

Green(ing) Houses: International policy ambitions



While advances in technology and incrementally revised green standards are applied to new homes, how are policymakers responding to the challenge of addressing the environmental credentials of existing buildings?

Being (thermally) comfortable in your own home has never been under greater pressure. From the geo-political impacts of the war in Ukraine to the urgency to reduce carbon emissions, the measures and policies we introduce, and the pace at which we make our homes more environmentally sustainable, has become an issue of increasing global concern. The percentage of buildings already constructed hovers around 80-90% depending on the country and author of the statistic, and it is widely accepted that much of this is housing stock that does not meet current performance standards. The challenge, therefore, is to find policies, technologies and the finances to retrofit our homes.

The role that policymakers play in helping to deliver sustainable housing, through debate, legislation and financial incentives, can offer the most tangible impact above the efforts of industry and property owners. Recent changes in political leadership in Australia and the US have introduced different, more progressive policies and legislation. Among a raft of measures to address climate change in the Inflation Reduction Act that was passed in the US in August 2022, includes a 30% tax credit for installing solar panels on roofs and rebates of US\$14,000 for the purchase and installation of energy efficient home appliances including heat pumps. By the close of the current decade, the Act aims to have helped install 950 million solar panels across homes and businesses, and 120,000 wind turbines, all supported by 2,300 grid-scale battery plants.

“The challenge is to find policies, technologies and the finances to retrofit our homes.”

In their Powering Australia policy document, the Australian Government again places great emphasis on the introduction of renewable energy sources, notably solar power, to reach their minimum targets of a 43% reduction in emissions by 2030 and achieving net zero by 2050. This includes establishing 400 community batteries across the country to provide energy storage for 100,000 households and investing in 85 solar banks that will provide renewable energy to low-income households and renters who are not always able to take advantage of energy grants often aimed at owner occupiers.

Globally retrofitting schemes, encouraging property owners to install a range of technologies and improve insulation, are increasingly commonplace. Canadians can apply for grants of up to CA\$5,000 and interest free loans of CA\$5,000 to CA\$40,000 with a payback period of up to ten years, but residential landlords and tenants are not eligible. Around a third of the country’s 37 million residents don’t own their homes so measures such as this only serve the country’s 10.2 million owner occupier dwellings and not the 4.8 million rental properties.

Yet there is clear need and demand from the rental sector from both landlords and tenants. In the UK, landlord representative bodies and property search engines have both recorded demand and applicant eligibility was extended to landlords in the UK's £1.5 billion Green Homes Grant scheme. The scheme, which closed in March 2021, six months after its introduction, offered grants for several measures including the installation of insulation, heat pumps and solar panels, and improved glazing to windows. While the current energy crisis, experienced around the world, has increased enquiries for and hastened the installation of sustainable technologies and insulation, without specific measures including grants, tenants and those households on lower incomes risk being left in an increasingly vulnerable and precarious position.

“Globally retrofitting schemes, encouraging property owners to install a range of technologies and improve insulation, are increasingly commonplace.”

One route to addressing this is through larger landlords and the opportunities that scale offers. Singapore's Housing and Development Board (HDB) is the dominant housing provider in the city state, retaining ownership of 84,000 apartments out of the more than one million it has constructed since its inauguration in 1960. Acknowledging that 16% of the city's energy is used by households the Green Mark environmental certification scheme for buildings was introduced in 2005. By 2019 40% of buildings in Singapore had been certified as reaching mandatory minimum standards, but the Singapore Government aims to increase this to 80% by the end of the current decade.

To that end, the HDB introduced the Green Towns Programme in 2020 with the aim of reducing energy consumption and increasing use of renewable resources in residential buildings, supported by measures to address the urban heat island effect. The policy sets out five approaches including rain water harvesting, changing all lighting to use smart LEDs, installing solar panels and applying cool coatings to buildings and other urban surfaces, to reflect heat and reduce the need for air conditioning. Following a successful but small trial on two adjacent buildings that reduced the ambient temperature by 2°C, a larger pilot study including 130 buildings will commence in late 2022 with ambitions to reduce temperatures by around 4°C.

Known for planting schemes on new buildings, Singapore also plans to increase greenery across the city aimed at mitigating urban temperature by establishing urban farms and community gardens on building and car park rooftops and introducing their Prefabricated Extensive Green Roof (PEG) tray system in selected locations. Consisting of 500mm² pre-planted polypropylene trays, the PEG system, developed and patented by HDB, weighs 120kg/m², addressing frequent concerns regarding structural loading.

Both the US and Australia have experienced a change in political direction and the UK a change of political leadership, and with each of these comes the opportunity to review the status quo and to refocus efforts to address the approaches required to transform the environmental performance of our homes. The challenge for all, Canada and Singapore included, is in delivering environmentally sustainable options for existing properties that are financially viable, encouraging homeowners and landlords to retrofit their properties. Aside from skilled installers and, in the case of solar panels, supply of materials, cost remains the reoccurring barrier for greening housing suggesting that the role governments should play, through policy, leadership and financial incentives, remains paramount.

Research

Kat Martindale
Head of ESG Research, Director
Savills UK
kat.martindale@savills.com

The Savills logo consists of the word "savills" in a lowercase, sans-serif font, colored red, positioned on a yellow rectangular background.