

# Linking Sustainable Improvements to Retail Real Estate Value

## *A First Step: A Framework for Analyzing Property Value Impacts*

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**Abstract:** *While the potential for sustainable features to reduce operating expenses and optimize building performance is equally relevant for retail properties as for other types of real estate, the unique nature of retail properties may make a direct quantitative link from sustainable improvements to property value more difficult to identify. This article provides specific parameters to gauge the influence of sustainable features on retail real estate value and provides three key steps to realizing the potential value impact.*

Sustainability, with its focus on society and the environment both present and future, presents a special set of considerations that affect commercial real estate valuation. The costs and benefits of acquisitions, renovations and new developments, when viewed through the broadened lens of sustainability, no longer solely affect the property owner or investors. The core issue of “who pays and who benefits” becomes a much more complex issue in light of sustainability initiatives, and for retail properties, where triple-net leases and tenant control over the use and build-out of the space are more common than in other sectors, this cost-benefit misalignment (the “split incentive”) can be keenly observed. Properly valuing sustainable real estate attributes requires an understanding of the cost and benefits, how the two are—or are not—aligned, the degree to which they can be quantified, and in the case of determining market value, the degree to which the market values the feature(s).

To date, numerous studies<sup>1</sup> have examined the level of value premium to sustainable or high-performance properties in the office and residential sectors; few studies have examined this issue in the retail sector. The studies have indicated varying degrees of value effects on sales prices, rents, occupancy and rate of return, including no value impact, and have included properties with a wide range of sustainable improvements from minimal energy-efficiency upgrades to green building certifications such as Leadership in Energy and Environmental Design (LEED)

and Building Research Establishment Environmental Assessment Methodology (BREEAM). Studies attempting to isolate the value premium from sustainable features or attributes face many challenges, not the least of which is the definitional challenge about what constitutes a “sustainable” or “green” property and whether any value premium due to these features is robust enough to break through the noise of all other factors that affect value. In the retail sector, this latter challenge is particularly notable given the greater potential for highly specific locational attributes to affect value compared to other property types such as commercial office.

In the course of researching this article, the authors uncovered a seemingly paradoxical reaction to sustainable property attributes that echoes some of the same challenges faced by studies seeking to quantify a value impact from sustainable improvements. While those market participants interviewed seemed unwilling to attribute a discrete value impact to sustainability features or practices, all agreed that the results of sustainability initiatives that enhanced marketability, lowered operating expenses, and facilitated entitlements had real value in the marketplace. Potential explanations for this apparent paradox include the market participants’ unfamiliarity with sustainability features and practices as real property attributes, the prevalence of the split incentive, and the fact that the impact on net operating income (NOI), or the marketability of the center, becomes obscured when bundled with all other value-affecting attributes. Thus, it

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<sup>1</sup> For a concise summary of relevant studies and their results, see Hans Op’t Veld and Martijn Vlasveld, “The Effect of Sustainability on Retail Values, Rents and Investment Performance: European Evidence,” *Journal of Sustainable Real Estate (JOSRE)*, Vol. 6, 2014, pp. 163-167.

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may be that the value impact of sustainability initiatives is being misattributed to other property factors, rather than being called out as directly attributable to a specific sustainability feature or practice.

Equivocal or conflicting results aside, there is continued and growing interest in optimizing building performance among investors and property owners. To the extent that sustainable upgrades and projects may be viewed as best practices and therefore a way to achieve optimal building performance, there is a need for a set of specific parameters which a feature or project must meet in order to impact value. This article examines, from a valuation practitioner’s viewpoint, the various ways in which sustainable features may influence value for retail properties.

### Direct and Indirect Value Impacts

Just as other types of acquisition or capital improvement decisions must “pencil out,” decisions to embark on a sustainable renovation or development must also be financially feasible. While sustainable projects must meet the same financial litmus test as any other project, it can be more difficult to ascertain the benefit that can be attributable to the real estate for these types of projects.

In addition, sustainable building design and construction often involves a cost shift from ongoing operations to upfront capital outlay. Even when the cost and benefit are aligned, the timing of each can affect whether a value impact is recognized in the market. For someone with a short investment horizon, the operational savings may not be material enough to offset the upfront cost. That investor might not value a building that recently underwent a major HVAC upgrade the same way a “buy-and-hold” investor might.

Sustainable features can have both direct and indirect market value impacts that can be either positive or negative. Table 1-1 summarizes the main types of impacts in both categories. Direct impacts are readily quantifiable and affect the cash flow, such as rent premiums, lower energy costs, or higher or lower operating costs. Indirect impacts are more difficult to quantify and tend to affect the risk profile of the property. For example, is marketability enhanced? Does the project decrease obsolescence risk?

