

## FREQUENTLY ASKED QUESTIONS ON MANDATORY ENERGY IMPROVEMENT (MEI) REGIME

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### **1. Which buildings will be subject to the MEI regime? How is an energy-intensive building defined?**

The MEI regime targets commercial buildings, healthcare facilities, institutional buildings, and sports and recreation centres, with a Gross Floor Area of 5,000m<sup>2</sup> and above, that are energy-intensive.

Energy-intensive buildings are defined as those that have exceeded the Energy Use Intensity (or EUI) threshold prescribed in subsidiary legislation for three consecutive years prior to the issuance of the MEI audit notice.

The EUI thresholds are established based on building sub-typologies to account for the energy use profiles of different types of buildings. These sub-typologies include, for example, offices, hotels, hospitals, nursing homes, civic institutions, cultural institutions, sport centres and recreational clubs etc.

For a start, the EUI thresholds are roughly pegged at the 75<sup>th</sup> percentile of the EUI for that particular building sub-typology. In other words, the MEI regime targets buildings that are consistently in the top 25% of that building sub-typology in terms of energy consumption over three years. This serves as an indication that the building is not operating in an energy-efficient manner.

Building owners may wish to refer to BCA's annual Building Energy Benchmarking Report (BEBR) to gauge how their building's energy performance compares to others.

### **2. How many buildings will be subject to the MEI regime?**

BCA estimates that fewer than 100 buildings would be subject to the MEI regime when it is first implemented in 2025.

### **3. When will the MEI regime be implemented?**

BCA targets to issue the first MEI audit notices in the third quarter of 2025. BCA has informed and engaged owners of buildings that are likely to be subject to the MEI regime.

**4. What if a building is a mixed-use building? How will the EUI threshold account for these multiple uses?**

The EUI threshold for mixed-use buildings will be pro-rated based on the space distribution of the different uses. For example, if a building comprises 70% office space and 30% retail space, the EUI threshold will be the sum of 70% of the EUI threshold for offices, and 30% of the EUI threshold for retail space.

**5. What if a building has data centre operations or laboratories which are highly energy-intensive? How will the EUI threshold account for such uses?**

We have also established EUI thresholds for spaces dedicated to data centre operations and laboratories. The EUI threshold for buildings with such uses will be pro-rated based on the space distribution. For example, if 70% of a building is used for office space and 30% is used for data centre operations, the EUI threshold will be the sum of 70% of the EUI threshold for offices, and 30% of the EUI threshold for space dedicated to data centre operations.

**6. If a building taps on District Cooling System (DCS), will it still be subject to the MEI regime? How will the EUI threshold account for this?**

Yes, the building will still be subject to the MEI regime as its other energy consuming systems such as air handling units or hot water systems may still be energy-intensive.

That said, the EUI threshold that the building will be benchmarked against will be 80% of the threshold set for its building typology as the energy consumption that is used for cooling is not included.

Buildings that use DCS also do not need to carry out an audit of its cooling system since this is centralised and not under the ownership of the individual building.

**7. On what grounds can an MEI audit notice not be issued / be cancelled for a building that is assessed to be energy-intensive?**

The Commissioner of Building Control (CBC) may choose not to issue or cancel the MEI audit notice if he/she assesses that it would not be reasonable for the building owner to comply with the regime. Some examples include if the building is scheduled for redevelopment or will be vacated in the immediate future. Building owners will need to provide the necessary evidence of such plans to the CBC.

The CBC may also choose not to issue or cancel the MEI audit notice if an energy-intensive building has already applied to carry out major retrofitting works or major energy use change. In such cases, these buildings will be subject to minimum

environmental sustainability standards and there is no need to impose an additional regulatory regime on them to improve their energy performance.

Such grounds will be assessed by the CBC on a case-by-case basis.

**8. What types of energy efficiency improvement works do building owners need to undertake if they are subject to the MEI regime?**

The MEI regime is outcome-based, and building owners have the autonomy and flexibility to implement measures that are most appropriate for their buildings. These could include simple maintenance works such as replacement of faulty parts and sensors, or getting their tenants to use energy saving lighting for their unit fit-out. Building owners may also choose to do more extensive retrofitting works of key energy consuming systems which may yield longer-term benefits in enhancing the building's overall energy performance.

**9. How much cost would building owners need to incur to comply with MEI requirements?**

Based on current market rates, the cost of an energy audit is typically no more than \$50,000.

