

**For discussion  
on 26 March 2013**

**LEGISLATIVE COUNCIL**

**PANEL ON DEVELOPMENT**

**Regulatory Control of Lift and Escalator Safety and Related Issues**

**Purpose**

This paper briefs Members on the regulatory control over lift and escalator safety in Hong Kong through statutory or administrative means, and related issues including the provision of advice and support to responsible persons<sup>1</sup> as well as manpower and training of the lift/escalator industry.

**Regulatory Control Over Lift and Escalator Safety**

The Lifts and Escalators Ordinance

2. With the support of the Legislative Council, the Lifts and Escalators Ordinance (Cap. 618) (“the Ordinance”) was enacted in April 2012 and put into full operation on 17 December 2012 to replace the repealed Lifts and Escalators (Safety) Ordinance (Cap. 327) which was enacted in the 1960s. The Ordinance provides a strong legal framework for the Electrical & Mechanical Services Department (“EMSD”) to exercising safety control over lifts and escalators in Hong Kong.

3. The Ordinance has introduced a series of enhancement control measures. These measures include strengthening the registration regime of personnel engaged in lift and escalator works including the introduction of a registration system for lift and escalator workers based on their

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<sup>1</sup> Under the Lifts and Escalators Ordinance (Cap. 618), responsible person refers to those who have ownership of lifts (such as the owners of a building or the owners’ corporation) or who have the management or control of lifts (such as the property management company or the works consultant).

academic attainment, training and experience so as to raise their professionalism. To promote transparency, the deciding factors for the registration of lift or escalator contractors have been made clear in the Ordinance and they have to renew their registration on five-year basis thus providing a mechanism for continual compliance checking. Further, to achieve the necessary punitive and deterrent effects, the maximum fine of the offences under the Ordinance has been increased to \$200,000 such that they are on par with the penalty levels of ordinances of similar nature. On public safety ground, the application of the Ordinance is extended to the Government and the Housing Authority in addition to the private sector. Besides lifts/escalators owners, management companies of buildings and management staff of an organization who have the management or control of lifts or escalators will also be regarded as “responsible persons” to share the responsibilities of ensuring the safety of lifts and escalators under their management or control. Other improvement measures under the Ordinance include conferring power on the Director of Electrical and Mechanical Services (“DEMS”) to issue Improvement Orders for expediting the rectification of non-compliance with statutory requirements and practices, introducing a new use permit containing concise information of the lift or escalator such as expiry date of examination to better promote user surveillance, and empowering the Registrar to suspend or cancel the registration of registered persons<sup>2</sup> which can be more expedient than taking disciplinary actions.

4. EMSD conducts audit inspections to lifts and escalators and works of registered contractors (“RCs”) according to a risk-based approach to identify any non-compliance with the requirements of the Ordinance. Under the approach, lifts and escalators are selected for audit inspections taking into account the assessed risks in respect of age, type of installation, nature of works associated with installation, complaint, incident, change-over of maintenance contractor and past performance of the responsible registered contractors. On average, more than 9,000 audit inspections are conducted by EMSD each year. In the past three years, EMSD made 11 successful prosecutions and issued 51 warning letters.

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<sup>2</sup> Under the Ordinance, registered person means a registered lift/escalator contractor, a registered lift/escalator engineer or a registered lift/escalator worker.

## Contractors' Performance Rating

5. Registered contractors play an important role in the up-keeping of lifts and escalators in safe working order. To compliment the statutory control regime and in order to facilitate lift owners or their property management agents to choose appropriate registered contractors for the maintenance of lifts and escalators in their premises, EMSD has implemented a Contractors' Performance Rating ("the CPR") scheme since 2009.

6. The CPR is based on the scheme of the performance monitoring (PM) points. If RCs have shown inferior performance and non-compliant items are found during inspection, PM points will be recorded and aggregated in the safety aspect and maintenance aspect based on their non-compliances. The non-compliant items are classified into six categories<sup>3</sup>, reflecting the severity/importance of the lift components. The CPR is updated every three months and announced on the website of EMSD for public reference.

7. Warning letters will be issued to RCs who have received 12 PM points in a single lift inspection or four averaged PM points within a 12-month period. Upon receiving three warning letters within a 12-month period, DEMS may consider taking disciplinary action against the RC. Warning letters issued by EMSD to RCs and details of lift or escalator incidents have been posted on the website since the inception of the CPR. Since September 2010, information of prosecution and disciplinary actions against RCs have also been posted on the website of EMSD.

### *Improvement Measures to Enhance Regulatory Control*

8. Following the North Point lift incident in March 2013<sup>4</sup>, EMSD has conducted a brief review of the regulatory control processes and proposed the following improvement measures -

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<sup>3</sup> For example, under the category of critical safety item, 15 PM points will be recorded for non-compliance.

