2014 Leader in the Light Award Entries & Trend Analysis

Prepared by RealFoundations for NAREIT

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Introduction

NAREIT®'s annual Leader in the Light Award (LitL) honors NAREIT member companies who have demonstrated superior sustainability performance across their portfolio. The Leader in the Light Award is presented in eight property sectors: Diversified; Global (for non-U.S. companies); Health Care; Industrial; Lodging/Resorts; Office; Residential; and Retail. NAREIT has been presenting the Leader in the Light Award since 2005. Beginning in 2012, the judging criteria was modified to include the results of the Global Real Estate Sustainability Benchmark (GRESB[1]) Annual Survey. Incorporating GRESB Survey results into the Leader in the Light judging criteria enables the companies competing in Leader in the Light to measure their performance against a global benchmark.

In addition to the Leader in the Light award, NAREIT also hosts the annual Leader in the Light Working Forum. The 2015 Working Forum was held at the Hyatt Regency in Reston, VA on January 21-22, 2015. This event is a hands-on collaborative workshop that provides NAREIT corporate members the opportunity to advance the sustainability conversation and to better understand leading sustainability practices among their peers. Over 75 attendees representing a cross-section of the real estate industry, including 38 from NAREIT corporate member organizations, participated in the event this year. The Working forum was also attended by representatives from the Global Real Estate Sustainability Benchmark (GRESB), the U.S. EPA's ENERGY STAR program, the U.S. Green Building Council (USGBC), Carbon War Room as well as by academic and consulting organizations focused on advancing real estate sustainability.

Given the success of the LitL Working Forums, it is apparent that sustainability and energy efficiency have become an integral part of NAREIT Corporate Members' operations. Participation in industry surveys, such as the NAREIT Leader in the Light supplementary questions, provides quantifiable information on the true impact of each respondent's initiatives. This analysis provides a synopsis of trends over the past 4 years (2011-2014) based upon the information gathered through LitL Award Entries. Various important metrics demonstrating the increasing impact of energy efficiency/sustainability related investments are presented in this paper, including incurred project costs, savings attributable to such projects, and more across all NAREIT Leader in the Light projects[2] submitted in 2014 with respect to projects submitted in previous years. In order to accurately assess the trend over a period of time, information from 2014 LitL entries was compared to a 3-Year Average (2011-13). Time series data has been used for comparing industry trends in order to smooth out short-term fluctuations and highlight longer-term trends.

Methodology

RealFoundations'[3] Energy Solutions team has analyzed the survey responses to the LitL questionnaire for reporting years 2011, 2012, 2013 and 2014. The first step was to review raw information, i.e. the information submitted to NAREIT

[1] The Global Real Estate Sustainability Benchmark (GRESB) is a dynamic benchmark used by institutional investors. GRESB is an industry-driven organization committed to assessing the sustainability performance of real estate portfolios around the globe. www.GRESB.com

[2] Due to confidentiality reasons, and to focus on the primary objective of evaluating industry-wide trends, the information is presented in way so that no single entity or their performance is identifiable.

[3] RealFoundations is a professional services firm focused on the real estate industry. With offices on four continents, 250 client-serving professionals and delivery capabilities in China and India, RealFoundations provides Management Consulting, Managed Services and Energy Solutions to developers, owners/operators,

as a part of each GRESB Survey response, and thoroughly scrutinize it to ensure robust data quality. RealFoundations standardized this data by requiring each data point to meet certain requirements—in order to guarantee reliable comparisons—and removed incomplete entries and outliers.

The following criteria were established for inclusion of information in this analysis:

- Reported projects must contain cost (Project Investment) information; and
- Reported projects must contain information on one of the two benefits (energy or financial).

Data that did not meet the above requirements was not considered for the purposes of this study. The remaining data was then collated and organized by the year of response and project type. There were a few exceptions to these rules, as listed below:

- Behavioral measures or DR (Demand Response) programs which require no investment for implementation.
- Operational efforts, such as energy information portals and benchmarking projects which fall under the category of enablers rather than directly reducing end-use energy.
- A separate category for Total Investment was created (to capture the total investment metric), which included all project investments, including ones without energy savings or financial returns information.

