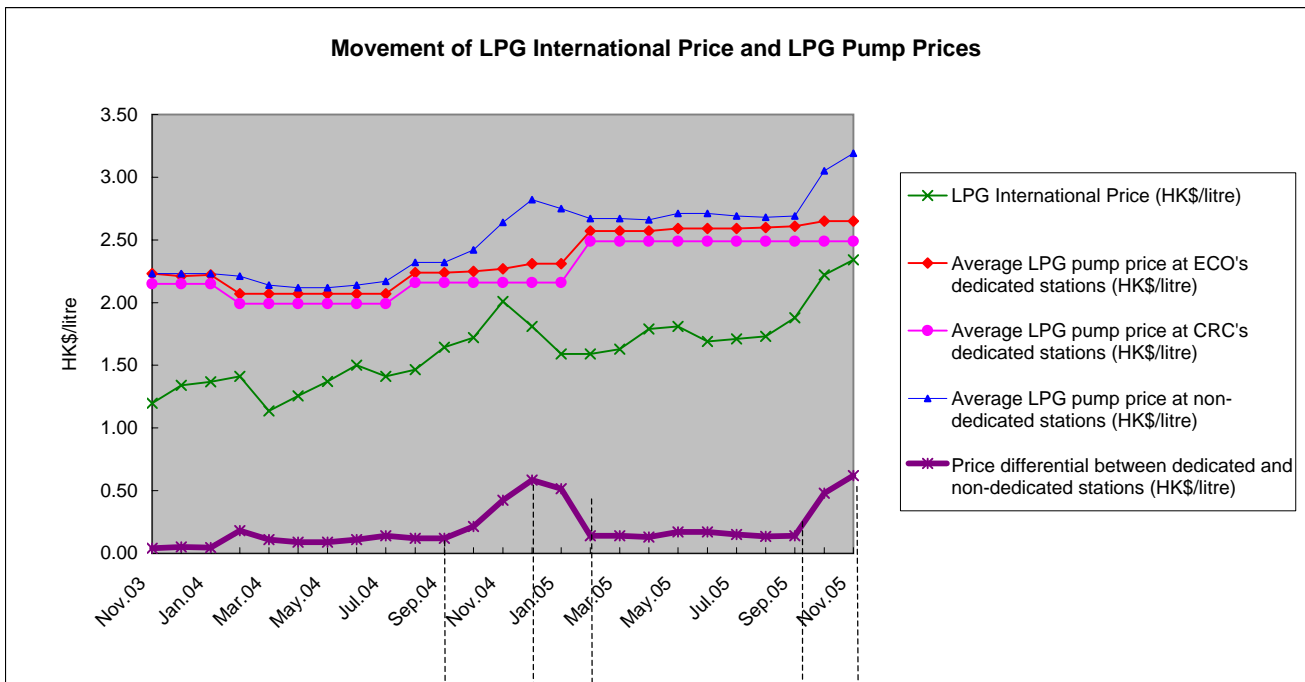
14. As the queuing of LPG vehicles at dedicated LPG filling stations is caused by the time-lagging effect of LPG pump prices at times of great fluctuation of LPG international price, the working group considered it necessary to timely reflect the movement of LPG international price into the LPG pump price of dedicated LPG filling stations. As such, it is fair and reasonable to revise the adjustment frequency of the LPG ceiling price from half-yearly to monthly, with reference to the LPG international price for the preceding month.

15. The LPG ceiling price under the revised mechanism will follow closely the movement of LPG international price. The revised LPG ceiling price adjustment mechanism is cost neutral to the users in the long run and helps strike a better balance between supply and demand at dedicated and non-dedicated LPG filling stations.

