CUSHMAN & WAKEFIELD

Going Green

LEED Certification - Financial Trade-off and Benefits

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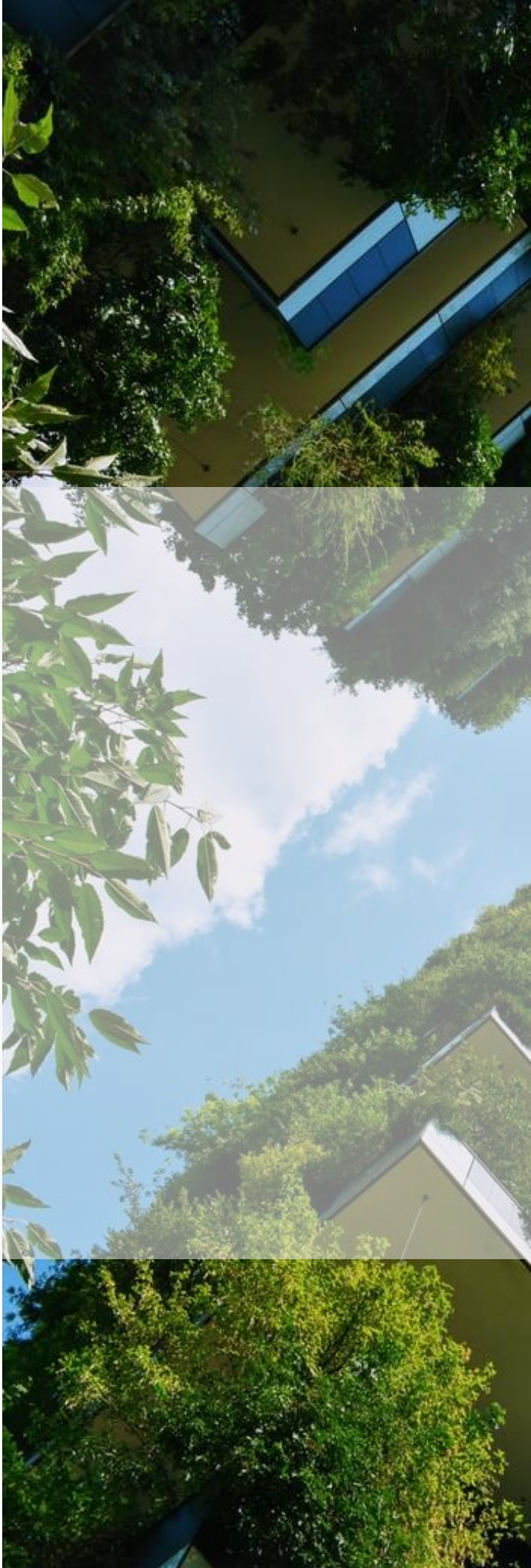
The Earth's climate is highly affected by human-generated greenhouse gas emissions, which mostly come from the built environment – transportation, infrastructure, land-use planning, and building construction and operation. Specifically, buildings, be it offices, houses, malls or schools, may damage climate through the materials utilized, decisions about sites, electricity and water usage, and landscape surroundings. In addition to its effects on environment, the conditions of a building also affect the health of its occupants.

To mitigate damages caused by buildings and the real estate sector in general, it is important to use environmentally friendly supplies, recycled building materials, green technologies, and sustainable operation practices promoting health and protecting the environment. 'Healthy' green buildings can preserve depleting natural resources and improve our quality of life. The system that recognizes if a building uses green practices is LEED: Leadership in Energy and Environmental Design. The certification was created to establish standards for building new green-rated structures, to act as a decision-making framework for project teams during planning, design, construction and operations processes, and then to reward resource-efficient buildings.



In line with ongoing sustainability activism and the leading role that real estate can play in contributing to environmental conservation, we are offering a series of articles, in which we will be reviewing the importance of greener orientation and sustainability in Real Estate, green buildings, sustainable materials and practices, financial benefits of eco-friendly buildings, and lastly we will be touching upon greenness trends in Georgia to assess where real estate stands in the country on the road to sustainability.