For the purpose of this analysis, each project was categorized into one of the following types:

- Lighting (including integrated lighting controls)
- HVAC (Heating, Ventilation & Air Conditioning)
- Building Envelope (façade, roof, windows)
- Controls (building-wide controls)
- Whole Building (projects reported at the building scale, instead of separately for each measure)

Trend Analysis

The results from this 2014 analysis provide some interesting insights on sustainability projects reported by LitL Award participants. Overall, in 2014, Leader in the Light respondents invested significantly more in energy-efficiency projects than the three-year average. The investments demonstrated an increase in total returns as well, when compared to the historical average. The ROI reported by 2014 energy-efficiency investment was substantially higher than the three-year average comparison period. Additionally, 2014 showed a change in the distribution of investment dollars, deviating from the categories that have historically seen the most attention from real estate owner/operators.

service providers, institutional investors and corporate occupiers. From the building itself to the way it is used, operated and financed, no firm understands the inner workings of the entire real estate ecosystem as well as RealFoundations. We Make Real Estate Run Better. www.RealFoundations.net

Investments, Returns & ROI

The graphic below (Figure 1) captures information related to project investment, realized (or projected) savings and the resultant ROI (Return on Investment). Total project investments in 2014 amounted to $98.2M (with reported savings) and $104.7M (when projects with missing savings information were included). This figure was roughly 29% higher than the 3-year moving average of $76.2M for 2011-13. Additionally, the value of total savings of $39.5M from such projects in 2014 is up roughly 96% over the 3-year moving average of $20.2M. Lastly, the ROI for projects reported in 2014 was 40%, compared to the average ROI of 26% during the 2011-2013 time period.

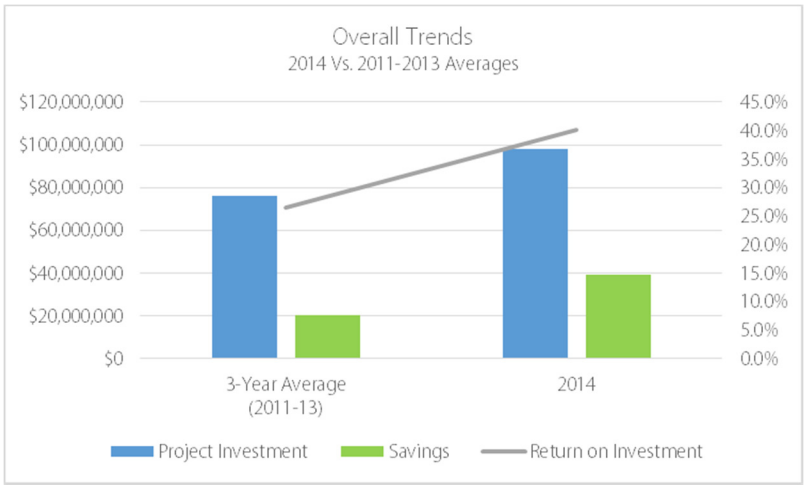

Figure 1: Overall Trend Comparison

Total Investments

RealFoundations also analyzed the total investment dataset in order to determine the investment allocations made to each project type. For this analysis, reported projects which contained investment/cost data, but did not include any returns data (financial or energy savings) were included in the data set. Figure 2 below illustrates the investment allocations made during the 2014 and 3-year average (2011-13) time periods.

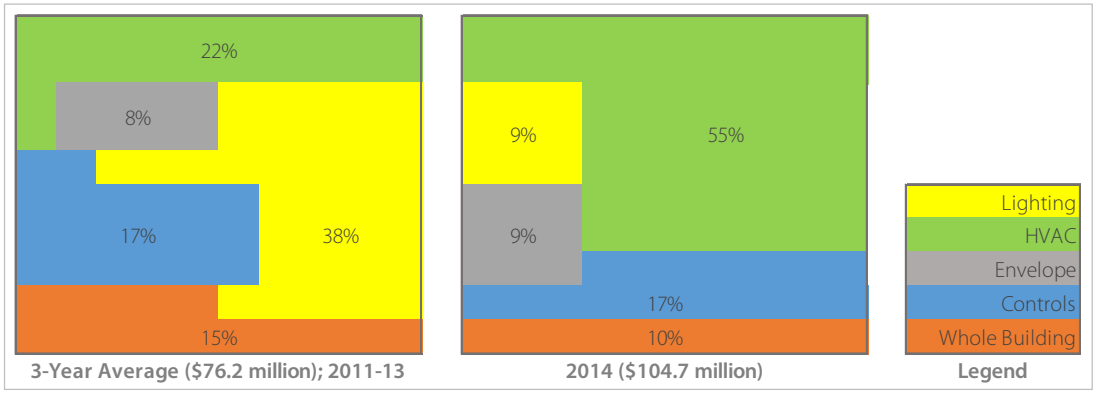

Figure 2: Investment Allocations, by Project Type (Energy End-Use)

As is apparent from a closer look at the project investment breakdown above, lighting related projects attracted most investment dollars as a proportion of total project investments during 2011-13. On average, during that time period, investment in lighting projects reflected 38% of total investment. Lighting was followed by HVAC and whole-building projects (such as metering/monitoring, demand response, or other measures that have whole-building ramifications). However, in 2014, this landscape went through some changes. More than half of the reported investment dollars in 2014 went towards HVAC projects, and an additional 17% was invested in controls and energy management systems (EMS) related projects.

