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# **Fire Services Department**

## **Study on Business Impact Assessment of the “Third Party Fire Safety Certification Service under the Registered Fire Engineer Scheme in Hong Kong” of the Government of the HKSAR**

**Executive Summary**

**March 2013**



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## Table of Contents

1. Introduction.....	3
2. Findings from Stakeholder Interviews.....	8
3. Business Impact Assessment.....	17
4. Conclusion and Recommendations.....	22

### **Commercial-in-Confidence**

This Executive Summary has been prepared for, and only for, the Fire Services Department (FSD) of The Government of Hong Kong Special Administrative Region in accordance with the terms of the FSD contract of 6 June 2012, and for no other purpose. We do not accept or assume any liability or duty of care for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

# 1. Introduction

## 1.1 Overview

The Fire Services Department (FSD) of the Government of the Hong Kong Special Administrative Region (Government) commissioned PricewaterhouseCoopers Advisory Services Limited (PwC) to conduct a consultancy study (Study) to assess the business impact of the “Third Party Fire Safety Certification Service under the Registered Fire Engineer (RFE) Scheme (Scheme) in Hong Kong”.

The Study started in June 2012.

This executive summary of the Final Report gives:

- the key features of the Scheme.
- the key findings from the stakeholder interviews.
- a summary assessment of the business impact of the proposed Scheme on relevant business segments.
- key recommendations, in terms of suggested changes (where appropriate) to the proposed Scheme with a view to making the requirements more business friendly while at the same time considering the public safety angle.

## 1.2 Key Features of the Scheme

In 2007, FSD published a consultation paper on the implementation of a third party fire safety certification service by introducing an RFE Scheme, and launched the first round of trade consultation. The majority of respondents were in principle supportive of the proposed Scheme.

Based on the comments received from the first round of trade consultation, FSD revised its initial proposal for the Scheme with the aim of enhancing its business-friendliness and reducing any potential adverse impact on the trade. In 2011, FSD published a revised proposal, and conducted a second round of trade consultation.

The key features of the proposed Scheme<sup>1</sup> are summarised below:

### 1.2.1 Objective of the Scheme

- The Scheme aims to facilitate business and to shorten the processing time for licence applications by allowing licence applicants to adopt the Scheme on a voluntary basis, i.e. they can use either of the following routes to obtaining certification:
  - following the existing process of using FSD’s services; or
  - engaging RFEs for (i) risk assessment and formulation of fire safety requirements; and/or (ii) compliance certification.

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<sup>1</sup> This is referred to as Option B in the ‘Consultation Paper on Revised Scheme for the Implementation of Third Party Fire Safety Certification by Introducing an Registered Fire Engineer Scheme in Hong Kong’, October 2011.

### 1.2.2 Scope of Services

- As a starting point for implementing the Scheme, it will be applied to licensed premises such as food premises, places of public entertainment, school premises/child care centres, hotels, guest houses, clubs, and residential care homes.
- There are three distinct classes of RFE according to their own areas of expertise and the scope of services:
  - RFE (Risk Assessment) or RFE(RA) – who is allowed to undertake fire risk assessments and formulation of fire safety requirements<sup>2</sup> for licensed premises
  - RFE (Fire Service Installation) or RFE(FSI) – who is allowed to:
    - conduct compliance inspections in relation to fire service installation upon completion of works by a Fire Service Installation Contractor (FSIC)
    - issue a Fire Safety Certificate for a fire service installation
  - RFE (Ventilating System) or RFE(VentS) – who is allowed to:
    - conduct compliance inspections in relation to fire safety aspects of ventilation system upon completion of works by a Ventilation Contractor (VC)
    - issue a Fire Safety Certificate for a ventilation system.
- Under the proposed Scheme, a licence applicant may choose to:
  - hire the services of RFE(RA) for risk assessment and formulation of fire safety requirements and then engage RFE(FSI)/RFE(VentS) as appropriate, for compliance check upon completion of the installation works of FSI and/or VentS;
  - hire the services of RFE(RA) for risk assessment and formulation of fire safety requirements, and then use FSD's services to conduct compliance check upon completion of installation works of FSI and/or VentS;
  - use FSD's services for risk assessment and formulation of fire safety requirements, and then engage RFE(FSI)/RFE(VentS) for compliance check upon completion of the works; or
  - continue to use the services provided by FSD under the existing mechanism.

### 1.3 Relevant Business Stakeholders

The scope of the pilot Scheme is limited to licensed premises only. The business segments that will be affected by the introduction of the proposed Scheme include:

- Potential service providers (e.g. individual engineers with relevant experience, engineering firms, etc).

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<sup>2</sup> Subject to endorsement by FSD.

- Potential service users (e.g. licensing consultants, restaurant operators, school operators, hotel operators, elderly home operators, etc).

### 1.3.1 Potential Service Providers

The proposed Scheme is designed to register engineers (not companies) with relevant professional qualifications and experience. In Hong Kong, these engineers can work for engineering firms, on a self-employed basis, or as an academic (e.g. in universities):

#### Potential Service Providers (Large Engineering Firms)

- Mostly multi-national corporations – less than 10 in Hong Kong
- Multi-disciplinary – e.g. structural, building services, geotechnical, environmental, and fire engineering
- Some large players have over 500+ professional engineers spread across various disciplines
- Typical clients – real estate developers, and large corporations

#### Potential Service Providers (Small to Medium Sized Engineering Firms, Self Employed Engineers, and Academics)

- Mostly local engineers – hundreds of them with a fragmented market structure
- Varying staff strength – from 1-3 engineers up to 20+ engineers
- Most firms are capable of undertaking prescriptive-based fire safety design
- A small number of firms are also capable of undertaking performance-based design
- Typically partner with architects, interior designers, licensing consultants, or contractors to provide consulting services

### 1.3.2 Potential Supply of RFEs

Looking at the registration requirements, when estimating the potential supply of RFEs, we have assumed that current Registered Professional Engineers (RPEs) in the Fire (FRE) discipline, Building Services (BSS) discipline, and Mechanical (MCL) discipline are believed to have a higher level of interest in registering as RFEs. It is believed that academics are unlikely to be interested in providing third party certification services, although they may, at times, be involved in some ways in relevant projects providing inputs or support.