*In our previous article we explained the importance of sustainability and green buildings, and introduced **LEED** certification. We also explained how to get **LEED** certificate, its assessment areas while also reviewing sustainable building materials and two successful cases of **LEED** certified buildings.*

*This article will showcase **LEED** from investors' perspective. Even though going green incurs costs, they will be offset by financial gains later on by endorsing a building through **LEED** program. We will also emphasize that there is other financial impetus for sustainability and going green as eligibility for loan, grant or tax and other structural incentives.*

The series is published every week

and can be found at www.cushwake.ge

Cost Premium

LEED certification provides for a more efficient building, with U.S. Department of Energy estimating that, compared to non-LEED properties, LEED buildings will consume 25% less energy and 11% less water, will have 19% lower maintenance costs and 34% lower greenhouse gas emissions, and will bear 27% higher occupant satisfaction. However, such fiscal, as well as human, socio-cultural and environmental benefits require an upfront investment of cost premium. The USGBC estimates that LEED green premium will range between $20,000-$60,000 depending on the project size, complexity and the team experience. These up-front costs are driven by investing in high performance features such as sustainable materials, better mechanical systems, design and modelling, as well as the cost for certification. According to recent updates of the relevant documentation, LEED certification for a new building under 4,645m^2 (50,000 sq. ft) will cost $2,900 as a minimum, and a newly constructed building over 46,451m^2 (500,000 sq. ft) will require at least $20,000 on LEED. Plus, there is a $900 initial registration fee.

Cost premium for any given project varies by factors such as building characteristics, location and certification level aimed at. Certification level is determined by the accumulated number of credits, which are applied for each fulfilled assessment criterion. There are some basic criteria that can easily get scores without much cost premium; others are harder to meet. Higher level of certification is naturally associated with higher premium as more criteria should be fulfilled, higher scores gained, and more funds expensed in order to do so.

In spite of all the fiscal and non-fiscal future benefits of this upfront investment, the very fact of the additional cost seems to be the most significant barrier for enterprises aiming for ***LEED*** *certification. Investors are driven primarily by the financial gains generated by their properties, which should return an expected payback on investment within a reasonable timeline. Fortunately,* ***LEED*** *certified buildings are documented to have generated* ***tangible, revenue-driven benefits of LEED certification.*** *Due to such benefits, as USGBC reports, the number of* ***LEED****-certified homes have jumped by 19% since 2017.*

LEED Certification Level Cost Premiums

The Gains

LEED's financial benefits translate into increased productivity and higher Return on Investment (ROI). A study of several LEED-certified buildings and their operating performance has shown that for existing green building projects ROI increased by 19.2% on average, while it rose by 9.9% for new green buildings. Another large firm reported a full payback on their investment in under 8 years. A study conducted by Kats et al. (2003) further investigated that 33 LEED buildings in the US had a cost premium of 1.8%, but at the same time financial benefits generated during the lifecycle of the building were 10 times higher than the upfront investment costs.

Apart from signalling the intent to implement environmentally responsible building practices, LEED also helps position the developers as reputable leaders in the industry. As LEED gets more and more popular, participants in the LEED certification scheme seek marketing benefits through 'green signaling', which increases demand from the end users, distilling down to higher occupancy and higher rents. Operating cost reductions are primarily driven through the energy-efficient design. LEED certified properties generate higher value for investors on both lease and sales prices.

On the end-user side, LEED attracts diverse groups of customers and tenants. In terms of LEED offices, recently, increased focus on environmentally friendly materials and sustainability resulted in employees who are more motivated than ever to work for a company promoting a higher standard of living both for employees and also for the community. USGBC reports that 90% of respondents like LEED-certified offices, while 79% would prefer to take a job in LEED-office rather than non-LEED. USGBC further claims that "in today's highly competitive job market, if companies want to attract and retain highly skilled employees, they must demonstrate a commitment to environmental, human, and economic sustainability". Also, better lighting in LEED-offices and natural sunlight boosts overall productivity and brings 27% reduction in the incidence of headaches, which in turn leads to 0.7% cost reduction in employee health insurance - $70 per employee annually.
These very tangible commercial byproducts of being LEED certified are an incentive enough for many to seek an upgrade to a greener standard. A thoroughly business-minded move, such a decision has as a strong positive impact upon public health and the environment, and contributes to creation of a more sustainable real estate community.