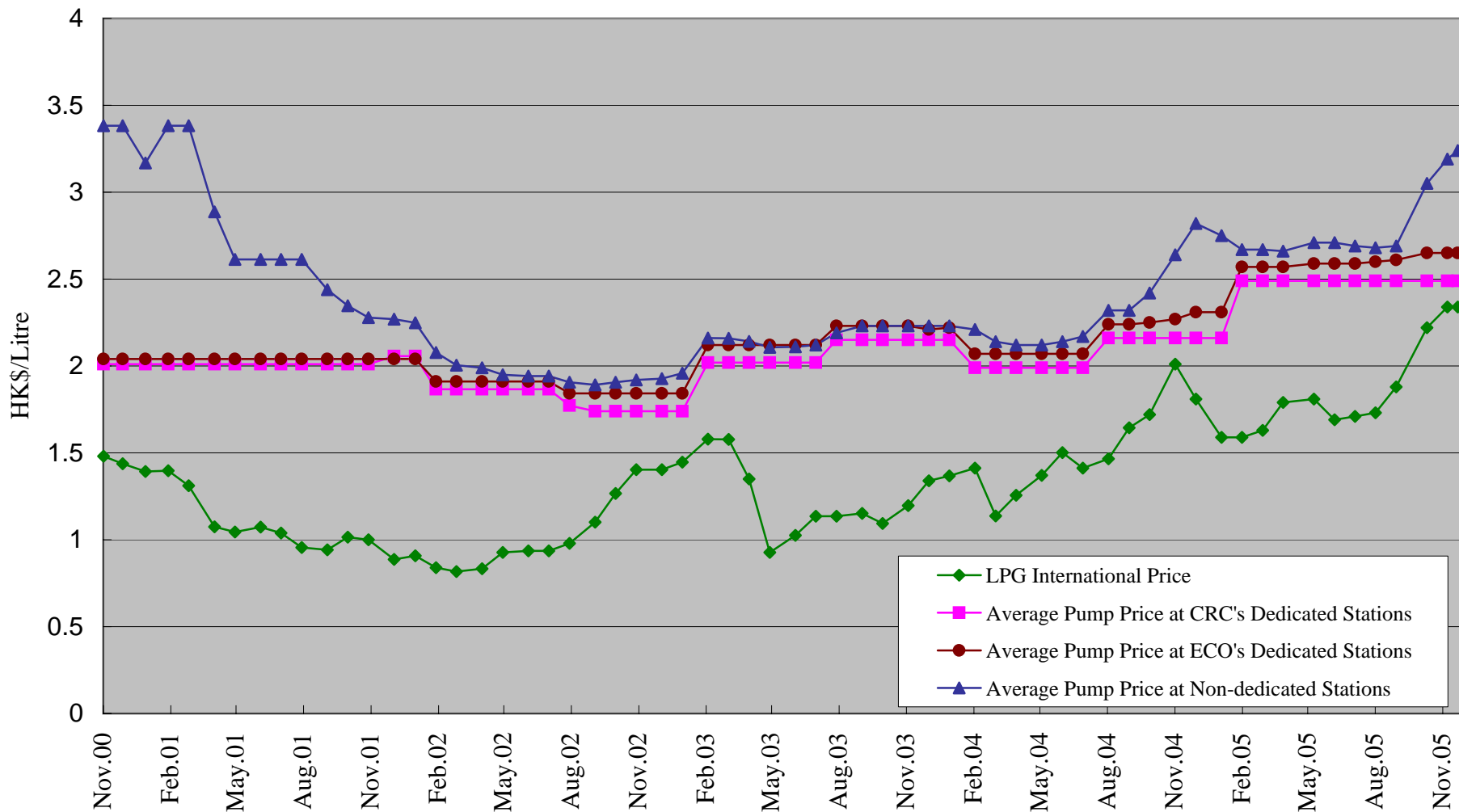
16. The prevailing problem of queuing at dedicated LPG filling stations could only be mitigated but not resolved given the design capacity limit of the LPG supply chains. Accordingly to the DBO contracts currently in force, 1 February 2006 is the due date when the next half-yearly adjustment of LPG ceiling prices will be implemented. Hence we plan to implement the monthly LPG ceiling price adjustment mechanism with effect from 1 February 2006. We have explained the rationale of the new adjustment mechanism to the taxi and light bus trades. They have indicated no objection to the implementation of the revised adjustment mechanism with effect from 1 February 2006.