<sup>4</sup> On 2 March 2013, a lift in a building in North Point plunged suddenly, injuring several passengers. In the incident, all four suspension cables of the lift involved had snapped, and its safety protection system had not functioned as designed to stop the lift from dropping.

(a) Review of the lift/escalator inspection regime

9. EMSD will review the risk elements for sampling of lifts and escalators for audit inspection such that more inspections would be conducted for lifts and escalators maintained by contractors with lower performance ranking under the CPR. The approach will also encourage RCs to improve performance in order to secure a higher ranking in the CPR.

10. Besides, more inspections will be accorded to lifts maintained by a RC which has received warning letters, orders, complaints, or has been involved in incidents. EMSD aims at strengthening enforcement against poor performers to eliminate performance degradation affecting public safety. Enforcement actions will be taken for non-compliances identified during the increased number of inspections.

11. Regarding manpower resources, approval has been given to EMSD in 2010 to increase eight posts in the professional engineer and inspectorate grade to enhance the regulatory control work. EMSD will review the manpower situation from time to time to ensure that sufficient resources are available to carry out enforcement and public education works.

(b) Stepping up monitoring of contractors

12. To monitor the operation of individual RCs, EMSD will increase the frequency of audit visits to RCs with low CPR ranking. The audit will include examination of the various administrative and operational aspects of the contractor including its manpower resources, facilities available, work scheduling system, readiness for handling emergency situation. The audit visits can enable EMSD to assess the ability of RCs to perform their duties under the Ordinance. EMSD can require RCs to take improvement actions for identified deficiencies failing which the registration of the RCs may be suspended.

13. Separately, EMSD will critically review the CPR with a view to rationalizing the scheme such that the rating indices can more directly and coherently reflect performance of RCs. Further, to promote users'

surveillance of the performance of RCs, consideration will be given to showing the name of the RCs responsible for maintaining the lift or escalator on the use permit in respect of the lift or escalator concerned.

## **Support to Responsible Persons**

### Advice and Support to Responsible Persons

14. Under the Ordinance, responsible persons (“RPs”) for a lift/escalator must, among others, ensure that the lift/escalator and all its associated equipment or machinery are kept in a proper state of repair and in safe working order. They also have to cause a RC to undertake the maintenance works of a lift/escalator.

15. To facilitate RPs to better understand their duties and responsibilities under the Ordinance, EMSD has published “Guidebook for Responsible Persons for Lifts/Escalators”. The Guidebooks aim to assist RPs to ensure that their lifts/escalators could effectively be kept in a proper state of repair and in safe working order. It also provides guidelines on the daily routine duties in lifts/escalators maintenance, selection of maintenance contractors, handling of emergencies and basic construction of the lifts/escalators.

16. Besides publishing guidebooks, EMSD has organized seminars for introducing the Ordinance to RPs and to raise their awareness of the statutory requirements. From 2012 up to February 2013, over 30 seminars have been held which were attended by more than 3 000 people including lifts/escalators owners, property management personnel and other industry practitioners. EMSD has also organized ambassador visits to around 100 buildings which have no Incorporated Owner Corporation, Owner’s Committee or property management agent. The ambassadors have provided residents and lift owners with information relating to the Ordinance and tips on managing their lifts.

17. Furthermore, the Administration has provided the following supports to assist lift owners in need to carry out repairing works for their lifts -

- the Urban Renewal Authority in collaboration with the Hong Kong Housing Society has rolled out a one-stop Integrated Building Maintenance Assistance Scheme for providing financial assistance and technical support to property owners to carry out repairing works to their buildings including lifts;
- the Building Safety Loan Scheme provided by the Buildings Department can provide eligible property owners with interest free loan for carrying out repairing works, including lift repairing works; and
- the Building Grant Scheme for Elderly Owners managed by the Housing Society on behalf of the Government can assist elderly owners to undertake maintenance and repair of their property and public areas, including lifts.

18. If lifts are properly maintained and examined with worn and torn components timely replaced or upgraded, their service life could be extended. On the other hand, enhancement and modernization solutions are available to make existing lifts safe more, effective, reliable and comfortable. The Administration is promoting to the public key issues that need to be aware of in maintaining aged lifts as well as providing information on the benefits of upgrading aged lifts. To assist RPs to understand the benefits of upgrading their aged lifts and provide practical suggestions, EMSD has published “Guidelines for Modernizing Existing Lifts” for reference by lift owners. EMSD will step up publicity and public education by rolling out more seminars for the RPs to enhance their knowledge on daily management of the lifts and entering maintenance contract with the RCs.

#### Procurement of Lift/Escalators Maintenance Services

19. As mentioned above, RCs play an important role in the up-keeping of lifts and escalators to a safe operating state. In the “Guidebook for Responsible Persons for Lifts/Escalators” and seminars organized for RPs, RPs are reminded that, apart from cost, they should also consider factors such as the RC’s manpower resources, technical support available and past

performance including incidents encountered, history of receiving warning letters and their CPR in selecting contractors to maintain their lifts and escalators in a safe operation state. A sample maintenance services procurement contract is also available at website of EMSD for reference of RPs and their agents which also included guidelines on preparing marking scheme for tender evaluation in procuring lift or escalator maintenance services. The guidelines further supplement selection of service providers basing on technical capability including CPR ranking instead of solely on tender price.

