

# Financial Feasibility of LEED Certified Buildings for Developers and Investors

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This is a case study on a small to mid-size private equity firm that deals with real estate development as well as investment to find out the financial feasibility of LEED certified buildings in today's building climate. Interviews with two investment analysts at this firm who are versed in LEED certification about how it is looked at in their company as well as the broader industry will give insights into the feasibility of developing or investing in environmentally friendly buildings. This impacts the real estate and construction industries due to the fact that developers and investors are often times a large part of the clientele for contractors. This paper will look to industry professionals to find out some of the conditions that are needed in order to make capital investments in LEED buildings, such as geographic location, tenant motivation, and large institutional sized products. The findings of this study were that for medium to small sized investors and developers focused on maximizing rate of return through short hold periods, there are little incentives to invest in LEED certified buildings, however the analysts acknowledge that there are benefits and could be effectively implemented in long term hold approaches or for very large institutional investments.

**Key Words:** LEED certified, real estate, financial feasibility, investment, development, environmentally friendly, green

## Introduction

The built environment of today is one that has been formed over hundreds of years of building with traditional techniques and standards. This is something that is changing as the world becomes more aware of the impacts that our buildings and cities have on our environment (Wikipedia). More and more buildings are now being designed, built, and remodeled to reduce their carbon footprint on the world and also their consumption in energy and water. With a multitude of different methods and techniques to accomplish this as technology advances it only looks like this is a trend that is set to continue into the future and will be something that people look at when leasing or purchasing a building. These changes also have many challenges in order to make them, whether it be complex designs, or large costs to complete there is always something more difficult about developing a building that is environmentally friendly.

As people start to adopt the idea that the build environment should be a sustainable and environmentally friendly place, many new building standards have come about to try and help developers and builders construct projects that are energy efficient and sustainable (USGBC). The most prominent of these standards is the LEED (Leadership in Energy and Environmental Design) building standard. Created by the U.S Green Building Council, LEED is the most widely used green building rating system in the world (USGBC). A LEED certified building is one that is designed and operated to the highest level of sustainability. The building standard is one that can be applied to any building type including offices, homes, churches, and schools. The standard is also not limited to new construction but can also be applied to renovations, interiors, whole communities and even entire cities.

The LEED building standard is broken down into four categories of certification, Certified, Silver, Gold, and Platinum, needing 40, 50, 60, and 80 points respectively. The LEED standard is computed through a point system with prerequisites for any certification. The point system is measured through categories such as location, energy usage, water usage, material choices, access to bicycle facilities, and reduced parking footprint. Each of these

certifications means that the building has reached a certain amount of points in any of the given categories and the building is given an overall score of the lowest point category.

Implementing the LEED building standard is a challenge for developers, designers, and contractors. Things like building location and advanced energy efficient technologies and certification fees mean that often times developers have to pay more for an urban plot of land and acquire newly developed technologies that offer greater efficiencies but at a higher upfront cost. Other costs such as more challenging design work and longer and more difficult construction schedules can also come into play when constructing a sustainable building. The implementation of sustainable building practices has a large upfront cost that could possibly detract from operating revenues in any investment property. However, the additional savings of less energy and water usage could offset some of these costs over the long term and today we are seeing more and more development of sustainable buildings and it could be a sign that environmentally friendly buildings are becoming more cost effective. This paper is attempting to understand the position of small to mid-size real estate developers and investors through a case study to better understand how their business model fits into the changing landscape of today's built environment.

### *Background Information*

According to the USGBC, "The global green building market grew in 2013 to \$260 billion, including an estimated 20 percent of all new U.S. commercial real estate construction." This is a trend that has been increasing over the years because of many factors. One of the main reasons is new age companies have mission statements to help the environment. This means that they are willing to pay extra to commission green buildings or pay premium rent for LEED certified buildings. This is a trend that is not exclusive to one area of construction, "A survey of 500 corporations completed by Grant Thornton in the summer of 2007 indicated that 75% of executives said that their companies would be spending more on environmental programs in the future." (Miller, Spivey, and Florence p. 386). This highlights the direction of many of the companies today and therefore will translate into more sustainable buildings to come from this trend. As more and more companies look to reduce their carbon footprints the easiest step would come from moving into or building a office or production facility that incorporates green technologies. A 2018 survey done by the USGBC and Dodge Data and Analytics showed that, "global green building activity continues its ascent, with significant increases expected in 19 countries over the next three years. Almost half of the total respondents say they expect to build more than 60 percent of their projects as green buildings by 2021. Building owners, especially, were excited about the growth in green building, with 57 percent planning to make the majority of their projects green by 2021" (Benjamin). Figure 1 shows the data collected from the same study.