Based on official information collected (as of 9 August 2012), it is estimated that approximately:

- 130 RPEs are likely to meet the registration requirements for Registered Fire Engineer (Risk Assessment) (RFE(RA)).
- 1,235 RPEs are likely to meet the registration requirements for Registered Fire Engineer (Fire Service Installation)/(Ventilation System) (RFE(FSI/VentS)).

There are a number of points to note about these figures:

- The Hong Kong Institution of Engineers (HKIE) has about 400 members in the Fire discipline (HKIE(FRE)), and believes that all of them would qualify to register as RPEs(FRE). It is worth noting that currently only HKIE(FRE) members are eligible to apply for registration as an RPE(FRE) but this situation may change in the near future according to the Engineers Registration Board (ERB).

- Currently, there are about 130 HKIE(FRE) members who are registered as RPEs(FRE). HKIE believes that the remaining 270 HKIE(FRE) members (400 - 130) will have a higher level of interest in registering as RPEs(FRE) if the volume of business stemming from the introduction of the Scheme is sufficiently large.
- Whilst RPEs in Building Services and Mechanical disciplines may possess more relevant experience for compliance check of fire services installation and ventilation systems, application for registration as an RFE(FSI/VentS) is opened to other engineering disciplines too (e.g. Electrical), and therefore, the potential pool of qualified candidates may be larger.
- While information collected from stakeholders suggests that engineering firms (both large and small firms) are interested in having registered RFEs in-house, and qualified engineers are interested in registering as RFE, it ultimately depends on the available business opportunities (demand for the services). This clearly will have an impact on the actual supply of RFEs in the market.

### **1.3.3 Potential Demand for RFE Services**

Given that the scope of the pilot Scheme is limited to licensed premises only, the potential demand for RFE services will be the number of new licence applications (for licensed premises) per year. The number can vary from year to year, and can be difficult to forecast. This is because it depends on a number of factors such as the general economic environment/climate, sector/industry market size (including market structure and competitive landscape), sector/industry's supply and demand, sector/industry trends and developments, relevant government policies and regulations, etc.

As an indication of the potential demand for services, we looked at the information provided by FSD about the number of licence applications received in 2011, and 4 types of licensed premises account for approximately 90% (2,486) of the total number of new licence applications (2,759):

- General Restaurants (1,211)
- Light Refreshment Restaurants (484)
- Food Factories (323)
- Schools (468).

Both the Food and Environmental Hygiene Department (FEHD) (for restaurants, and food-related premises) and the Education Bureau (EDB) (for schools) offer a provisional and full licensing scheme:

- In the case of restaurants and food-related premises, operators can start operation as soon as they meet a set of key fire safety requirements.
- In the case of schools, provisional registration requires compliance with all the fire safety requirements and possession of fire safety certificates issued by FSD.

Of all the licence applications received in 2011, the option to obtain a provisional licence was available to approximately 75% of the applications.

#### **1.3.4 Key Licence Application Practices**

All the stakeholders (except 5) we interviewed engaged a licensing consultant (or a fitting-out contractor) to help manage their licence application processes. The level of licensing consultancy fee involved varies depending on a range of factors such as the type of licence, size of premises and level of complexity. For instance, the fee for managing the application process for:

- food-related licences range from HK\$20,000 to 70,000 (depending on the type of licence and the size of the premises)
- hotel licence ranges from HK\$100,000 to 400,000 (depending on the number of rooms).

Licensing consultants generally prefer not to get involved in fitting-out or renovation work because this is an area that is often prone to problems (e.g. delays, budget overruns, etc). There are, however, some companies which offer “one-stop-shop” services—from providing licensing consulting services to designing and undertaking fitting-out work (either using their own internal resources or subcontracting the work to contractors). These companies are mainly (or started out as) works contractors, and over time, accumulated enough experience about the licensing process (usually involving the more straightforward cases) through their work, and then started offering licensing consulting services as a value-added service to their clients.

All the restaurant operators we interviewed (including relevant licensing consultants) said that it is common practice to first apply for a provisional licence and then a full licence.

## 2. Findings from Stakeholder Interviews

In terms of service providers, the market is currently dominated (in terms of numbers) by small-to-medium-sized engineering firms. Similarly, a majority of service users are small-and-medium-sized enterprises (SMEs).

We expect the potential impact of the proposed Scheme will be greater on local small-and-medium-sized service providers and service users. Accordingly, we placed greater emphasis on local SMEs during the information collection process in order to gain a better understanding of their views and concerns.

As agreed with FSD, we conducted interviews with a total of 42 stakeholders:

- 16 professional associations, and large and small potential service providers (engineering firms); and
- 26 licensing consultants, and large and small potential service users (food-related businesses, school (non-purpose built) operators, elderly home operators, and hotel operators).

We summarise below the key points raised by stakeholders. These are grouped under the main categories of questions we used to guide our interviews.