20. The CPR and past performance records of RCs published by EMSD at its website could help lifts/escalator owners and property management companies to make informed choices when selecting their registered contractors. RCs can also benefit by being able to undertake maintenance contracts at reasonable prices thereby improving their business operating environment. The industry will in turn be better placed to ensure quality service and to invest in manpower. To further assist RPs to assess reasonableness of tender prices of lift/escalator maintenance contracts, EMSD is considering to share price-related information of maintenance works for lifts belonging to the Government.

## **Manpower and Training to the Lift/Escalator Industry**

### Manpower

21. At present there are about 300 registered engineers (“REs”) and about 4 960 competent workers<sup>5</sup> engaged in lift or escalator works in Hong Kong. The main duty of a RE is to examine and certify whether a lift or an escalator is in safe working condition. As for competent workers, they are mainly responsible for carrying out installation, maintenance and repair works for lifts and escalators for which they are qualified. As at end 2012, there were about 60 000 lifts and 8 200 escalators<sup>6</sup> in Hong Kong. According to past records, about 800 new lifts and 200 new escalators are

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5 Commencing from 17 December 2012, workers can seek registration under the Ordinance to become a registered lift worker or registered escalator worker.

6 There was an increase of 8 100 lifts and 800 escalators under the regulatory regime following the change in application upon coming into force of the Ordinance.

put into service, and about 2 000 major alteration<sup>7</sup> involving lifts or escalators are carried out annually. The overall increase in workload is only around 1% per year and this has little impact on the manpower resources of the industry. Nevertheless, the Administration will continue to collaborate with major industry stakeholders to monitor the manpower situation in the industry and take appropriate measures, such as enhancing manpower training and publicity to address the manpower demand when necessary for ensuring sufficient manpower could be deployed in the trade to provide services.

22. A safe working environment can help attract youngsters to join the lift and escalator trade. In this regard, EMSD regularly organize activities for promoting safety in lift and escalator works to raise practitioners' awareness on work safety. EMSD also reviews and updates its code of practice ("COP") from time to time in conjunction with the industry to raise the requirements on work safety and working conditions. In the latest review of the COP, a requirement is added to stipulate that, before commencing any works in a lift shaft, RC must assess and confirm the working conditions in the lift shaft in respect of temperature, ventilation and lighting to be suitable for the kind of works to be undertaken. Moreover, the Construction Industry Council ("CIC") also issued Guidelines on Safety of Lift Shaft Works in January 2013 to promote site safety.

23. The more stable monthly employment basis commonly offered to engineers and workers of the lift and escalator trade is an attraction to potential new comers. The registration system for lift and escalator workers introduced by the Ordinance can recognise their competence, exert better control of workmanship, promote continuous self-development and replace the employment-tied competent worker arrangement, and provides workers with more flexibility in their choice of work.

### Training

24. For training of lift/escalator workers, the Vocational Training Council ("VTC") has been training new blood for the industry for many

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<sup>7</sup> Works which are regarded as major alteration are listed in Schedule 1 to the Ordinance.



years through organizing relevant skills training courses to complement the apprenticeship scheme for lift and escalator mechanics.

25. The industry is planning to collaborate with the Employees Retraining Board and the VTC to organize a Certificate Course for Assistant Lift and Escalator Mechanics to attract new entrants to the industry. The CIC has also agreed in principle to incorporate the E&M trade, including the lift trade into their “Contractors Cooperation Training Scheme”. Trainees of this scheme will be engaged by participating contractors before receiving training to enhance job security. During the training period, CIC will provide training subsidiary and contractor will pay salary to the trainees to make the scheme more attractive.

26. To attract graduates with relevant engineering degrees to enter the lift and escalator industry and to join the ranks of registered lift and escalator engineers, some RCs have set up engineering graduate training schemes, recognized by the Hong Kong Institution of Engineers, for providing graduates with more opportunity to obtain professional qualifications to attract graduates with relevant engineering degrees to enter the lift and escalator industry and to join the ranks of RE.

## **Way Forward**

27. EMSD will continue to monitor the operation and maintenance of lifts and escalators and exercising its regulatory control to ensure public safety in Hong Kong. Further, EMSD will regularly review the effectiveness of the improvement proposals with reference to such indicators as the number of lift incidents and the contractors’ performance rating.

28. For the formulation strategies and implementation related measures, the Administration is arranging to establish a Lift and Escalator Safety Advisory Committee (“the LESAC”) to canvass views and expertise of the industry and community in relation to lift and escalator safety. Views of the LESAC can also be sought on the improvement proposals as described above.

**Development Bureau  
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