This data, in conjunction with the positive trend in project ROIs, suggests that 2014 Leader in the Light respondents are continuing to strategically target investments with the intent of maximizing returns. HVAC systems consume a lot of energy to maintain the required comfort conditions in a building, so targeting HVAC is a tactical approach to increasing savings across a building or portfolio of buildings. Simply upgrading to more efficient HVAC equipment does not guarantee that energy use will be minimized where possible, so integrating sophisticated controls and EMS systems, to optimize operational metrics, is a logical approach to making investments to HVAC infrastructure.

Assuming that the reported projects represent the general trend of energy retrofit-focused trends in the industry, it is clear that simple/low-hanging projects (lighting) fell to the wayside in 2014, and more emphasis was placed on complex projects (HVAC, controls). Given that lighting was a heavy focus in the previous three years, it is possible that many respondents have already plucked the "low-hanging" fruit of lighting replacement projects and are now turning towards more difficult and capital-intensive energy efficiency measures, explaining the upward trend in HVAC and controls projects compared to the downturn in lighting project investment dollars.

Project Counts by Type

When analyzing the number of reported projects by type, the 2014 data-set resulted in a drop-off from previous years. The total number of projects in 2014 was significantly less than the average count observed over the 3-year period (Figure 3). However, as a proportion of total number of projects implemented, lighting related projects were similar to the 3-year average (32% in 2014 compared to 31% during 2011-13), as shown in Figure 4. The number of whole building and building envelope projects were also similar (15% vs.16% and 3% of the count in both time periods, respectively). The real increase in 2014 was HVAC, representing 32% of the total project count. The proportion of HVAC projects was more than double that of 2013's and a sizable increase over the three-year average comparison period (only 20% of projects from 2011 – 2013 were HVAC projects). It is very evident that HVAC was a focus for real estate companies in 2014, though the data does not reflect whether this was a strategic decision or if these projects simply coincide with scheduled maintenance or replacement of equipment.