## Level of Green Building Activity (According to Global Respondents)

Dodge Data & Analytics, 2018

1% to 15% Green Projects
  More Than 60% Green Projects  
 Exploring  
 (No Green Involvement)
  31% to 60% Green Projects  
 16% to 30% Green Projects

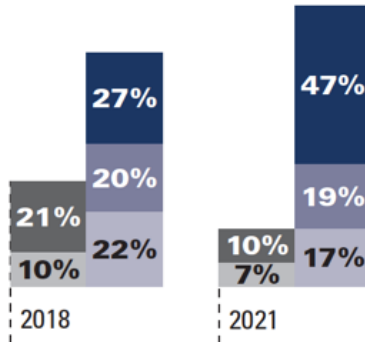


Figure 1

Though the trends point to increased investment into green buildings and other technologies there are considerable upfront costs to consider. Some of these upfront costs come in the form of fees for the certification process as well as the increased costs for building and materials. “According to surveys of those meeting the minimum LEED certification, the average costs are reported to be about 3% extra versus the zero-figure provided by the USGBC” (Miller, Spivey, and Florance p 391). This additional cost is for the most basic LEED certification and goes up considerably the higher tier one tries to attain. This cost can vary depending on the region you are building in due to weather and site locations. Because of the fact that points are offered for buildings in urban areas close to mass transit means that there are most likely additional costs for land acquisition. The data collected in table 1 shows the increased costs of LEED certification based on percentages of the overall project costs depending on location and gives insight into the cost differences between different certification levels.

### Extra Costs to Go Green by Region

Market	Platinum	Gold	Silver
UCSB	7.8%	2.7%	1%
San Francisco	7.8%	2.7%	1%
Merced	10.3%	5.3%	3.7%
Denver	7.6%	2.8%	1.2%
Boston	8.8%	4.2%	2.6%
Houston	9.1%	6.3%	1.7%

Table 1 (Matthiessen and Morris p. 16)

Even though there are increased costs of construction for LEED certified buildings owners can benefit from their investments in multiple ways. The main way being lowered operating expenses in the form of less energy and water usage. “Premiums for eco-certified buildings are attributable to direct benefits such as energy cost savings and intangible labeling effects stemming from marketing or reputational benefits” (Freybote, Sun, and Yang p. 587). This means that over the lifetime of the building reduced operating costs allow for increased rents especially effecting the triple net leases that most businesses use when renting out office space. With many of the points attributed to LEED certified buildings coming from decreased consumption of utilities like water, electricity and better insulation this allows for lower overall utility bills. For example, “One major hotel project spent an estimated \$184,000 for building energy efficiency improvements and has realized a yearly savings of \$58,035, yielding a 3.17 year break-even point” (USGBC p. 2). This improvement shows that for the lifetime of a building the investment into green technologies allows for increased cost saving. These cost savings are then marketed to businesses and thus command higher rents for owners allowing them to more easily justify the additional construction costs. Studies show that “LEED building certification increases sales prices for condos in our sample. In particular, LEED building certification adds a premium of 3.8% to the sales prices of certified condos” (Freybote, Sun, and Yang p. 595). This price premium for resale of condos can give insight into the effects of certification on other building types as well, such as office buildings. The investment in green buildings affects a company’s reputation and allows them to better market themselves to their environmentally concerned customers. As more and more of these companies look for environmentally friendly buildings to lease to better their reputation the demand and therefore rents for the buildings will increase. The USGBC found, “Today's tenants understand and are looking for the benefits that LEED-certified spaces have to offer. The new Class A office space is green; lease-up rates for green buildings typically range from average to 20 percent above average”. All of these benefits highlight why developers and investors are starting to move to more green buildings despite the cost of construction increases.

