

MEDIA RELEASE

MEASURES TO RAISE PRODUCTIVITY AND BUILD CAPABILITY IN THE CONSTRUCTION SECTOR

- \$250 million incentive package to complement policy measures

1. The Economic Strategies Committee (ESC) has recently recommended the need for strong measures to boost Singapore's productivity level. To meet this challenge, the construction sector will need to raise the quality of its workforce, design buildings that are easier to construct, and adopt more advanced construction technologies. In this regard, the Government has reviewed various policies and is introducing a \$250 million package of incentives to help the sector raise productivity and build capability.

Raise Quality of Local and Foreign Workforce

2. In line with the Economic Strategies Committee (ESC)'s recommendation to shift towards productivity-drive economic growth, we will have to raise the quality of our local and foreign workforce. To do so, the Ministry of Manpower (MOM) will introduce a tiered levy framework to encourage the upgrading and retention of the more experienced and higher skilled foreign workers as well as to raise foreign workers' levies. To enhance productivity, MOM will also cut the Man-Year Entitlements (MYEs) quota progressively. .

3. In addition, the Building and Construction Authority (BCA) will be reviewing its existing **Construction Registration of Tradesmen (CoreTrade)** scheme to build up a larger core of experienced and highly skilled workforce. BCA will look into increasing the number of high value construction trades under the CoreTrade scheme and also raising the number of CoreTrade personnel required in construction projects.

Introducing \$250 million Incentive Package

4. To help the industry adapt to the upcoming policy changes, the Government has set aside \$250 million to steer the construction sector towards higher productivity and to build capability. The incentives cover the following three broad aspects:

- **Workforce Development** – Co-funding manpower development through (i) upgrading courses and training in the use of technology, (ii) skill assessment of workers; as well as (iii) scholarships to attract local PMETs to join and lead the sector.
- **Technology Adoption** – Funding support will be provided to encourage the adoption of technologies and use of equipment that could lead to significant productivity improvements. Greater assistance will be given to help the small and medium size firms harness technology for long term productivity benefits; and
- **Capability Development** – To capitalise on the upcoming pipeline of an estimated \$50 billion worth of rail lines and complex expressway projects over the next 10 years, financial support will be provided to help progressive builders to develop capability in complex civil engineering projects and also the more complex building projects (*e.g. high-value commercial, residential, institutional or industrial projects utilising advanced construction technologies*).

Push for Easier-to-Construct Buildings

5. BCA will strengthen the existing buildability legislative framework by requiring designers to come up with more buildable designs to ease construction work on site. We will also expand the framework beyond the design stage to downstream stages which include construction methods. This means that builders will be required to adopt more labour-efficient construction methods, e.g. integrated system formwork.

6. The suite of new measures will ensure that manpower development and technology adoption work in tandem to build up the construction sector's productivity, capacity and capabilities in the long term.

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Annex 1 Raise Quality of Local and Foreign Workforce

Annex 2 \$250 m Incentive Package to Steer Construction Sector towards Higher Productivity and Capability Development

Annex 3 Measures for Easier-to-Construct Buildings

About Building and Construction Authority

The Building and Construction Authority (BCA) of Singapore champions the development of an excellent built environment for Singapore.

At BCA, our mission is to shape a safe, high quality, sustainable and friendly built environment, as these are four key elements where BCA has a significant influence. In doing so, we aim to differentiate Singapore's built environment from those of other cities and contribute to a better quality of life for everyone in Singapore. Hence, our vision is to have "the best built environment for Singapore, our distinctive global city".

Together with our education and research hub, the BCA Academy of the Built Environment, BCA works closely with its industry partners to develop skills and expertise that help shape the best built environment for Singapore.

For more information, visit www.bca.gov.sg.

