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How to get best financial outcome while “going green” - by Udi Meirav

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With energy use in commercial buildings accounting for nearly 20% of total U.S. greenhouse gas (GHG) emissions at a cost of more than \$100 billion per year, and global warming the heated subject of national discourse, the sector is under growing pressure to make a difficult decision – produce the best financial outcomes, or increase their building costs to “go green” and boost energy efficiency to reduce carbon emissions.

In New England, commercial buildings have responded to that call for global change, with most of the six states and many individual cities having implemented energy efficiency and GHG emission goals. Boston for example, rolled out its Climate Action Plan to provide a roadmap for reducing GHG by 25% by 2020, and to be carbon neutral by 2050. Providence has set its sights on reducing their energy use in municipal buildings by 30% by 2030 compared to 2010, and the state as a whole offers cash incentives for energy efficiency through large and small business programs. Connecticut is making strides as well, having launched its Energize Connecticut initiative to help businesses of all sizes with rebates, financing and services for energy efficiency improvements.

Typically, the barrier to commercial real estate developers and building owners when considering whether or not to “go green” is that green buildings require more upfront investment. However, some technology solutions can reduce that upfront cost of buildings or renovations, while making the building more energy efficient.

For example, HVAC Load Reduction (HLR) modules are doing just that – reducing the capacity and cost of HVAC systems so that the incremental cost of adding this technology is zero or even negative. This technology, designed to reduce indoor air contaminants such as carbon dioxide (CO₂), aldehydes and volatile organic compounds (VOCs), also reduces HVAC energy usage. The HLR technology can be installed in renovations, as a retrofit, or in new construction, and is scalable, as a network of multiple modules can be deployed to accommodate any size building.

Instead of the traditional process of replacing the entire volume of a building’s indoor air every one to two hours, HLR modules clean and recycle existing indoor air. This enables a 60 to 80%

reduction in required outside air intake, and a decrease in annual HVAC energy consumption of 20 to 30% (up to 40% in peak periods). In addition to the annual energy savings (OPEX), lower capacity HVAC systems require less upfront capital (CAPEX).

A further incentive to building green is that LEED-certified buildings, the international standard of excellence in green building, can provide lower operating costs and better indoor environmental quality. That makes them more attractive to a growing group of corporate buyers that are not only concerned about costs, but increasingly focused on environmental and social responsibility.

For example, with HLR technology, companies can earn as many as 17 LEED points – over 40% of the points required to receive LEED certification – merely from implementing the technology along with an indoor air quality assessment. In addition, technology solutions like these can be eligible for New England utility rebate programs, such as through Mass Save and New Hampshire's CORE Business Energy Efficiency Program, which can further increase the savings on building costs.

What's more, LEED-certified projects outperform non-certified buildings in rental rates, occupancy and sale price – commanding 3.7% more in rent and 4% higher occupancy rates.

Going green has traditionally scared away building developers and owners because of the common misconceptions around high costs. Yet, innovative technology solutions are turning that assumption on its head, helping New England developers and owners reduce their carbon footprint, use less energy, and save money upfront.

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