Electrical and Mechanical Services Department
31 December 2005

Annex A



Movement of LPG Pump Prices



	International Price (HK\$/Litre)	Average Pump Price at CRC's Dedicated Stations (HK\$/Litre)	Average Pump Price at ECO's Dedicated Stations (HK\$/Litre)	Average Pump Price at Non- dedicated Stations (HK\$/Litre)	Average Pump Price at Dedicated Stations
5.Nov.00	1.48	2.01	2.04	3.38	2.03
1.Dec.00	1.44	2.01	2.04	3.38	2.03
1.Jan.01	1.39	2.01	2.04	3.17	2.03
1.Feb.01	1.40	2.01	2.04	3.38	2.03
1.Mar.01	1.31	2.01	2.04	3.38	2.03
5.Apr.01	1.08	2.01	2.04	2.89	2.03
3.May.01	1.05	2.01	2.04	2.61	2.03
7.Jun.01	1.07	2.01	2.04	2.61	2.03
5.Jul.01	1.04	2.01	2.04	2.61	2.03
2.Aug.01	0.95	2.01	2.04	2.61	2.03
6.Sep.01	0.94	2.01	2.04	2.44	2.03
4.Oct.01	1.02	2.01	2.04	2.35	2.03
1.Nov.01	1.00	2.01	2.04	2.28	2.03
6.Dec.01	0.89	2.06	2.04	2.27	2.05
4.Jan.02	0.91	2.06	2.04	2.25	2.05
1.Feb.02	0.84	1.87	1.91	2.08	1.89
1.Mar.02	0.82	1.87	1.91	2.00	1.89
5.Apr.02	0.83	1.87	1.91	1.99	1.89
3.May.02	0.93	1.87	1.91	1.95	1.89
7.Jun.02	0.94	1.87	1.91	1.94	1.89
5.Jul.02	0.94	1.87	1.91	1.94	1.89
2.Aug.02	0.98	1.77	1.84	1.91	1.81
6.Sep.02	1.10	1.74	1.84	1.89	1.79
4.Oct.02	1.27	1.74	1.84	1.91	1.79
1.Nov.02	1.40	1.74	1.84	1.92	1.79
6.Dec.02	1.40	1.74	1.84	1.93	1.79
3.Jan.03	1.45	1.74	1.84	1.96	1.79
7.Feb.03	1.58	2.02	2.12	2.16	2.07
7.Mar.03	1.58	2.02	2.12	2.16	2.07
4.Apr.03	1.35	2.02	2.12	2.14	2.07
2.May.03	0.93	2.02	2.12	2.11	2.07
6.Jun.03	1.03	2.02	2.12	2.11	2.07
4.Jul.03	1.14	2.02	2.12	2.12	2.07
1.Aug.03	1.14	2.15	2.23	2.19	2.19
5.Sep.03	1.15	2.15	2.23	2.23	2.19
3.Oct.03	1.09	2.15	2.23	2.23	2.19
7.Nov.03	1.20	2.15	2.23	2.23	2.19
5.Dec.03	1.34	2.15	2.21	2.23	2.18
2.Jan.04	1.37	2.15	2.22	2.23	2.19
6.Feb.04	1.41	1.99	2.07	2.21	2.03
5.Mar.04	1.14	1.99	2.07	2.14	2.03
2.Apr.04	1.26	1.99	2.07	2.12	2.03
7.May.04	1.37	1.99	2.07	2.12	2.03
4.Jun.04	1.50	1.99	2.07	2.14	2.03
2.Jul.04	1.41	1.99	2.07	2.17	2.03
6.Aug.04	1.47	2.16	2.24	2.32	2.20
3.Sep.04	1.64	2.16	2.24	2.32	2.20
1.Oct.04	1.72	2.16	2.25	2.42	2.21
5.Nov.04	2.01	2.16	2.27	2.64	2.22
3.Dec.04	1.81	2.16	2.31	2.82	2.24
7.Jan.05	1.59	2.16	2.31	2.75	2.24
4.Feb.05	1.59	2.49	2.57	2.67	2.53
4.Mar.05	1.63	2.49	2.57	2.67	2.53
1.Apr.05	1.79	2.49	2.57	2.66	2.53
13.May.05	1.81	2.49	2.59	2.71	2.54
10.Jun.05	1.69	2.49	2.59	2.71	2.54
8.Jul.05	1.71	2.49	2.59	2.69	2.54
5.Aug.05	1.73	2.49	2.6	2.68	2.55
2.Sep.05	1.88	2.49	2.61	2.69	2.55
14.Oct.05	2.22	2.49	2.65	3.05	2.57
11.Nov.05	2.34	2.49	2.65	3.19	2.57
25.Nov.05	2.34	2.49	2.65	3.24	2.57
9.Dec.05	2.3	2.49	2.65	3.27	2.57

