

Buildings in S'pore have to meet higher standards to be certified green under refreshed scheme

Singapore

NEW and existing buildings will now have to hit higher sustainability standards to be certified green, with the reduction of embodied carbon in developments as one of the criteria emphasised.

The changes to the Building and Construction Authority (BCA) Green Mark scheme come as Singapore pushes towards its target to become a low-carbon built environment.

The refreshed scheme places greater emphasis, among other criteria, on the integration of smart technologies, the creation of healthier environments for building users and the reduction of embodied carbon in developments, said National Development Minister Desmond Lee on Tuesday. Embodied carbon refers to the carbon or energy consumed through the production of materials used for construction and during the construction process itself.

The refreshed scheme was launched at the virtual International Built Environment Week 2021 event, which runs till Sept 10.

In his opening address, Mr Lee said there is a need to continually review and raise standards for sustainability in buildings, in order to hit key targets set in the Singapore Green Plan 2030. "Over the years, we have reviewed and refined the scheme to ensure that we consistently raise the bar for our best-in-class standards, and to broaden the scope for sustainability in our built environment," he said. "(In the refreshed Green Mark scheme) we will raise our standards in energy performance, and place greater emphasis on other important sustainability outcomes."

Under the BCA Green Mark 2021, new and existing buildings will need to meet higher minimum energy efficiency levels and score sufficient points in the sustainability sections to be certified green. It will also be applicable to buildings that have already been certified Green Mark in the past.

In Singapore's push for more super-low energy developments, residential buildings that achieve at least 60 per cent improvement in energy

efficiency compared with 2005 levels will also be recognised, said Mr Lee.

The Green Mark 2021 scheme is aligned with the United Nations' Sustainable Development Goals. Launched in 2005, the BCA Green Mark certification scheme is a rating system that evaluates a building's environmental impact and performance.

In his speech, Mr Lee said that a one-stop digital platform to streamline the submission process to relevant government agencies is also in the works. It currently involves more than 20 approval processes, but will be consolidated into just a few across the design, piling, construction, occupation and completion phases.

The digital platform roll-out is part of wider efforts to accelerate the transformation of the built environment sector which has been badly hit by the pandemic.

Called Corenet X, it is slated to be launched in the second half of 2023.

"The end goal is an efficient, faster and an easier-to-navigate regulatory approval process that will benefit

both industry practitioners and our regulatory agencies," he said.

On Tuesday, Mr Lee highlighted two projects by the National University of Singapore – the four-storey Engineering Design and Innovation Centre and the Frontier, a two-storey building which houses two canteens.

Both have attained the Green Mark Platinum (Zero Energy) certification under the Green Mark 2021 scheme. Mr Lee noted that both projects harness renewable energy through solar panels and are designed to maximise natural ventilation and daylight while using sun-shading devices and extensive greenery to bring temperature down.

Frontier, in particular, has demonstrated exemplary performance in climate resilience by putting in place food waste processes to generate reusable resources, such as using biodiesel from recycled cooking oil to power vehicles in the campus, said Mr Lee.

In a discussion at the event hosted by Jessica Cheam, founder and managing director of Eco-Business, Mr Lee said the pandemic, while harsh, has pushed many stakeholders to adopt and advocate for the digital transformation of the built environment sector.

However, for the sector to weather "black swan" events like the Covid-19 pandemic and future crises to come, it will take more than just government legislation and contractual commitments, he added.

"It's the collaborative mindset that allows developers, main contractors and the rest of the ecosystem to have that relationship to support each other beyond what is written in black and white," he said. "To get a project completed involves many players and if it's an arms-length relationship, it only takes you so far.

"But if there's trust and open conversation with each other, it can take you to the finish line in better shape than most."

When asked what he imagined Singapore's built environment to look like in the future, Mr Lee said: "I'll push to be a City in Nature."

"This requires the built environment stakeholders to not just build more sustainably, but also be stewards of the environment, people, biodiversity, heritage, enterprises and communities in and around the projects we work on.

"This ensures that Singapore can be both an urban hub – which is very exciting, but also very homely in how we take care of our most vulnerable, our environment and nature – and being guardians of our memories for future generations." THE STRAITS TIMES