### 2.1 Findings from Potential Service Providers

#### 2.1.1 The Proposed Scheme

- General feedback given by the majority of service providers:
  - Generally support (in principle) the implementation of the proposed Scheme.
- Other points raised by individual service providers:
  - Public safety must always come first, and there needs to be a comprehensive quality control mechanism in place.
  - The current approach to certifying ventilation systems works well and can help ensure safety, and should be maintained.
  - There are questions about whether the proposed Scheme will help expedite the licensing process for licence applicants who also apply for a provisional licence.

#### 2.1.2 Registration Requirements for RFE

- General feedback given by the majority of service providers:
  - The proposed requirements are reasonable.
  - RPEs in the Fire discipline are usually more experienced in using the fire engineering approach to assess and determine fire safety requirements
  - RPEs in the Building Services discipline and Mechanical Engineering discipline generally have more (or actual) field experience, including experience with licensed premises.
- Other points raised by individual stakeholders:
  - FSD should clearly define “relevant” and “continuous” experience for registration as RFEs.



- FSD should issue guidelines on how to validate “local” experience.
- Relevant field (i.e. hands-on installation and/or compliance checking) experience should also be required.
- 2 years of local relevant experience (instead of 1 year) should be required.
- Only relevant experience accumulated after obtaining RPE qualifications should be considered.
- A rigorous set of evaluation criteria for the qualifying interview should be developed by FSD.
- Only FSD representatives should be included in the Registration Committee (i.e. the Committee should not have any representatives from the industry) to maintain independence – after all, the Committee is evaluating candidates from the industry.

### **2.1.3 Registration Fees**

- General feedback given by the majority of service providers:
  - Generally find the suggested fee levels acceptable.
- Other points raised by individual service providers:
  - Referencing Authorised Persons’ (APs’) fee levels is not appropriate because there is a big difference in terms of the size of the projects involved.
  - Consider referencing the level of fees of other schemes such as the Registered Energy Assessor (REA) scheme managed by the Electrical and Mechanical Services Department (HK\$2,100 for a 10-year period, and consider setting this as the maximum amount regardless of how many RFE categories a person wants to register under); or adopting a fee structure whereby registration and renewal fees are charged on a per category basis, e.g. the one-off fee might be around HK\$1,500 and the renewal fee (at 5-year intervals) might be around HK\$400 for each single category of RFE registration.

### **2.1.4 Quality Assurance**

- General feedback given by the majority of service providers:
  - Generally agree that FSD should conduct random audits to maintain standards and ensure quality of work, and hold regular communication sessions with the industry to clarify expectations and requirements (especially during the early days of the implementation process).
- Other points raised by individual service providers:
  - Risk assessment and compliance checking should be conducted by different RFEs with no conflicts of interest (e.g. not employed by the same employer).
  - FSD should audit all installations (instead of just conducting random audits).
  - FSD should reassess the need to endorse all risk assessments after the pilot stage.

### 2.1.5 Conflicts of Interest

- General feedback given by the majority of service providers:
  - Generally find the proposed restrictions reasonable, but should not include “personal friends” because it is difficult to define and implement.
- Other points raised by individual service providers:
  - If at some point in the future FSD decides not to be involved in endorsing risk assessments, there is room for tightening some of the restrictions (e.g. RFE(RA)s who are employees of chain restaurants should not be allowed to undertake risk assessment work for their own restaurants).
  - FSD should trust the professional ethics of RFEs. Also, being personally liable is a sufficiently strong deterrent. As an alternative, FSD could mandate that all RFEs declare their financial (and other relevant) interests, and allow them to undertake the work.
  - FSD should clearly define terms such as “direct financial interest”, “relatives”, “personal friends”, etc; and issue detailed guidelines to the industry.

### 2.1.6 Scope of Responsibility, Liabilities, and Disciplinary Actions

- General feedback given by the majority of service providers:
  - FSD should clarify the scope of responsibility and (legal) liabilities of RFEs.
  - Generally support harsher penalties for RFEs, and agree that RFEs should be legally liable (and be prosecuted for criminal liability, where appropriate). That said, the level of liability should be commensurate with the duties that are being undertaken.
- Other points raised by individual service providers:
  - The risk factor (potential liabilities) associated with a project is a key consideration when determining and setting fee levels. There are likely to be two possible outcomes if service providers perceive risks as being “too high”:
    - Very high fees (e.g. in North America); or
    - No one will be willing to take on the role of certifying fire safety installations.

### 2.1.7 Professional Indemnity Insurance (PII)

- General feedback given by the majority of service providers:
  - PII should not be mandated by law as it is not a legislative issue. PII is designed to provide protection for the service provider and the service user, and is considered a commercial issue between the two parties. The parties involved should be allowed to decide whether or not PII is needed between them, and how best to strike a balance between cost and benefit from their own respective perspectives.
  - Currently, very few PII products are available on the market, and they are expensive with limited coverage (e.g. premium of around HK\$20,000 a year with a maximum of only HK\$5 million coverage).
- Other points raised by individual service providers:

- If PII is a mandatory requirement, the Government should take the lead to work with insurance companies to develop relevant and tailored products for RFEs.
- The additional cost of purchasing PII is likely to be passed on to service users. This is likely to impact SMEs adversely, especially if and when the proposed Scheme is made mandatory.
- While the RFE (person) is the one signing the Fire Safety (FS) certificate and being liable, in many cases (except in the case of individual, self-employed consultants/engineers) it is the company who is being commissioned to undertake the work. Therefore, there is the question of who should be buying the PII (if needed). In the case where a company buys PII and provides coverage for its RFEs (which is currently the case at least at larger corporations), will an RFE continue to be covered by the company (for the work he/she undertook for the company) after he/she leaves the company.