For information on
16 December 2005

**LEGISLATIVE COUNCIL
PANEL ON TRANSPORT**

Operation of Dedicated LPG Filling Stations

PURPOSE

This paper explains the operation of the dedicated LPG filling stations under the Design, Build and Operate (DBO) contracts, the recent problems encountered and actions being taken to tackle the problems.

BACKGROUND

2. There are currently a total of 53 LPG filling stations in Hong Kong. Among them, twelve are dedicated LPG filling stations of which seven are operated by the China Resources Petrochems (Group) Co. Ltd. (CRC) and the other five are operated by ECO Energy Co. Ltd. (ECO). In addition, there are 41 non-dedicated LPG filling stations.

3. All dedicated LPG filling stations are operated under DBO contracts with the HKSAR Government. There are three DBO contracts with CRC and another three DBO contracts with ECO, and the locations of the dedicated LPG filling stations are as follows –

	CRC	ECO
1 st DBO contract	Sheung Wan Kwun Tong Tai Po	Chai Wan West Kowloon
2 nd DBO contract	Kowloon Bay Kwai Chung	Mei Foo Tuen Mun
3 rd DBO contract	Ma On Shan Yuen Long	Wan Chai

4. When the Government launched the LPG Taxi Scheme in 1999, the dedicated sites were provided at nil land premium in order to support the scheme. In return, the Contractor shall design, build and operate the stations in accordance with the terms and conditions of the contracts. In addition, LPG pump price at dedicated LPG filling station is capped by a Pricing Formula. Non-dedicated LPG filling stations are free to adjust their pump prices.

5. Under the DBO contracts, the Contractors are required to operate the stations in accordance with the terms and conditions of the contracts. For example, they shall maintain the operation of the stations 24 hours a day in all weather conditions and ensure that queuing of LPG vehicles entering a station to refill LPG is kept to a minimum.

Government's Role

6. The Electrical & Mechanical Services Department (EMSD) represents the Government in managing the DBO contracts by monitoring the design and construction of the dedicated LPG filling stations as well as their subsequent operation and maintenance. EMSD also collects data on the monthly LPG international prices, the monthly US\$/HK\$ exchange rates and yearly Composite Consumer Price Index (CPI) movement in order to calculate the applicable LPG ceiling price of the dedicated stations according to the Pricing Formula the DBO contracts.

7. Under the DBO contracts, staff of EMSD are empowered to enter the stations to carry out inspections and instruct the Contractor to carry out maintenance work, or make good any defect, imperfection or other fault identified. If the Contractor is in breach of their obligations under the contract, EMSD will issue warnings to the Contractor. If the situation persists, EMSD has the power to terminate the Contractor's employment. Under this situation, however, the service of the dedicated LPG filling stations will be severely disrupted until they are taken up by new operators through tendering. Such tendering process takes at least six months.

8. At the time when the LPG Taxi Scheme was introduced, there was no precedent on applying DBO contracts to filling stations. The DBO contract document has therefore incorporated a provision that a review of the pricing mechanism shall be conducted at five-yearly intervals, with a view to ensuring long term sustainability of the 21-year DBO contract and that the pricing arrangement is fair and equitable to all parties concerned. The first batch of dedicated LPG filling stations has reached the time for the review. The Government is in the process of reviewing the pricing mechanism with CRC and ECO.

