Frontier Advisors

Real estate: how climate change is forcing a green renovation

June 2023

Asset owners could face a material drop in the value of their existing property portfolios due to net zero carbon emissions and climate transition risks, but emerging climate tech also promises to bring new investment opportunities.

The real estate industry is responsible for 37% of CO_2 emissions, 34% of energy demand, and 50% of raw material usage, according to Greg Smithies, Partner and Co-Head of Climate Technology, at venture capital firm Fifth Wall.

“These are shockingly large numbers,” he said. “So, it's a little bit surprising that we've flown under the radar as an industry for such a long time. But people are waking up to this.”

The need to cut those emissions to reach net zero by 2050 is now being backed up by regulations prompting new green building retrofits such as Local Law 97 in New York and the Existing Buildings Energy Ordinance in San Francisco.

The Frontier team saw the changes first-hand as part of a recent US research trip, speaking with a number of proptech companies piloting new technologies for pension funds in their office, retail, residential and logistics assets. Turntide Motors was one such group with an impressive list of pension fund clients. Some investment managers have been exploring the use of geo-thermal energy to power New York buildings while the state is considering hydro-electric options.

“It was evident that increasing regulations was a big driver of the ESG integration into portfolios,” Shrabastee Mallik, Senior Consultant, Frontier Advisors, said. “It varies quite significantly by geography – the political divide between different states in the US was very distinct.”

It will require an estimated $US18 trillion to directly decarbonise all existing buildings yet the real estate industry has attracted less than 5% of all climate tech funding in the last two years.

Jennifer Johnstone-Kaiser, Principal Consultant, Frontier Advisors, said multiple strategies must be pursued beyond basic solutions such as LED lights, solar panels, and better waste management. “Sweeping regulations across North America, UK and Europe are forcing compliance with the threat of punitive measures. It’s around the corner – portfolios must become regulatory resilient or risk obsolescence.” They come with some help from city and state governments – tax credits and other offsets are available, recognising the massive challenge for the real estate industry.

“We need to be looking at differentiated strategies – something that's leading-edge technology which can have measurable impact,” she said. Return on investment improves because operational costs are reduced from energy savings, better insulated windows, green power and natural ventilation. “Renewable energy is not just an infrastructure discussion – it’s highly relevant to standing and new buildings.”

New investment solutions required

Real estate involves some of the most difficult industries to decarbonise, such as steel and concrete production, which means new technological breakthroughs will be needed.

“We’ve got to figure out how to put up the buildings faster, cheaper and with less waste – 60% of the stuff in the world's landfills is building rubble,” Smithies said.

The solutions fall into three categories, which can all produce investment returns:

- Defensive: making buildings cleaner and greener, which can lower insurance costs and attract higher quality tenants.

- Offensive: capturing the energy transition’s financial upside with new strategies such as installing EV chargers, solar panels, and batteries into buildings to generate new revenue.
- Financial arbitrage: underwriting long-term theses around climate risk.

While climate and transition risks may reduce the value of real estate by 17%, green buildings can attract a 10-21% higher asset value, based on EY estimates.

Smithies cited Turntide Motors, which creates more efficient electric motors for building air-conditioners, as a successful defensive strategy investment. The company’s product pays for itself in nine months in Europe and in 18-24 months in the US.

“You can sell this product to an active climate change denying CFO – they still want to buy it – it makes your building more profitable. You put a 60% saving on your air conditioning bill – it’s real money.”

EV charging company Loop is an example of an offensive strategy rolled out across multi-family apartments in the US and Europe. Loop sells end-to-end EV charging solutions for multi-tenant and commercial real estate.

Prologis, the largest owner and operator of warehouses around the world has figured out how to turn the ultimate waste of space — the flat roof of a warehouse—into an emissions-reducing, money-producing power plant. “You can produce electricity on your roof for two cents per kilowatt hour and you can sell it through to your tenants at 30 to 40 cents per kilowatt hour. That's a 95% gross margin business.”

Johnstone-Kaiser stressed the need for investors to map, measure and monitor their real estate exposures. “Know the weak points but recognise the opportunity set.”