### **2.1.8 Potential Business Opportunities and Attractiveness**

- General feedback given by the majority of service providers:
  - Whilst there is agreement that the Scheme represents an additional revenue stream for businesses, business opportunities depend on the demand for RFE services and are considered somewhat limited during the pilot stage when the scope is confined to licensed premises.
  - The potential business opportunities will be more attractive if and when the scope of the proposed Scheme is expanded to include alterations and additions works, new buildings, etc.
- Other points raised by individual service providers:
  - Licence applicants raised some concerns in using a third party to certify fire services and ventilation installations because:
    - They could be selected for random audit by FSD (an uncertainty).
    - If selected for audit:
      - FSD may hold a different view about whether the premises in question meets fire safety requirements (another uncertainty)—not because the RFE failed to exercise reasonable care when discharging his/her duties, but simply because FSD and the RFE may have different interpretations of the fire safety requirements.
      - The duplication of work involved—fire services and ventilation installations are being checked by RFEs first and then by FSD.
    - The “uncertainty” issue alone is sufficient to create a disincentive for some licence applicants to use RFEs.
  - Larger service providers are expected to employ only a few in-house RFEs so that they can offer RFE services as part of their broader service offerings (bundled services); or provide RFE services when clients specifically ask for them.
  - Smaller service providers (especially individual, self-employed consultants/engineers) are likely to be more interested in providing RFE services.

### 2.1.9 Potential Fees (Charged by Service Providers)

- General feedback given by the majority of service providers:
  - Service providers generally consider a range of factors when determining pricing:
    - Size of premises: some said it does not really matter, whilst others said it does.
    - Type of premises is likely to be a factor (e.g. karaokes and restaurants have different fire safety requirements).
    - Market competition (i.e. the fee levels that are acceptable to the market).
    - Risk to the service provider (e.g. legal liabilities) is likely to be a key consideration (including whether or not to undertake the work in the first place).
  - Because of the potential risks involved, there is likely to be a “minimum fee” for risk assessment and fire safety certification work. Depending on the size of the service provider, stakeholders estimated that it could range from about HK\$30,000 to HK\$200,000.
- Other points raised by individual service providers:
  - For compliance checks, the scope of work clearly affects pricing. In order for service providers to be able to price their RFE services appropriately, they need clear and detailed guidelines from FSD (e.g. minimum sample sizes for compliance checking purposes). The guidelines will also help align expectations and minimise potential differences in interpretation of the requirements, and ensure consistency and quality standards.
  - The current hourly rate is about HK\$800 (in the case of individual, self-employed consultants/engineers, or smaller service providers) to HK\$1,500 (in the case of larger service providers).
  - Typically, it takes approximately 1 man-day to undertake the RA work (on-site assessment plus reporting). Time to conduct compliance work varies depending on the level of complexity involved. As an example, for a typical fast-food chain outlet, it takes approximately 1 man-week for an individual, self-employed RFE to undertake the compliance check at an estimated cost of around HK\$100,000.

### 2.1.10 Potential Supply of RFE

- General feedback given by the majority of service providers:
  - Assuming there is demand for third party fire safety certification services, the supply of RFEs should not be an issue.
- Other points raised by individual service providers:
  - The actual supply of RFEs is likely to be smaller than the pool of available qualified candidates because not all of them will be interested in registering, taking on the role or offering RFE services (even if they have registered as an RFE). However, it will be difficult to estimate the actual supply of RFEs because it will be a business decision and different companies/people will have different sets of considerations as to whether to offer RFE services.

### 2.1.11 Implementation

- General feedback given by the majority of service providers:
  - While there is agreement that FSD should implement the proposed Scheme by phases, there are concerns that there will be a limited number of cases during the pilot stage for FSD to be able to evaluate the effectiveness of the proposed Scheme in a meaningful way.
  - There are concerns about potential differences in interpretation of fire safety standards between FSD and RFEs(FSI) and RFEs(VentS), and to what extent these RFEs will be held liable (the risk factor that many service providers have alluded to when determining their fee levels and/or deciding whether or not to undertake the work in the first place).
  - Stakeholders generally agree that the proposed Scheme should eventually be made mandatory (because the Government and taxpayers should not be subsidising businesses as it currently does). Small businesses (service users), however, will be affected the most (because of the higher fees charged by the private sector compared to those currently charged by FSD, and therefore higher costs for service users), and FSD will need to communicate and explain to small businesses (service users) about the need for and the benefits of introducing such a Scheme.
- Other points raised by individual service providers:
  - There was a suggestion to focus the pilot on those who are willing to give the proposed Scheme a try.
  - There were also suggestions to include alterations and additions works in the pilot, and even new building works.
  - As pointed out earlier, FSD should issue detailed guidelines for compliance checks (e.g. minimum sample sizes) so as to:
    - align expectations and minimise potential differences in interpretation of the requirements;
    - ensure consistency and quality standards; and
    - facilitate setting of fees by service providers.

## 2.2 Findings from Potential Service Users

### 2.2.1 The proposed Scheme

- General feedback given by the majority of service users (including licensing consultants):
  - Generally support the proposed Scheme because it provides them an option of whether or not to use RFE services (assuming that FSD services and relevant performance pledges will remain the same).
  - There is no need to make acquisition of PII a legal requirement because:
    - Currently, other similar schemes (e.g. APs, RSEs) do not have this requirement. In addition, there are practical difficulties involved because there is only one insurance company in Hong Kong that provides this type of insurance.