PROBLEMS RECENTLY ENCOUNTERED

9. There has been large fluctuation of LPG international prices since September 2005. While the LPG pump prices of the non-dedicated stations

have been promptly adjusted upwards, those of the dedicated stations could not be changed until the date for the next half-yearly ceiling price adjustment i.e. 1 February 2006. Consequently, there is a significant price differential between dedicated and non-dedicated stations, resulting in huge increase in demand at dedicated LPG filling stations and thus queuing of vehicles. Movement of LPG international price and retailed prices at dedicated and non-dedicated stations and their effect on LPG consumption at the stations are given in **Annex**.

10. The recent LPG consumption figure revealed that about 46% of LPG vehicles are refilled at the seven dedicated stations of CRC, about 28% of LPG vehicles are refilled at the five dedicated stations of ECO and the remaining 26% are refilled at the 41 non-dedicated stations. The skewed balance between supply and demand has caused substantial pressure on the LPG filling facilities at dedicated stations, especially those operated by CRC's as the LPG pump price at their dedicated stations is the lowest among all LPG filling stations in Hong Kong. The 7 dedicated LPG filling stations of CRC were designed to support about 10,000 LPG vehicle fillings per day and now they are supplying up to 15,000 fillings a day. The situation is not sustainable. Their LPG road tanker fleet, their oil terminal at Tsing Yi and even their LPG supply chain are also stretched to their capacity limit. The said problem has occurred repeatedly at time of substantial price difference between dedicated and non-dedicated LPG filling stations (see **Annex**). The situation during the recent months was compounded by the breakdown of CRC's road tankers and the steep LPG international price increases.

ACTIONS TAKEN

11. Since the commencement of operation of dedicated LPG filling stations, EMSD has carried out regular inspections of the dedicated stations to monitor gas safety and ensure continuous supply of LPG and that the facilities are properly maintained. From late September 2005, EMSD received a number of reports from the LPG vehicle trade that some dedicated stations that are operated by both CRC and ECO have queuing problem and that a number of nozzles were reportedly broken down. EMSD has stepped up the inspections of dedicated stations and urged the contractors to rectify the problem.

12. CRC informed the Government in late November 2005 that their LPG filling facilities and LPG road tankers had been over-stretched for a prolonged period and required necessary repairs. As a result, the LPG replenishment frequency for CRC's dedicated stations decreased. This led to even longer queues of LPG vehicles at CRC's dedicated stations and caused

inconvenience to the LPG vehicle trade and the public.

13. Upon receipt of CRC's advice in late November 2005, EMSD had taken further actions to closely monitor the situation. From 23 November 2005 onwards, staff of EMSD visited various CRC's dedicated stations to record their LPG replenishment frequency, LPG inventory, LPG filling nozzles in operation and the number of LPG vehicle queuing. Moreover, staff of EMSD went to CRC's oil terminal at Tsing Yi to monitor the delivery schedule of LPG road tankers. The inspections revealed that their LPG road tankers are running more than four trips per day to their dedicated stations which is above the industrial norm. Urgent meetings were conducted with CRC. It is understood that CRC has placed order for one more LPG road tanker which is scheduled for delivery in early 2006.

14. Since May 2005, a joint departmental working group comprising representatives from EMSD, Environmental Protection Department (EPD) and Transport Department (TD) was formed to conduct the five-year Pricing Review as prescribed in the DBO contracts. Taking into account past operating experiences and in consultation with ECO and CRC, the working group recommended to revise the ceiling price adjustment frequency from half-yearly to monthly, with reference to the LPG international price for the preceding month. With the introduction of a more frequent ceiling price adjustment mechanism, we are optimistic that the queuing problem caused by the price lag at dedicated stations will be resolved.