Financial Benefits of LEED

CASH FLOW PARAMETER	EFFECT	RANGE
Rental Income	↑	*Up to 23%*
Occupancy	↑	*Up to 17%*
Operating Costs	↓	*14.3-25.8%*
Risks	↓	*0.36-0.55%*
Sales Price	↑	*Up to 43%*

Rent

Green certification can bring rental premium of around 23%. Today's eco-conscious consumers are looking for green options and are willing to pay higher rents as they value increased productivity, improved indoor air quality, access to natural light, premium HVAC systems, recycling possibilities, electric car charging stations, walking distance to services, and access to public transportation.

Moreover, in some LEED certified buildings, operating costs have been documented to be 5.40% lower than in non-certified buildings. In net lease structures tenants pay base rent and operating expenses such as utilities. When operating costs are lower due to energy efficiency of the building, the landlord can charge higher rent, leveraging the lower expenses. Some suggest that LEED buildings with net lease structures enjoy a rent premium of 8.6%. On the other hand, in gross lease structures where investors are responsible for operating costs, they might get motivated too to invest in green design and get possible savings.

Interestingly in some places, like Helsinki, people tend to pay more for desirable building features and location – appropriate site in an environmental context. Here certification could be seen as an important differentiation factor from other non-LEED buildings.

Some studies even show that in some places LEED has become the norm and is no longer considered a differentiating factor. Consequently, green certificates have led to higher rental premiums in developing markets compared to more established markets, such as the US and the UK, presumably reflecting the relative scarcity of certificates and the lower sustainability standards in emerging economies.

Occupancy

As LEED buildings bring several benefits for tenants, it would be justifiable to expect the occupancy rates of certified buildings to be higher than those of regular buildings. The research findings show up to 17% higher occupancy in LEED-certified buildings, compared to non-certified ones.

Value

Green buildings generally are assumed to be high-quality and high-performance facilities. Such efficiently operating buildings are more attractive to employees and investors. Additionally, a younger generation of homebuyers who want to live more sustainably enter the housing market daily and choose LEED certified homes or redesign them afterwards to meet LEED standards. Adding such modifications to the home now may increase its value later. If a building is LEED-certified, repute – an important intangible asset - further increases the buildings' value. However, it should also be mentioned that there is no one-size-fits-all way for estimating the value LEED certification will bring to each particular building.

Low risk

Green buildings are associated with lower default risk. The study by An & Pivo (2017) claims that being green led to a 34% reduction in loan default risk. This can be due to green buildings producing green rent premia, which can be dynamic and hedge against risk in down markets. Higher rent rates can in turn increase the debt service coverage ratio and lower the default risk.

Sales

The signaling effect of green certificates and their power are important. Sales processes are often faster in certified buildings. Additionally, lower risk, lower operating costs, higher rents and other benefits usually lead to higher sales price premiums for LEED-buildings compared to the regular ones. When comparing LEED certified and non-certified multifamily residential properties, the certified properties had an added 4% premium. However, higher sales premiums might also be due to higher construction costs from meeting certification requirements.

Notably, in the US, LEED buildings also benefit from tax incentives, better loan conditions, construction permits, reduced fees, and grants.

Tax Incentives in the USA

Initial investment costs represent barriers to entry until a return is realized. Tax incentives can reduce such barriers and unlock potentials for investors to save and free up capital for future investments. Types of tax incentives are corporate tax, income tax, property tax, sales tax, etc.

Tax incentives are determined by measuring energy savings by a building. This means measuring improvements in how much energy consumption was reduced compared to where the building started. Energy saving shows incentives in environmental conservation and innovations, and those energy conservation measures will qualify building for tax credit.