- The cost is likely to be passed on to users, irrespective of whether these users consider having PII to be essential (and worth paying for) when engaging RFEs.
- It would be difficult to prove professional negligence of a service provider (in most cases) and therefore some stakeholders have reservations on the value of mandating PII.
- Other points raised by individual service users (or licensing consultants):
  - The introduction of the proposed Scheme will not be perceived as:
    - being biased towards benefiting the larger corporations.
    - creating a “non-level playing field” (therefore seen as unfair to some) between those who can afford to pay more to engage RFEs (as a way of potentially shortening the time needed to obtain a licence) and those who may not be able to afford the additional cost (and will need to follow the “longer” route). That said, a small number of stakeholders think otherwise.
  - There are concerns that RFEs may err on the side of caution and over-specify the requirements in order to manage their own risks and potential liabilities, or even to maximise their own income (and contractor’s income if they were to collude) as more requirements mean more work/equipment and man-hours, and therefore potentially higher fees. That said, a few stakeholders mentioned that this potential “risk” is always present, even in the existing system (e.g. current licensing consultants or FSI contractors can over-specify the requirements).
  - Public safety should always come first, and there are concerns that if FSD only conducts random audit/inspection, fire safety standards could be compromised. It is important that FSD continues to be the party ultimately responsible for upholding standards and ensuring fire safety.
  - FSD should be responsible for conducting risk assessments because they are the ones who set the requirements, and are therefore most familiar with them. Some stakeholders think that to ensure safety FSD should be responsible for conducting compliance checks and issuing fire safety certificates.
  - To avoid conflict of interest, RFEs who are responsible for conducting compliance checks of licensed premises should not be “salaried employees” of the licence applicants (“owners”) of the relevant premises.
  - A few stakeholders think that acquisition of PII should be made mandatory. This will provide coverage for professional liability or claims that may arise from their professional activities, and better protection for users of their services.
  - Elderly home operators interviewed were concerned about the additional cost to their businesses if and when FSD makes the proposed Scheme mandatory. They pointed out that they are providing a service to the community, and this type of “Government measure” is adding to their burden.

### **2.2.2 Key Considerations Whether or Not to Use RFEs**

- General feedback given by the majority of service users (including licensing consultants):



- Stakeholders typically consider the following when deciding whether or not they will use RFEs:
  - For restaurant operators, potential time savings in the overall licensing process (not just the FSD process). Some indicated that time savings need to be 1 to 2 weeks or more to provide the incentive to use RFEs.
  - Hotel operators confirmed that the following compliance activities are conducted by the Office of the Licensing Authority (OLA) under the Home Affairs Department (HAD) upon completion of renovation:
    - The Fire Safety and Enforcement Unit (FSEU) confirms compliance of the ventilation system of the hotel with relevant fire safety (ventilation) requirements;
    - FSEU confirms compliance of the fire services installation of the hotel with relevant fire safety (FSI) requirements; and
    - HAD and other departments confirm compliance of the hotel with other statutory requirements (e.g. building) if required.

As these compliance activities are typically arranged to be conducted in sequence, any time savings during the fire safety certification process can likely save time in the overall application process. Therefore, hotel operators are more interested in using RFEs because they think it will either help expedite the process (best case scenario), or give them greater control over their projects, or at the very least make the liaison process more efficient (they value both responsiveness and efficiency).

  - Another factor to consider is the additional costs involved (relative to estimated potential revenue gain, and size of the project). Some stakeholders expect that professional fees charged by RFEs should be less than that of licensing consultants as the latter cover multiple disciplines of work (e.g. food hygiene, building, fire safety). Smaller restaurant operators are less inclined to use RFEs regardless of the potential time savings – this is because cost is a more important consideration.
  - There needs to be consistent interpretation of regulatory requirements between FSD and RFEs. This is because potential re-works could be costly and result in delays.
- Licensing consultants are inclined to present the Scheme as an option to their clients, but will not make specific recommendations as to whether a client should or not should use RFEs.
- Other points raised by individual service users (or licensing consultants):
  - Availability of provisional licence to restaurant (or food-related) operators:
    - The majority of interviewees said they were able to obtain a full licence within a 6-month period of obtaining a provisional licence, i.e. these licence applicants were already able to fulfil all fire safety requirements at the same time when their businesses were operated (legally) with a provisional licence. This tends to suggest that the Scheme may be less relevant to them.
    - Even if they were not able to obtain a full licence within the 6-month period of gaining a provisional licence, most interviewees cited that,

amongst all areas of statutory requirements, meeting fire safety requirements was often not on the critical path of the application process. Some stakeholders therefore are uncertain whether it would help expedite their licensing applications by further shortening the compliance process for fire safety alone.

- Restaurants located inside newly built (or fairly new) malls (these tend to be the larger chain restaurants) are less inclined to use RFEs because:
  - Everything is purposely built (including areas that are specifically designed for operating restaurants) and there is essentially no difficulty in meeting fire safety requirements.
  - Chain restaurants have a set of “standard” layouts and designs which fulfil the fire safety requirements.
- Elderly home operators interviewed said that they will not use RFE services because it involves additional costs.