15. Since the commencement of the review process on the Pricing Formula, TD, a working group member, has maintained informal contact with the LPG vehicle trade. EMSD has set up a 24-hour hotline for the trade to report problems on dedicated LPG filling stations for prompt follow-up actions. TD, EPD and EMSD had a meeting with the LPG taxi trade on 29 November 2005, where they explained to the trade the recent events, problems and actions taken to improve the operation of the dedicated LPG filling stations. We have sounded out the LPG vehicle trade on the proposal to revise the ceiling price adjustment frequency so that the LPG price at dedicated LPG stations can keep pace with the current market price. The trade had no strong view on the proposal to shorten the review period of the ceiling LPG price from half-yearly to monthly. They demanded that CRC should improve its LPG supply service at dedicated stations promptly.

WAY FORWARD

16. EMSD will continue to closely monitor the operation of dedicated

LPG stations in accordance with the terms and conditions of the DBO contracts. In addition, given the prevailing situation of CRC, staff of EMSD will continue to visit various CRC's dedicated stations to record their LPG replenishment frequency, LPG inventory, LPG filling nozzles in operation and the number of LPG vehicle queuing. EMSD will continue to monitor the delivery schedule of LPG road tankers at CRC's oil terminal in Tsing Yi.

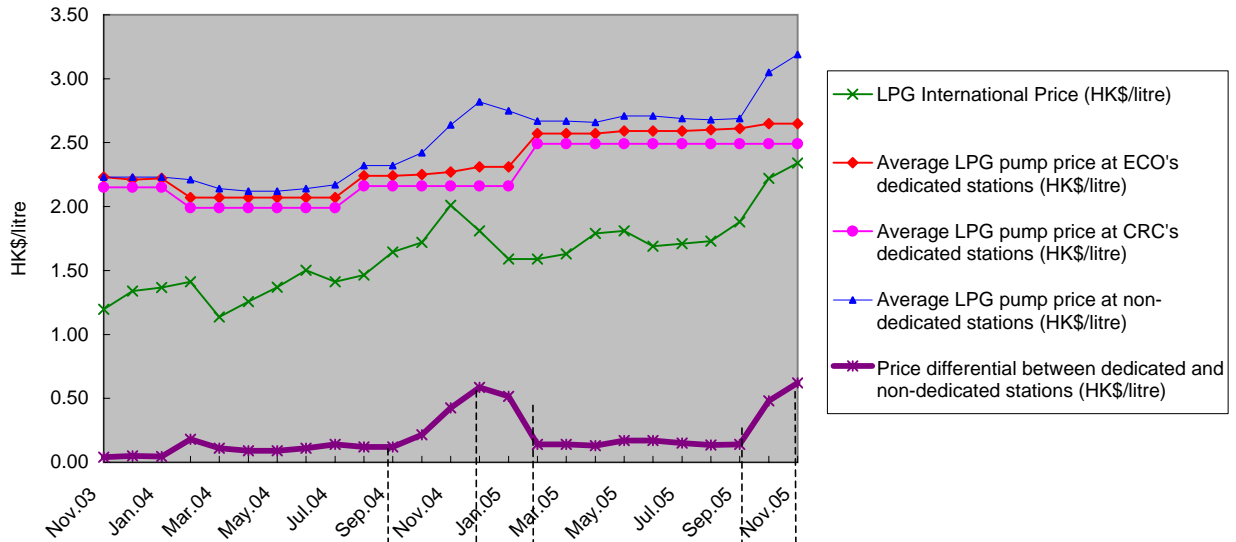
17. At our meeting with CRC on 2 December 2005, it undertook to strengthen their LPG supply chain to deliver more LPG to their dedicated LPG filling stations, and that nozzles would be put into operation unless they were out of order. EMSD's follow-up and on-site inspections revealed that CRC has taken steps to maintain LPG supply at their dedicated stations in response to the demand of the LPG vehicle trade.

18. The long-term solution is to reflect the movement of LPG international price timely. With more frequent ceiling price adjustment, the time-lagging effect of LPG ceiling prices at dedicated filling stations will be minimised. As a result, the price gap between dedicated and non-dedicated LPG filling stations will be narrowed, even at times of large fluctuation of LPG international prices. Consequently, the queuing problem will be improved.

**Electrical and Mechanical Services Department
December 2005**

Annex

Movement of LPG International Price and LPG Pump Prices



LPG Consumption at dedicated and non-dedicated stations (litre)