Although there are certainly benefits to building LEED certified buildings there are also some drawbacks. The main of which is the considerable upfront costs that must be paid in order to construct these environmentally friendly buildings. Most of which comes from the added technologies and design work that needs to be accounted for to get the certification level desired. This means that larger amounts of capital are required to start the process of development and can often times deter owners from making the decision to go green. Even though some of these costs can be mitigated due to higher rents or resale values that takes time and can hurt the projects bottom line. In order to see some of the cost savings on operating costs a developer will likely have to invest more to go for a higher certification level meaning that the majority of these savings and benefits can only be realized with significant investments to reach a higher level of certification such as gold or platinum. Another reason that develops might not want to get into LEED certified buildings is the special materials that are needed to construct them. Often times they are harder to get in certain areas and this increases the construction schedule and makes the return on investment period longer. These advantages and disadvantages were discussed with financial analysts and industry professionals to better understand how their business model is affected by these trends and the reasons for them to either join in or stay away from LEED certified projects.

## **Research Methodology**

The research done for this paper was a combination of background information from previous academic papers as well as online publications familiar with LEED certified buildings and the affects they have on real estate, as well as qualitative research done through interviews with financial analysts at a small to mid-sized development and investment company. The preliminary research done allowed for the creation of thoughtful questions that the answers give better insight into the company’s position on green buildings as well as the broader industry. The first steps of the research was done by examining previous studies and information relating to the impacts of LEED certified buildings on real estate development and investment. This was accomplished through various academic papers and thoroughly understanding their conclusions and the data collected. The second step was approaching industry professionals that were involved in the financial analysis of real estate products as well as acquainted with the LEED standards and their methods. This was accomplished by finding a small private equity firm in an urban area that had analysts working on evaluating the financial viability of projects and had previous education and designations from LEED. The third step was coming up with open ended questions for the interview to better understand their own and their company’s opinion on these LEED certified buildings and if they thought it could be

a profitable endeavor. The fourth step was conducting the interview with the analysts and investors to find out how their business model and investment goals were affected by these green projects. The final step was to do follow up questions and to take the information from the first-round interviews as well as the follow ups and analyze their reasons for either joining the trend in environmentally friendly buildings or staying away from it.

## Research Results

Despite the research showing that there are some benefits to LEED certified buildings for investment and development there are certain criteria that are needed for the investment to pay off. For example, investing in urban areas that have a high percentage of companies with green mission statements can play a large part in the ability to get additional rental income from the properties. Despite this company investing mostly in the pacific northwest and the Los Angeles area, where there is a large amount of these companies, they still figure the benefits would be hard to attain due to the large drawbacks. The analysts I interviewed with were very aware of these drawbacks and the potential benefits of investing in LEED certified buildings due to their LEED designation. Their firm however is not one that can easily realize the benefits, outside of being more environmentally friendly, that come from investing in green properties. Currently the issues that are holding back their investment into certified properties is their requirement for individual investors in the properties they acquire, their short hold times, and their company's overall size.

The firm I interviewed has an investment structure that is common among smaller investment shops but that differs greatly from the large institutional investors. They structure deals individually and find investors for each building they want to develop or purchase. This means more often than not these are high net worth individuals or corporations looking to make the maximum amount of return on their money as possible. With this structure it makes it very difficult to convince investors of the benefits of spending extra capital to acquire or develop a LEED certified building. This can be seen when an interview respondent says, "Our basic investment structure has no incentive to focus on LEED certification as each of our investments require new capital partners with varying investment priorities. Our current strategies seek to maximize the economic bottom line, as opposed to the popular triple bottom line (profit, people, planet) of impact focused investors". When the financial payoffs are often time the main concern the decision to invest in LEED buildings is often time scrutinized due to the fact that there is no guarantee of seeing higher rents or resale values, even though on average it is true. "Drawbacks are paying a premium in acquisition and/or development costs that don't translate into higher tenant lease rates. Just because the building is certified, doesn't mean the tenants will pay more. Both parties must be aligned for this to happen". This response highlights the need for finding the right tenant or buyer in order to capitalize on the higher rents or resale values. There is never a guarantee of finding these people and uncertainty makes the sale of larger capital requirements for individual investors even more difficult. Even if tenants were brought on before acquisition or development of the building that would mean a huge uptick in required work just to assure the benefits of the investment was realized and this is something that just doesn't seem very viable for numerous reasons.