### **2.2.3. Implementation:**

- General feedback given by the majority of service users (including licensing consultants):
  - Generally support the implementation of the proposed Scheme, and agree that a phased implementation, as suggested by FSD (e.g. first through a pilot), is a sensible approach.
  - Knowing that the scope of the Scheme might be expanded to other “more complex” areas (e.g. new buildings) after the pilot scheme, FSD should consider whether the currently proposed set of registration requirements can apply to all types of work rather than just licensed premises.
- Other points raised by individual service users (or licensing consultants):
  - FSD can consider expanding the scope of the pilot scheme to areas where the licensing process involved are typically longer in duration (e.g. new buildings, alterations and additions).
  - Confidence in the Scheme is a consideration when it comes to deciding whether or not to use RFEs. It will help if FSD can publish statistics on successful licence applications using the proposed Scheme.

### **2.2.4. Voluntary versus mandatory:**

- General feedback given by the majority of service users (including licensing consultants):
  - Generally think that they should be given an option (based on the assumption that the FSD services and relevant performance pledges will remain the same) whether to use or not use RFE services. Most of the potential service users we interviewed have reservations about the idea of making the Scheme mandatory (because it will mean additional cost to their businesses, large corporations and SMEs alike). SMEs in particular have very strong views about this.
  - Elderly home operators interviewed were concerned about the additional cost involved in setting up an elderly home operation. Again, they pointed out that they are providing a service to the community, and this type of “Government measure” is simply adding to their burden.



### 3. Business Impact Assessment

This section provides an assessment of the potential impact on businesses which might be affected by the implementation of the proposed Scheme. There are two parts to this assessment:

- **A qualitative assessment** – where we offer our observations and assessment based on the information collected from the stakeholders about market structure and dynamics, general business practices, and the issues raised.
- **A quantitative assessment** – where we estimate total cost of compliance using Economic Analysis and Business Facilitation Unit's Business Cost of Compliance Framework.

#### 3.1 Assessment of Business Impact

##### 3.1.1 Overall Impact

From our discussions with service providers and service users, they generally support the Scheme, which gives the necessary statutory provisions for:

- a group of professional and competent RPEs to be registered with, and regulated by, FSD so that they can provide third party fire safety certification services; and
- the business community (or service users) to choose between RFEs and FSD for fire safety certification work.

They also agree that the proposed Scheme will bring about benefits in terms of helping to expedite some of the FSD processes. In addition, the proposed Scheme is not difficult or costly to set up and maintain, and is unlikely to place a burden on:

- the local business community (in terms of cost of compliance from a service user's point of view) as long as the Scheme is optional
- the Government (in terms of administrative costs associated with establishing and maintaining such a Scheme).

##### 3.1.2 Impact on Service Providers and Service Users

There will be demand for qualified engineers to conduct risk assessments, and perform compliance checks for fire safety installations and ventilation systems (and issue relevant certificates). This represents new business opportunities for service providers who might be interested in providing relevant RFE services.

Licence applicants (and other stakeholders—if and when the scope of the proposed Scheme is expanded to cover other areas) will be presented with a choice of either continuing to use the services provided by FSD or engaging an RFE. In addition to having a choice, licence applicants expect that the proposed Scheme can help expedite the overall licence application process, or give them greater control over their projects (especially the larger scale, more complex ones).

#### Impact on Small-and-Medium Businesses

The Government is particularly interested in understanding the potential impact of the Scheme on small-and-medium businesses. Therefore in this section we provide a separate account of the potential impact on the small and medium-sized licence applicants.

The proposed Scheme does not impose additional burden to these licence applicants as long as they will have a choice of using either RFEs or FSD for fire safety certification works and that the FSD services and relevant performance pledges will remain the same.

Whilst these licence applicants are less inclined to use RFE services (as they are very cost-conscious), they generally consider that the introduction of the proposed Scheme will not be perceived as being biased towards benefiting the larger corporations, nor creating a “non-level playing field” between those who can afford to pay more to engage RFEs and those who may not be able to afford the additional cost.

### **3.1.3 Impact on Engineers with Relevant Qualifications and Experience**

Engineers who are qualified and interested in providing RFE services will need to register with FSD. From the information collected from service providers, the proposed registration requirements and the associated fees are considered appropriate. As stakeholders pointed out, while the amount of business opportunities depends on the demand for RFE services which is considered somewhat limited during the pilot stage when the scope is confined to licensed premises, qualified engineers are generally interested in registering because it is something that they can add to their list of “professional qualifications”.

### **3.1.4 Impact on Registered Contractors and Licensing Consultants**

We believe that the potential impact on existing RFSICs and RSCs(V) (collectively, Registered Contractors) and licensing consultants is unlikely to be substantial. This is based on the following observations:

- The scope of work performed (and therefore services offered) by RFEs is intended to be the same as that currently performed by FSD. Therefore, there is unlikely to be any overlaps between the scope of work (and therefore services offered) of RFEs and that of Registered Contractors or licensing consultants.
- Some stakeholders suggest that the existing practices whereby Forms C and D are used for the application for provisional licences may be replaced by Fire Safety Certificates issued by RFEs under the Scheme. This inevitably will have an adverse impact on Registered Contractors’ business in relation to the preparation of Forms C and D. Our view is that this situation already exists under the current system – for instance, a licence applicant can apply for a Letter of Compliance from FSD and directly use it (instead of Form D) to apply for a provisional licence. That said, most stakeholders expect that the existing business practices are likely to continue after the implementation of the Scheme.
- An RFE must maintain independence from the FSI and ventilation system contractors associated with the same licence application. This implies that an RFE will not be able to provide a full-suite of services (including installation of fire services equipment and ventilation system) if the RFE also assumes (at the same time) the role(s) of RFE(RA), RFE(FSI) and/or RFE(VentS). As a result, the role of the Registered Contractors or licensing consultants in the application process is likely to remain the same even after the implementation of the Scheme.