The cost of the energy efficiency improvement measures that building owners will have to undertake will depend on various factors, including (i) the existing building system condition and performance; (ii) the type of measures adopted; and (iii) the scale of implementation.

Simpler measures such as maintenance-related works of existing systems as well as optimisation of chiller systems and airside equipment would cost around \$50,000 to \$200,000.

More extensive retrofitting works, such as the upgrade of building management systems, partial replacement of chiller systems, as well as the full replacement of chiller systems and air-handling units can range from \$150,000 to \$2,000,000 or more. Building owners who choose to undertake such extensive retrofitting works can also tap on the Green Mark Incentive Scheme for Existing Buildings 2.0 (GMIS-EB 2.0) to do so.

While building owners will incur upfront cost when implementing measures to comply with the MEI regime, building owners should also take into consideration the long-term energy cost savings, as well as other types of savings such as maintenance and even manpower savings that can be expected.

For example, extensive retrofitting works involving the replacement of chillers are expected to have an average payback period of around 6 years. In other words,

building owners can expect to offset the upfront cost of the retrofit through the downstream energy cost savings within an average of 6 years. Correspondingly, the upfront investment for simpler measures is typically lower, and will likely have an even shorter payback period.

As carbon pricing is set to increase further in the coming years, the business case for pursuing greater sustainability in our buildings will become more compelling. Furthermore, corporate clients such as tenants are also increasingly placing more emphasis on sustainability and prefer to lease from sustainable buildings. This would further bolster the business and reputational case for building owners to implement more sustainable measures for their buildings.

**10. Will there be funding provided to building owners subject to the MEI regime to carry out the energy audits and implement the energy efficiency improvement measures?**

While funding will not be directly provided to building owners to meet the requirements under the MEI regime, building owners who choose to undertake more significant retrofitting works can tap on the Green Mark Incentive Scheme for Existing Buildings 2.0 (GMIS-EB 2.0) to do so.

This scheme co-funds retrofitting works based on the Green Mark rating and the amount of carbon emissions reduction achieved. Building owners can receive up to 50% co-funding to support such works, and a building that achieves Zero Energy standards is eligible for up to \$1.2 million in co-funding support.

**11. What if building owners are unable to afford the cost of energy efficiency improvement measures? What financing options or business models are there out there?**

Building owners who are unable to afford the cost of energy efficiency improvement measures can explore various financing options or business models. For example, there are existing green financing options from financial institutions to finance energy efficiency projects (e.g. UOB's U-Energy Programme).

Building owners may also consider engaging in energy performance contracting models with Energy Services companies (ESCOs) which guarantee an outcome (either in terms of achieving a certain level of energy efficiency or energy savings). Some of such models also include an agreement where the ESCO or third-party financing firm finances the energy efficiency retrofits, which is subsequently repaid through the resulting energy savings.

**12. Who can be appointed to carry out the energy audit and develop the energy efficiency improvement plan? Is there sufficient capacity?**

Professional Engineers in the field of Mechanical Engineering and Energy Auditors registered with BCA have the necessary capabilities to carry out energy audits and develop energy efficiency improvement plans.

There are about 500 Professional Engineers, BCA-registered energy auditors, and NEA-accredited Energy Services Companies (ESCOs) that can provide energy audit services. This will be sufficient to support building owners whose buildings will be subject to the MEI regime.

**13. Will the new MEI regime raise prices for the services provided by energy auditors? Will there be measures to ensure that these rates remain competitive?**

The MEI regime is unlikely to raise the prices of services provided by energy auditors.

While the MEI regime is new, its requirements are similar to that of the Periodic Energy Audit regime for cooling systems which was implemented in 2014. As such, the skillsets required of the professional or energy auditor under the MEI regime are neither niche nor new, and we do not expect service prices to increase. Furthermore, the number of buildings that will be subject to the MEI regime is less than 100. We do not expect a surge in demand that would cause service prices to increase. The prices for energy audit services have also been competitive over the years.

Building owners have 90 days from the issuance of the notice to appoint a professional. We encourage building owners to use this time to obtain quotations from different professionals and compare prices.

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*Note: The EUI of a building is derived based on the energy consumption and building information data provided by the building owners. Building owners are responsible for ensuring that the information provided is factual and accurate. If verification of the submitted details is required, please inform BCA via [this form](#).*