Due to the company's desire to get the maximum amount of return on investment for their clients they usually only hold buildings for 3-5 years. This allows them to see meaningful income streams from rents as well as large payouts upon resale and avoiding the large amounts of interest on loans used for the financing of the purchase. With many of the benefits of investing in LEED buildings coming from cost savings over the long term this means that because of their short hold time they will never realize these gains. This is highlighted in the interview when a respondent said, "The obvious benefits are operating efficiencies in hospitality, multifamily and gross office leases where common area expenses aren't passed-through to the tenant. However, these efficiency benefits have greater significance with longer-term investment hold periods and larger scale capital than our current focus". The firm also currently is not investing in very large hundred million-dollar buildings that can see huge savings in reduced electricity and water consumption costs but alternatively smaller twenty million-dollar buildings where reduced utility costs are less of an impact. This is the final reason that this company does not see the benefits of investing in LEED certified buildings, because of their size. As mentioned previously the larger buildings see more significant cost reductions for operations compared to the smaller ones that are mostly purchased and developed by this company. Small firms have an advantage here in that their strategy doesn't consist of quick hold periods, and institutional investors that can scale up to purchase the large buildings that can see the most benefit from increased efficiencies. As stated by a respondent, "Top beneficiaries would be family firms (who hold indefinitely) and institutional investors (life ins., pension funds)". With mid-size and some smaller firms that are not focused on long term hold periods there are

significant drawbacks to investing in LEED certified buildings and these are the reasons this company has decided to stay away from the trend so far.

Even though the analysts interviewed so far understand the benefits that LEED certified buildings can offer they do not see them benefiting their company due to their investment structure, investment period, and size. A respondent summed up their feelings by saying, “I believe LEED certification does garner a premium at sale. However, the premium is relative to the level of certification and project size. As mentioned previously, and owner/user size office building may be very attractive to a small family firm with a LEED certification. And again, on the other end of the spectrum, projects in the hundreds of millions with an institutional investor would pay higher price per foot to save on operating expense per foot”. The benefits for investing in LEED buildings are certainly there but for this company those benefits do not squarely fit with their investment strategy and therefore it is easier for them to stay away from these buildings until they become the norm.

## **Conclusion**

The trend of environmentally friendly buildings and companies is certainly here and has been increasing the last few years and will probably continue to do so into the future. This is due to the increased value people are putting on brands and lifestyles that have minimal impact on our planet in regard to natural resource consumption and renewable technologies. All of these things have led to the increase of development of green buildings and this has led to standards such as LEED to better quantify the impact these projects have on our community and planet. Development of these LEED certified buildings however comes with significant upfront costs in the form of fees, increased design work, expensive yet efficient technologies, and hard to get materials. These are all costs that are paid for before the development of the building and can often times deter owners from these types of projects. However, these increased costs do not come without benefits. Often times LEED certified buildings will have increased rental rates, higher resale values, and lower operating costs, not to mention the impact they have on keeping our built environment greener. Even though the benefits of these green buildings are clear there are still obstacles in getting investors and developers on board. For small family owned investment firms that have long hold periods investing in more efficient buildings that garner higher rents is a no brainer, and same goes for large institutional investments that use huge amounts of water and energy to run and often target large tenants that most likely have green mission statements. However, for smaller to mid-size investment firms with strategies that involve shorter hold times and small to medium sized commercial properties, like the one interviewed for this study, the benefits seem to not be as prevalent. Firms that have a goal of creating the maximum return for their investors have a hard time justifying the upfront costs that LEED certified buildings require, especially when they only hold them for short periods of time and can't scale up the main benefit of an efficient green building. As the green trend continues though, there will be more and more certified buildings and they will slowly become the norm, allowing firms like the one studied here to enter into the market of LEED buildings without many of the additional costs and risks that come with them today.

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## **Appendix A – Interview Questions**

Do you have experience with LEED certification? If so, how did you get it and what are your qualifications?

Does your company have any specific strategies regarding LEED on either acquisitions or developments? If so explain, if not, why not?

Do you see any benefits to your company by investing in LEED certified buildings? If so, what are they? If not, why?

Do you see any drawbacks to investing in LEED certified buildings? If so, what are they?

What ways do you see to overcome the upfront costs of developing a LEED certified building?

Have you noticed LEED certified buildings having a premium resale value? If so, what reasons do you think accommodate this?

Do you know if tenants have a preference for LEED certified buildings in the areas your company invests in? Why or why not may this be the case?

Are there any specific geographic areas your company invests in or knows about where LEED certified buildings have premium resale values or more demand for tenants?

Do you know of any additional maintenance costs to for LEED certified buildings? If so, please explain.

Does your company currently own any LEED certified buildings? If yes where are they located, and if no why not?