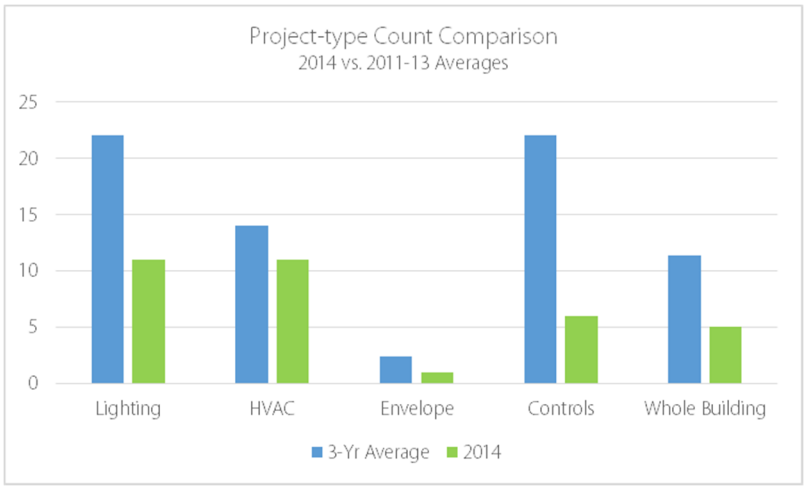

Figure 3: Number of Projects Implemented, by Type

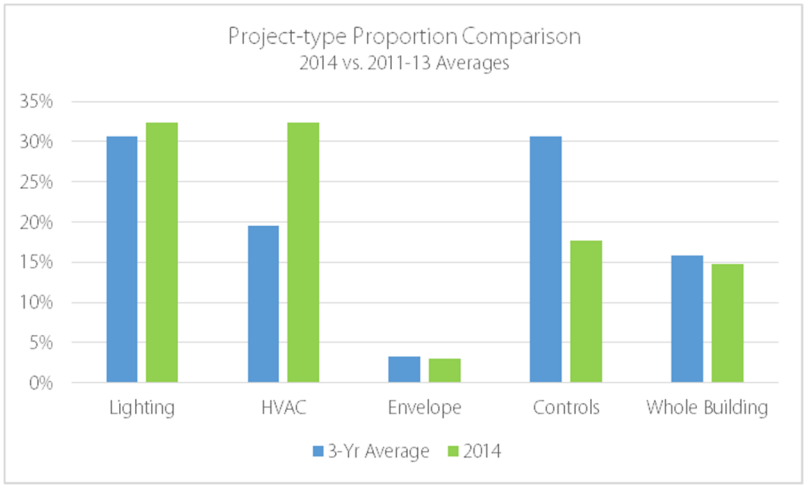

Figure 4: Projects Implemented as a Proportion of Total Investment

Average Project Investment

The final trend analyzed was the average investment made per project, by project type (Figure 5). As previously mentioned, there was a reduction in the overall investment made in lighting projects 2014 and the data set shows that this is due to both the number of implemented projects as well as the investment in the few lighting projects that were implemented and reported. It is unclear if this phenomenon simply because of more lighting projects being reported in the past three years or if strategic decisions were made to invest capital in other projects.

Other than lighting, the amount of capital invested in an average project went up significantly across the board in 2014. HVAC project increased >4x; envelope projects 2.5x; whole buildings projects 2x; and controls >4x, when compared to the three-year averages. From the reported information, it's not possible to determine the motivation for these increases. However, some conjectures can be drawn. For instance, as controls projects are often implemented in conjunction with HVAC replacements, it is logical that the industry chose to invest more in sophisticated controls projects to ensure optimal efficiency and larger returns from their HVAC projects.

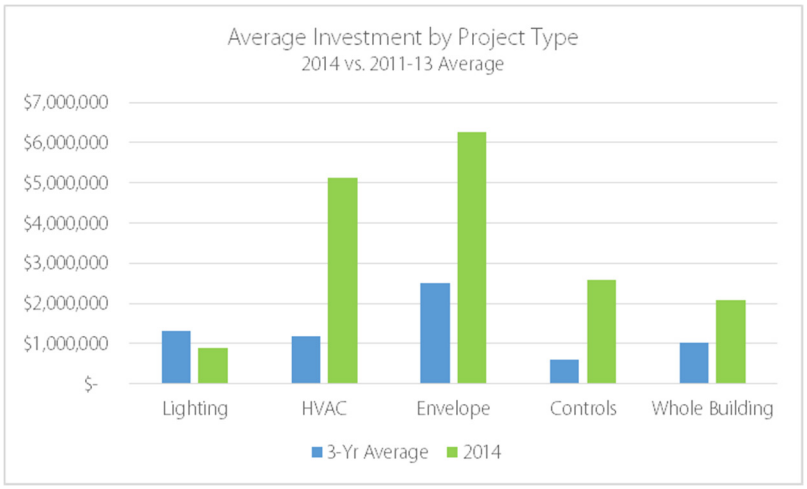

Figure 5: Average Project Investment, by Type

Conclusions

RealFoundations' analysis of the 2014 NAREIT Leader in the Light Award survey data leads to some good insights into the state of energy performance and investment in sustainability amongst the leaders in real estate for 2014. It is clear that energy efficiency continues to provide financial benefits as evidenced by both the higher volume of investments being made the higher ROIs observed in 2014. Following the trends seen in the past, it appears that real estate organizations are becoming more focused when it comes to energy management, making smarter investments in energy efficiency projects in order to maximize their returns over the life-cycle of the project or equipment.

2014 was unique compared to the past few years in that it featured a lower number of individual projects, even though total investment was well above the three-year average for each project type. Additionally, in 2014, there was an increase in HVAC-related projects, overtaking lighting as the leading project category for the respondents. The reasoning behind this phenomenon cannot be fully understood using only this data set, but we conclude that many organizations have already seized most lighting opportunities amongst their portfolios over the past several years and are now moving on to HVAC, as it is now the single largest contributor to energy consumption within the built environment. However, it is possible that the data reported in 2014 simply coincided with scheduled replacement for many organizations who reported, and the values are not as representative as they would have been otherwise. It will be interesting to see what the project mix and trends look like for 2015.

Lastly, since: a) participation in Leader in the Light Award related questionnaire is voluntary and limited to GRESB Survey participants, and b) the Survey format allows only top 2-3 projects to be reported per organization, there is likely a self-selection bias in observed data set. This issue is largely unavoidable as the respondents are allowed to decide entirely for themselves whether or not they want to participate in the Leader in the Light Survey and what to report, if they do. However, given that the Survey's voluntary nature or number of reportable projects hasn't changed over the past few years, the analyses and findings are assumed to be substantively correlated to the historical trends; even though they better represent the activities of the leaders in the industry than the entire target population.