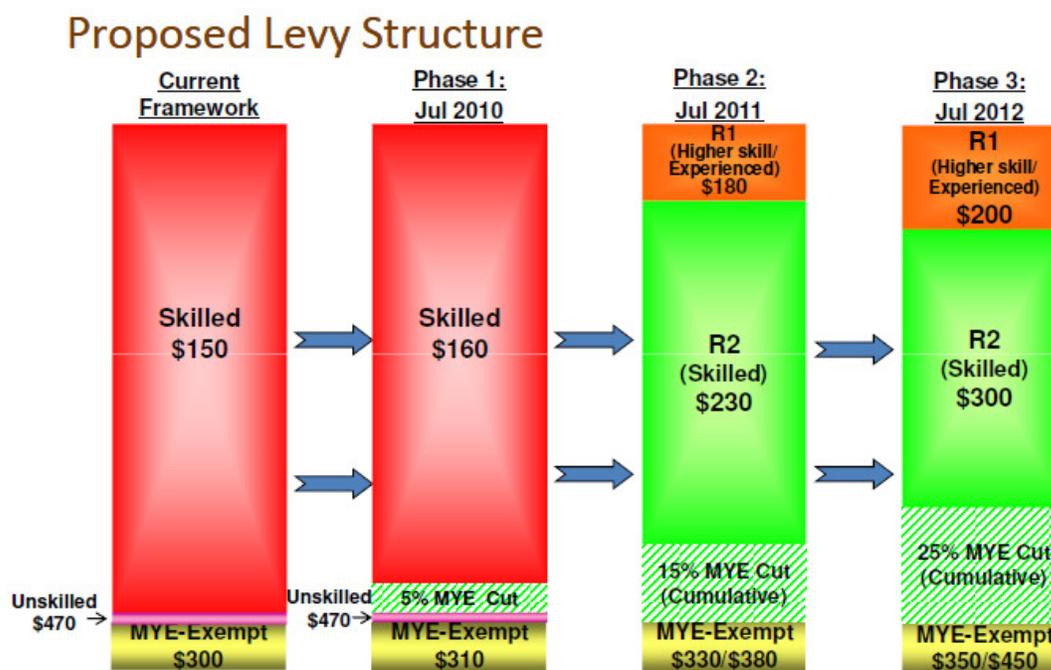
FACTSHEET: RAISE QUALITY OF LOCAL AND FOREIGN WORKFORCE

The construction industry workforce is made up mainly of low cost foreign labour. The availability of low cost labour has managed to keep Singapore's construction cost competitive against other major regional cities over the years. However, the use of foreign workers (FWs) has also resulted in low productivity levels of the construction sector. While foreign workers will remain the industry's main labour source, it is important to reduce the churning of the workers and raise the quality of the workforce through the retention of the more experienced workers and skills upgrading to enhance productivity,

In line with BCA's strategic intent to develop a more productive and competent construction workforce, and encourage the retention of the more experienced and higher skilled FWs, BCA is working closely with MOM to implement a tiered-levy framework that recognises the experienced and higher value-add workers and progressively cut MYE allocation.

Raising the quality of the foreign workforce and improving productivity through tiered-levy framework and MYE cuts

The changes to the MYE and levy framework are summarised in the chart below:



There will be progressive MYE cuts over three phases, leading to a cumulative 25% cut in MYE allocation by July 2012.

Levy rates will be progressively raised. The new tiered levy framework will also serve to distinguish the experienced and skilled FWs (such as CoreTrade personnel or those with additional specialised qualifications) from the newer entrants with basic

skills, and incentivise their retention and skills upgrading by the industry. From July 2011 onwards, higher-skilled and experienced FWs within MYE quota will now be placed on the lower levy tier. Going forward, more of these better, experienced FWs will be recognised under enhancements to the CoreTrade scheme as explained in the section below.

The MYE-exemption¹ route will be retained to provide flexibility for the firms to meet their specific manpower needs. However, FWs under this route will be subjected to higher levies to discourage excessive FW usage beyond the MYE quota.

Construction Registration of Tradesmen (CoreTrade)

The **Construction Registration of Tradesmen**, or CoreTrade in short, is a registration scheme administered by the Building and Construction Authority (BCA), for skilled and experienced construction personnel in key construction trades. Please refer to Appendix A for the list of key construction trades currently recognised for registration under CoreTrade.

Objectives of CoreTrade

The construction sector is heavily dependent on foreign workers who are highly transient in nature. The CoreTrade scheme was hence introduced to facilitate the sector in building up a core group of competent and experienced tradesmen and trade foremen in key construction trades to anchor and lead the construction workforce, and thereby raise construction quality and productivity levels.

CoreTrade provides a platform to retain the better and more experienced workers by providing a clearer career progression path and giving them due recognition through a registration system. It allows one to move from a general worker, to a registered Construction Tradesman² specializing in specific trades and eventually become a registered Construction Trade Foremen³. Workers who are eligible for registration include skilled locals as well as skilled and experienced foreign workers who have been working in the construction industry in Singapore.

Under the Building Control (Amendment) Act 2007, licensed Class 1 General Builders are required to deploy a minimum number of registered CoreTrade personnel in their projects of value S\$20 million and more. This applies to new building works, addition and alteration works and civil engineering works. The registration of CoreTrade personnel commenced in December 2008. To-date, more than 7,000 have been registered as CoreTrade personnel.

¹ Currently, companies may employ NTS or PRC construction workers who have worked with any employer for a cumulative period of two or more years in the construction industry without the need for MYE. A levy rate of \$300 will be imposed on these workers.

² Construction Tradesman is a worker who is skilled and engaged in a particular trade.

³ Construction Foreman is a worker who takes charge of and co-ordinates a group of tradesmen in a particular trade

Implementation of CoreTrade

The regulatory requirements on deployment of CoreTrade personnel commenced in June 2009. To-date, more than 100 construction projects, with a total value of almost \$10 billion, are subjected to the CoreTrade requirements.

Enhancement of CoreTrade Requirements

CoreTrade remains a key lever to build up a stable core of highly skilled, experienced and productive workforce in the construction sector. BCA is in the process of reviewing the CoreTrade requirements. Possible enhancements to the CoreTrade scheme could include widening the range of trades to be registered under CoreTrade, raising the man-year deployment requirements and also strengthening the skill qualification of workers for registration under CoreTrade.