For example, Chatham County in Georgia designed a five-year full property state and county tax abatement for commercial buildings that receive LEED Gold certification. It also provides a reduced abatement for the next five years (a reduction of 20 percent each year). Furthermore, there is a 100% tax exemption for LEED certified buildings in Cincinnati, Ohio, not to exceed $500,000 over 15 years for new buildings and over 10 years for renovations.

Connecticut also incentivizes builders to develop green buildings and offers Tax Credit for those who meet or exceed LEED Gold Standard for commercial construction, renovation or rehabilitation projects. Allowable costs will be the basis used in determining the amount of any tax credit. If the allowable costs per square foot exceed the statutory limit $250-1 ft^2 (0.093m^2) new construction/$150-1 ft^2 (0.093m^2) for renovation, the state will reduce allowable costs until in compliance. The authority placed a $25 million cap on the total amount of tax credits that can be provided under this program. However, there is no individual cap placed on the amount any single project could be provided.

Grants

Grant programs can offset some of the increased development costs that arise from a green building project. Grants can be used to subsidize the cost of certification or as lump sum amounts applied to the total cost of the building. These incentives are typically awarded in a single, monetary contribution, and at the same time offer jurisdictions the opportunity to focus on particular features, such as HVAC systems, windows, photovoltaics, water systems, etc. For example, in King County Grant awards are available to projects to be able to achieve a 75% recycling rate for all construction and demolition debris, a reduction in landscape irrigation and a building's water use. Projects awarded LEED Silver will receive $15,000, LEED Gold will receive $20,000, and LEED Platinum will receive $25,000. 50% of the grant is awarded upfront, and 50% at project completion. The grant money must be returned if the project does not achieve performance results.

Loan Incentives

Green buildings carry financial benefits of lower operating costs for owners and tenants; social benefits of better-quality housing for inhabitants; and environmental benefits for everyone. Due to such benefits more banks are willing to offer favorable loan terms for green buildings and support developing environmentally sustainable real estate.

For instance, in the US, Fannie Mae - The US Federal National Mortgage Association is offering new lower interest rates for green building certified multifamily properties. They are granting a 10-basis point reduction in the interest rate of a multifamily refinance, acquisition or supplemental mortgage loan. Similarly, Freddie Mac and the Federal Housing Administration, as well as Natixis corporate investment banking company in the EU offer discounted financing solutions for LEED-certified buildings, including interest rate reductions, increased loan proceeds and rebates.

Also, there is US Small Business Administration (SBA) that offers loans with low down payments and low, fixed, long-term interest rates without future fluctuations to borrowers for LEED green buildings and for projects that deliver certain public benefits. For example, LEED certification for *sustainable design* qualifies up to $5 million loan per borrower at SBA. This is both an incentive to build green and an incentive for existing buildings to become green and achieve certification.

Interestingly, a solar panel array was installed on the roof of The Rio Tinto building of Mechanical Engineering Department of the University of Utah, which provided an additional 5% annual energy-cost savings for the building, gaining a LEED Gold certificate afterwards. This new 34.2-kilowatt solar panel system was a $24-million-worth renovation, but The Revolving Loan Fund had an incentive to provide the up-front costs for the project, enabling the team to achieve enough credits for LEED Gold Certification. Following the project completion, the loan will be paid back to the fund through savings from reduced energy costs to the university. The loan will be paid in 8-15 years, but the university will be likely to benefit from those savings for the remaining life of the equipment - usually 25 years

Structural Incentives

There are some other structural incentives with LEED, for instance, municipalities can significantly reduce the duration of reviewing of construction permits, reduce fees for permit review, and allow developers to start construction in exchange for committing to specific green building standards. In case of green building practices, some municipalities may allow Floor Area Ratio and density increase. Many municipalities are also offering free planning or certification training and assistance.

Note:

While reviewing material gains of LEED certification and financial incentives that LEED properties are eligible for, we should note that conclusions are heavily drawn from US real estate market data and the results may be somewhat less applicable to other markets.

Looking Ahead:

Over time the global non-residential green buildings market is expanding and so is the green home market. Our next article will introduce energy efficient, ecological, affordable, and comfortable construction concept - ***Passive House.***

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