Also, the potential impact on the licensing consultants is likely to be minimal, based on the following observations:

- The scope of work performed (and therefore services offered) by RFEs is intended to be the same as that currently performed by FSD. Therefore, there is unlikely to be any overlaps between the scope of work (and services offered) of RFEs and that of licensing consultants. In addition, the licensing consultants generally cover multiple disciplines of work (e.g. food hygiene, building, fire safety), rather than focusing on fire safety.
- An RFE must maintain independence from the FSI and ventilation system contractors associated with the same licence application. This implies that an RFE will not be able to provide a full-suite of services (including installation of fire services equipment and ventilation system) if the RFE also assumes (at the same time) the role(s) of RFE(RA), RFE(FSI) and/or RFE(VentS). As a result, the role of the licensing consultants in the application process is likely to remain the same even after the implementation of the Scheme.

### 3.1.5 Potential Supply of RFEs

While information collected from stakeholders suggests that the current pool of persons who are likely to meet the qualification of the application for RFEs is sufficiently large to meet potential demand for RFE services, the majority of the existing RPEs(FRE) are currently gainfully employed (i.e. not retired, or not working), and some larger engineering firms employ more than one.

Assuming that the same holds true for RFEs in the future, there will be an important implication for the potential supply of active RFEs. While there are less than 10 large engineering firms and depending on the total number of RFEs who are employed by these firms, a good proportion of the RFEs could be concentrated in these few large firms. For example, if we assume that all 130 RPEs(FRE) are registered as RFEs(RA) and there are about 10 large engineering firms and on average each employs say about 5 RFEs(RA), this means that 50 RFEs(RA) (which account for nearly 40% of the 130 RFEs(RA)) are employed by these large firms. Since large engineering firms do not consider the proposed Scheme (as it currently stands focusing on licensed premises alone) to be commercially attractive and are unlikely to pursue RFE-related business opportunities actively, the actual pool of available RFEs could be less than anticipated. That said, information collected from service providers also suggests that:

- these large engineering firms are still interested in having a few registered RFEs on their staff so that they can offer RFE service as part of their broader offerings; or provide RFE services when clients specifically ask for it and are willing to pay.
- the proposed Scheme will be more attractive if and when its scope is expanded to include alterations and additions works, new buildings, etc.
- the potential pool of qualified candidate for RFEs may be larger:
  - about 270 HKIE(FRE) members, who are not currently registered as RPEs(FRE), may be interested in registering as RPEs(FRE) if the volume of business associated with the Scheme is sufficiently large.
  - application for registration as an RFE(FSI/VentS) is opened to other engineering disciplines (in addition to Fire, Building Services and Mechanical disciplines such as Electrical discipline).

The exact size of the pool of RFEs depends on the available business opportunities and therefore remains uncertain.

### 3.1.6 Potential Demand for RFE Services

The general view about the attractiveness of the proposed Scheme as it currently stands (focusing on licensed premises alone) is consistent and shared across the different groups of stakeholders we interviewed. Potential service users (large and small businesses, except hotel operators) indicated that there is little incentive for them to use RFEs.

The main considerations for licence applicants are whether there will be potential time savings in the overall licensing process (and not just the FSD process), and the cost involved. The majority of restaurant operators also indicated that they were able to obtain a full licence within a 6-month period of obtaining a provisional licence, which means the Scheme is less relevant to them. Also, in most cases, meeting fire safety requirements (and completing the necessary formalities) was often not on the critical path of the application process. Restaurants located inside newly built or fairly new malls (these tend to be the larger chain restaurants) are less inclined to use RFEs because everything is purposely built (including areas that are designated for restaurants) and there is essentially no difficulty in meeting fire safety requirements. In addition, chain restaurants have a set of “standard” layouts and designs which fulfil the fire safety requirements.

From the information collected from service users we interviewed, the only exception appears to be hotel operators, who indicated that they are more interested in using RFEs because they think that it will either help expedite the process (best case scenario), or give them greater control over their projects.

That said, many stakeholders generally agree that there will be greater business opportunities (and demand for RFE services) if and when the scope is expanded to include alterations and additions works, new buildings, etc.

## 3.2 Estimated Cost of Compliance

Given that the proposed Scheme is only optional, and service users are given the choice of either continuing to use the services provided by FSD or engaging an RFE, it is difficult to predict their choices and estimate the cost involved. The same applies to service providers. As the service providers we interviewed pointed out, different people (engineers) will have different considerations (whether or not to register), and it is difficult to estimate the number of qualified engineers who will do so and estimate the cost involved.

If a licence applicant chooses to engage an RFE and incur the cost of doing so, this is considered a **voluntary** business decision, and any business costs incurred as a consequence of such decision should be considered as part of the “normal” cost of conducting business, rather than the cost of compliance associated with the Scheme. This, in turn, suggests that the cost of compliance to business is zero when the Scheme is completely optional in nature.

The same principle applies to service providers – registering as an RFE under the current Scheme is considered as a voluntary business decision by a service provider, when the Scheme is an **optional** one. That said, a small number of service providers (especially large engineering firms) may still be interested in having some of their professional engineers register as RFEs during the pilot stage, regardless of the level

of demand for RFE services<sup>3</sup>. Therefore these service providers will incur registration cost, and our estimates indicate that the total registration cost to service providers, who choose to participate in the Scheme during the pilot stage on a voluntary basis, is approximately HK\$208,760 (for the one-off cost) and HK\$5,400 (for the recurrent cost on an annualised basis).