List Of Key Construction Trades Recognised For Registration Under Coretrade

KEY TRADES FOR CONSTRUCTION TRADESMEN

- (1) Construction plant operation
- (2) Electrical works
- (3) Plumbing and piping works
- (4) Tiling and stone laying

KEY TRADES FOR CONSTRUCTION FOREMEN

- (1) Electrical works
- (2) Plumbing and piping works
- (3) Tiling and stone laying
- (4) Waterproofing works
- (5) Reinforced concrete works
- (6) Structural steel works

FACTSHEET: \$250 MILLION INCENTIVE PACKAGE TO STEER CONSTRUCTION SECTOR TOWARDS HIGHER PRODUCTIVITY AND CAPABILITY DEVELOPMENT

The Government, through BCA, will introduce a strong package of incentive schemes totaling \$250 million to steer the construction sector towards raising productivity and building capability. The incentives will cover 3 broad categories – workforce development, technology adoption and capability development.

(A) WORKFORCE DEVELOPMENT

Co-funding the cost of manpower upgrading and skill assessment

To encourage builders to upgrade their better and more experienced workers, we will co-fund the cost of training/upgrading and assessment/certification of workers through CoreTrade and other higher value-adding qualifications.

Attracting more new entrants into the industry

To attract more entrants into the sector, particularly at PMET level to lead the industry, the BCA-Industry Built Environment Scholarship has been enhanced to attract more and better calibre students to join the sector. More scholarships can now be offered, and the total amount co-sponsored by the Government and the participating firm will increase from the current minimum \$10,000 per year to at least \$14,000 per year for each scholar.

(B) TECHNOLOGY ADOPTION

Co-funding firms' efforts to adopt technology, innovate and re-engineer their construction processes - for builders, subcontractors and prefabricators

Financial support will be granted to builders, subcontractors and prefabricators to develop their capability through investing in advanced construction technologies and re-engineering of workflow. The grant will co-fund:

- (i) the purchase and leasing of equipment that can demonstrate significant productivity improvement;
- (ii) the conduct of studies and developmental projects to raise productivity. This include qualifying cost such as consultancy cost, manpower cost, equipment cost etc.

To promote better co-ordination amongst the planning, design and construction phases to reduce rework downstream, we will co-fund the cost incurred by designers in shifting their project information delivery approach format from the current 2D to 3D through the use of Building Information Modelling technology.

(C) CAPABILITY DEVELOPMENT

Building up construction capabilities of builders to undertake complex construction projects

Given the strong pipeline of complex civil engineering projects (e.g. underground road and rail projects) as well as the increasing number of relatively more complex building projects (e.g. high-value commercial, residential, institutional and industrial projects utilising advanced construction technologies), the Government will introduce a holistic programme to nurture progressive builders with specialised capabilities to undertake these complex construction projects. Builders can tap on the programme to build up their manpower and construction engineering capabilities, as well as defray the procurement costs of performance bonds to facilitate cashflow when carrying out such complex projects.

For instance, funding support will be granted to builders to send their promising employees for immersion programmes to gain project experience in complex construction works. We will also co-fund the cost of engaging specialist consultants to catalyse knowledge transfer and allow builders to build up their in-house engineering expertise.

FACTSHEET: PUSH FOR EASIER-TO-CONSTRUCT BUILDINGS

BCA is working with the industry to make building easier to construct. The buildability framework will be strengthened to require designers to deliver more buildable designs upstream, and contractors to adopt more labour-efficient construction technologies downstream.

Legislating Buildable Design

BCA introduced legislation for buildable design in 2001. Under the legislative requirements, each project's 'buildability score', which measured the level of easy-to-build construction in building design, had to meet the minimum legislated requirements. This has steered the industry to adopt more prefabricated and standardised building components and other labour-efficient designs. For example, as compared to 1998 – 2000 (before legislation), the use of buildable structural systems⁴ had doubled from 31% to 65% (measured by floor area constructed). At the same time, for wall systems, the use of prefabricated components such as cladding, curtain wall, drywall and precast walls had increased from 22% to 45% (measured by length of wall constructed). In contrast, the use of the labour-intensive brickwall had fallen from 63% to 31%.

To further enhance easy-to-build construction and reduce dependence on labour, the existing buildable score framework will be fine-tuned in the following ways to lift the productivity level of the construction sector:

Raising Minimum Buildability Scores

One key measure is to further tighten the existing buildability framework to require designers to adopt even more buildable designs upstream. The **minimum buildability scores would be raised to a level that would bring about wider use of buildable and less labour intensive designs such as prefabrication and precast.**

Introducing Constructability into the Buildability Framework

Beyond design considerations, to bring about greater productivity improvements, it is necessary to also tackle improvements in the downstream construction methods. Thus, the **buildability framework will be expanded to include the adoption of more labour-saving construction methods downstream.**

By encouraging technology development through the adoption of buildable design at the upstream design phase and use of labour-saving construction methods such as integrated system formwork, precast installation during the downstream construction phase, the industry can reduce the demand for manpower on-site.

⁴ These refer to precast structural components and cast-on-site floor systems that do not have beams i.e. flat plate and flat slab systems.