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Retrofitting actions and collective energy infrastructures: towards sustainable urban growth and 2050 net-zero carbon target

Real Estate Predictions 2025

The built environment's carbon challenge

The real estate sector is responsible for nearly 40% of global CO2 emissions, so it has a leading role to play in solving the climate crisis. Meanwhile, expanding urban populations, demographic shifts, and concepts such as 15-minute cities will reinforce the importance of cities for national economies. These changes will increase energy demand and exacerbate the carbon footprint of cities, so achieving net-zero emissions by 2050 will require big changes in how buildings are managed, retrofitted and integrated into broader energy systems. Real estate businesses must navigate those challenges while also meeting market expectations for sustainable, high-performing assets.



Urbanization and energy demand pressures

Cities are growing rapidly, with larger metropolitan areas seeing the most significant demographic shifts. This expansion places immense pressure on urban energy networks, which are already struggling to meet current demand reliably. Furthermore, growing energy demand in cities risks creating higher carbon emissions and increasing costs, unless strategic investments are made in efficiency and infrastructure. As a real estate leader, you must consider how the effects of increasing urbanization will impact asset performance and security of energy supply. Retrofitting strategies and forward-thinking investments in smart energy systems can mitigate those risks while also enhancing your asset value.



Public funding limitations and private sector responsibility

Public budgets are tightening, so governments might need to make some trade-offs in their investment decisions and might deviate from financing large-scale energy infrastructure projects at national level, and cities in particular. This is an opportunity for the private sector to become more proactive in shaping urban sustainability. While retrofitting initiatives at building level are essential, you can also enhance the broader urban ecosystem by forming publicprivate partnerships. Such partnerships can invest in collective energy solutions, such as district heating, microgrids or onsite renewable energy solutions, to ensure long-term urban resilience and align with evolving regulatory frameworks. In the meantime, sitespecific solutions will continue to be down to individual business. The role of private investment in collective energy systems is no longer optional – it's essential.



Retrofitting: more than just energy efficiency

Retrofitting has often been limited to improving the energy efficiency of buildings, but its potential extends beyond individual assets. When combined with city-wide energy infrastructure, retrofitting can reduce peak energy loads, lower operational costs, and enhance energy resilience.

Retrofits are more than simply insulation and HVAC upgrades, and you should start considering options such as integrated renewable energy generation, battery storage or smart grids. Such retrofits can future-proof buildings, but also the city as a whole. Furthermore, by aligning retrofitting projects with urban sustainability plans, your business can unlock financial incentives and become more attractive to institutional investors seeking ESGcompliant assets.



The economic and social payoff of smart investments

Investing in sustainable retrofitting and energy infrastructure isn't just about compliance – it's also a strategy for creating long-term business and social value. Assets with high energy efficiency ratings are in demand, and command higher rental premiums while experiencing lower vacancy rates. As well as their financial benefits, these investments also support social equity (improved access to clean and more affordable energy, healthier living conditions and community resilience) and create healthier urban environments.





The road to 2050: what should you do now?

Getting to net-zero emissions by 2050 requires immediate action. Start by assessing the carbon footprint of your portfolio and identifying which retrofitting opportunities will make the greatest impact. Engage with public authorities and energy providers to develop collaborative solutions for district energy and microgrid integration. Seek innovative financing models, such as green bonds or ESG-linked loans, to support large-scale retrofitting initiatives such as district heating systems, smart grids or microgrids to allow for a better management of energy distribution and consumption. By taking action today, you will ensure that your assets remain competitive and resilient in the cities of tomorrow.

Conclusion

Retrofitting and collective energy infrastructure are critical for achieving both sustainable urban growth and net-zero emissions. With limited public funding, the private sector must take a leadership role in shaping resilient and low-carbon cities. By investing in intelligent retrofitting and energy solutions, your business will future-proof its own assets, while also contributing to the long-term stability of urban environments. The transition to net-zero is both a social challenge and a business opportunity – will you seize it?



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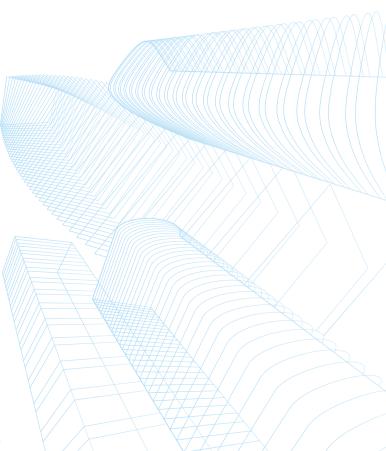


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