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Cleantech meets real estate: How innovation is driving new value for buildings - by Beaver and Keally

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Robyn Beavers
Blueprint Power

Alex Keally
Solect Energy

At the end of May in Boston, the Northeast Clean Energy Council (NECEC) hosted an event that explored the intersection of real estate and clean technology. Presenters ranged from commercial real estate developers to architects to innovation executives who are leading technology companies focused on buildings and their energy usage. As the discussion commenced, it was clear that there were two distinct industries pursuing the same opportunity; the terminology might be a bit different but the end-game was the same - enhance return on investment for building owners and developers.

With buildings accounting for 40% of total U.S. energy consumption, energy is often the starting point for building-focused innovation companies. Saving money by reducing energy consumption is not a new concept and energy efficient technologies like LED lighting and thermally efficient doors and windows have become standard operating procedure. For the past few decades, the real estate industry has been investing in efficiency to save money on their utility bills. But now, thanks to the falling costs of on-site distributed energy, new regulatory incentives and demand from tenants, many marquis players are shifting towards a revenue generation focus, building on-site generation like solar energy. Real estate now understands that their buildings are a valuable platform for more digital services and business platforms and that one of the natural next steps is to ensure their buildings are valuable contributors and revenue generators from the distributed, dynamic grid.

There are many new energy-related opportunities to increase net operating income (NOI) and a building's overall value. Investments in on-site energy assets are attractive thanks to ambitious renewable energy goals and initiatives at the federal, state, and local level and these new policies are constantly creating additional opportunities for building owners. In Massachusetts for example, behind the meter solar energy, with its state and federal incentives and energy cost savings, has almost become a default for owner occupied buildings. However, new policy changes now allow building owners to build "stand-alone" systems and sell power directly to the utility which often makes more sense for tenant occupied buildings. There are also new incentives for energy storage which can not only enhance a building's resilience, but also lower expensive demand charges. Energy capacity markets and demand response programs also represent additional revenue opportunities.

Energy opportunities won't only be limited to the building envelope as evidenced by recent incentives for solar canopies which are a great addition to parking lots. Electric vehicles also represent new opportunities for charging stations and, further down the road, potential revenue opportunities as energy storage devices. Of course, sustainable buildings also create additional value because they are more attractive to both individuals and corporations who have their own sustainability goals and are looking to occupy greener buildings.

As policy makers seek to enhance our grid infrastructure and decarbonize our energy system, buildings will play an ever-increasingly important role. Congestion on the grid (not enough distribution capacity in high demand areas) requires expensive system upgrades. Conserving and generating power locally is often a more efficient solution for congestion and accordingly, policy makers have incentivized technologies like solar and storage as a cheaper way to solve congestion problems. In the coming years, or even months, we will see new policies creating more opportunities for buildings to generate additional revenue and increase a building's value and NOI.

As the nexus of the built environment and the reinvention of our electric power system continue to converge, there will be increasing opportunities for clean energy technology and real estate companies, but it will require continued collaboration between the two industries. NECEC will continue the conversation and collaboration at Horizon19, a global event-driven platform harnessing

the international movement towards a clean economy, September 18-20 in Boston. With the common goal of increasing economic opportunity and addressing our sustainability challenges, the next few years should prove to be an exciting time for both industries.

Robyn Beavers is the co-founder and CEO of Blueprint Power and Alex Keally is partner and senior vice president of project development at Solect Energy, Hopkinton, Mass.

New England Real Estate Journal - 17 Accord Park Drive #207, Norwell MA 02061 - (781) 878-4540