Given this, we were asked by FSD to estimate the impact of the proposed Scheme in terms of approximate total cost of compliance to the relevant trades (involving General Restaurants, Light Refreshment Restaurants, Food Factories, Hotels, Non-purpose-built Schools Licences as well as potential RFEs) for complying with the proposed regulatory requirements **if the Scheme was made mandatory**.

If the Scheme was made **mandatory**, our estimates indicate that the total cost of compliance to relevant trades for complying with the proposed requirements is approximately HK\$155.1 million (for one-off cost, with 91% of it being the cost of engaging RFEs to provide third party fire certification services) and HK\$0.33 million (for recurrent cost on an annualised basis—this is solely the cost of renewing RFE registrations at five-year intervals).

Based on the estimated cost of compliance, the impact on relevant businesses (if the proposed Scheme was made mandatory) is considered:

- High for small-scale operations and smaller operators (regardless of the industry they are in). This is because the estimated cost of compliance per operator is higher relative to their total “setup” cost (e.g. for setting up a small restaurant).
- Low for larger-scale operations and larger operators (regardless of the industry they are in). This is because the same cost of compliance per operator is clearly a lot lower relative to the total “setup” cost involved say for setting up a larger-scale hotel, which typically runs into tens of millions, if not billions, of dollars per project.

This supports our findings from the stakeholder interviews, which clearly indicate that smaller operators are unlikely to use RFE services, while larger operators are more inclined to do so if the proposed Scheme is only optional.

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<sup>3</sup> Some stakeholders indicated that they may register as RFEs for non-commercial reasons, say, as a way to show support for the development of professional engineers.

## 4. Conclusion and Recommendations

### 4.1 Conclusion

In conclusion, based on our findings, stakeholders generally support the Scheme and consider that there is value in introducing a pool of qualified and regulated professionals to help deliver FSD's fire safety certification services, on the understanding that the business community will have a choice of using either RFEs or FSD for fire safety certification works and that the FSD services and relevant performance pledges remain the same. In addition, stakeholders generally agree that there will be greater business benefits (and hence demand for RFE services) if and when the scope of the Scheme is expanded to include alterations and additions works, new buildings, etc.

### 4.2 Recommendations

We have recommended changes to some areas where we think adjustments are needed with a view to making the requirements as business friendly as possible while at the same time considering the public safety angle. For other areas, we agree, in principle (knowing that in some cases fuller details have yet to be developed by FSD), with FSD's current proposal.

#### **Registration Requirements:**

- FSD should provide clear guidelines that set out FSD's expectations on "relevant professional experience" and demonstrate (preferably with examples) how the professional experience is considered by FSD.

#### **Fees and Charges:**

- FSD should consider the feasibility of recovering the cost of regulation from the regulated industries. This is consistent with the latest instructions issued by the Financial Secretary during the 2013 Budget Speech asking all government bureaux and departments to review their fees and charges and submit plans for their revision in order to recover fully/more fully the cost of providing relevant public services. This will in turn help narrow the gap between the fee levels charged by FSD and RFEs, thereby making the Scheme more competitive (more comparable from a cost point of view) and potentially more attractive to potential service users.

#### **Quality Assurance:**

- FSD should adopt a robust approach to auditing using a clearly defined set of criteria to ensure quality of work of RFEs.
- FSD should consider establishing a formal mechanism for stakeholders (or licence applicants) to lodge complaints with FSD.

#### **Conflict of Interest:**

- FSD (with help from relevant authorities, e.g. Independent Commission Against Corruption) should define key terms more clearly.
- FSD should consider removing "personal friends" from the definition.



### Implementation:

- FSD should maintain a phased approach to implementing the Scheme because it (i) helps manage implementation risks; (ii) facilitates transfer of knowledge and on-site experience from FSD to RFEs; and (iii) allows FSD to observe (and act on if required) the responses from the market.
- During the pilot FSD should closely monitor the uptake of (i) RFE registration by qualified professional engineers and (ii) RFE services by licence applicants.
- FSD should work with the business community to “recruit” service users to participate in the pilot exercise. For example, FSD can target those who are more likely to benefit from (and therefore more willing to give it a try) using RFE services (e.g. hotel operators).
- FSD should proactively facilitate transfer of practical knowledge and on-site experience to RFEs (so that RFEs know exactly what is expected of them from FSD and have a consistent interpretation of fire safety requirements as FSD does), and consider conducting some form of interactive demonstration or knowledge sharing workshop where RFEs are offered an opportunity to learn from FSD officers on a number of case studies in relation to risk assessment and on-site compliance check. FSD can then evaluate effectiveness of this arrangement at the end of the pilot.
- FSD should refine the audit programme, consider collecting and collating relevant information (e.g. characteristics of licensed premises, experience and track record of RFEs / FSI and ventilation system contractors, common pitfalls, etc.) that helps inform an effective audit programme
- FSD should consider implementing initiatives that help instil stakeholder confidence in the Scheme. For instance, FSD can develop a communications programme to publish success stories, lessons learned, key statistics (e.g. the number of compliance audits performed and “passed”), etc.
- FSD may wish to perform an interim review of the implementation of the pilot Scheme (say one year after the implementation of the pilot) to assess the implementation progress (and outcome) and concerns. Based on the feedback received, FSD can then fine tune the approach to pilot if required. For instance, if there is evidence suggesting that the supply of RFEs in the market is insufficient, FSD may need to discuss this with the relevant professional organisations and encourage qualified engineers to register as RFEs. If the market has sufficient supply of RFEs, FSD may consider expanding the scope of the pilot.