### Valuation Thresholds

Broadly speaking, a discernible market value impact will depend on whether or not the sustainable project or feature meets the following thresholds:

Table 1-1 Direct and Indirect Market Value Impacts	
DIRECT IMPACTS	INDIRECT IMPACTS
↓ Energy costs	↑ Marketability
↓ Water/sewer costs	↑ Absorption
↓ Waste/trash costs	Future proofing against sustainability risks*
+/- Operating costs	
Rent premium	
+/- Build-out (tenant improvement) costs	
Capital costs	
<small>* Sustainability risks can include energy price increases, scarcity or increased materials costs for tenant improvements, future building code compliance, etc. More information regarding real estate-related sustainability risks can be found in the authors’ prior work, “Integrating Sustainability and Green Building into the Appraisal Process,” <i>Journal of Sustainable Real Estate (JOSRE)</i>, Vol. 2, 2010, pp. 228-229.</small>	

#### 1. Is the sustainable feature/project’s impact

- measurable,
- durable, and
- tied to the real estate?

2. Does the market value the feature? If so, can this fact be objectively conveyed?

#### Measurability and Benchmarking

*Direct impacts* such as rent premiums, lower energy or tenant improvement build-out costs are readily measurable. But how does the unique nature of retail properties—triple-net leases, tenant-paid build-outs and end-users who frequent the premises only occasionally—affect the attribution of the value of those impacts?

Rent premiums clearly accrue to the real estate by increasing net operating income (NOI). While energy savings accrue to the property, they may or may not accrue directly to the property owner due to the triple-net lease structure common in the retail sector that typically shifts energy cost to the tenant, either as part of the common area maintenance (CAM) charge, direct metering, or both. If the landlord is responsible for replacing the HVAC but the tenant pays the energy bill, the benefit of upgrading the HVAC to a more efficient system accrues to the tenant, while the landlord pays the cost. Unless the landlord can recoup that capital cost through higher rent, or amortize the capital cost in the CAM charges, the cost and benefit remain misaligned, and

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the project is not economically justified from the landlord's perspective.

*Indirect impacts* such as marketability to the tenants and investment risk are more difficult to measure directly. Sustainable characteristics of a shopping center may connect with the values of a particular shopper demographic, such as the organic grocery customer, and thus may provide a marketing edge or attract certain desirable tenants. The indirect impact of enhanced marketability may lead to measurable direct impacts: higher rents, shorter absorption, reduced concessions, or reduced downtime on lease rollover. Higher customer traffic may lead to higher sales, which creates the synergistic effect common to successful shopping centers, while also increasing the retailer health and ability to pay higher rents. As with any market differentiator, the impact, if any, will depend on how successfully the sustainable characteristics connect with the customer.

Some sustainable features present unique measurement challenges. The reduction in water use from water-efficiency upgrades can be straightforward to measure, but what about changes to storm water runoff through the use of bioswales or permeable landscaping? How can this impact be translated to an economic impact? Features such as bioswales that reduce the impact on local sewer infrastructure may help expedite the entitlement process, but quantifying that type of indirect impact remains elusive.

Measurability is also an essential component of *benchmarking*, the process of establishing and documenting a reference point for building performance. Benchmarking of a property's performance as regards factors such as income, expenses and occupancy is a fundamental practice in commercial real estate, but sustainability initiatives have expanded the type of parameters that are measured and monitored. For example, tracking energy or water use before and after upgrades allows for assessment of efficacy of changes in operations and capital upgrades. Further, benchmarking a property's performance against a recognized metric, such as ENERGY STAR's Portfolio Manager for energy use, can demonstrate a building's performance relative to the market. For features such as energy-efficiency upgrades, benchmarking can not only be useful, but required in a growing number of areas. Map 1-1 shows the U.S. states and cities which have adopted mandatory energy benchmarking regulations as of June 2015.

Outside the U.S., energy benchmarking of private-sector buildings in the European Union was established by the 2003 European Performance on Buildings Directive

(EPBD). Energy Performance Certificates (EPCs) began on a voluntary basis but will become mandatory over time.

### *A Matter of Control*

Control of the space is also a factor that has unique value-affecting implications for sustainable improvements in retail properties. Measurement of sustainability metrics such as energy use, or implementation of energy-reducing strategies, can prove difficult or, in some cases, impossible without changes to the lease language. Unlike a typical multi-tenant office building that is master-metered for utilities and where the landlord has broad rights to control the tenant build-out, the anchor tenants in a shopping center often directly control the building specifications and even the contractor selection. The landlord may provide little more than a build-to-suit dollar allowance, or in some cases, simply ground lease the site. Landlord influence on the building practices, materials selection, and ongoing operation in these situations is severely constrained. Without specific clauses in the lease allowing it, a landlord may not even be able to collect whole building energy or water use data and therefore not be able to adequately measure, track and benchmark sustainability initiatives.

Looking to the balance of the center, most shop tenants expect substantial control over their interior space as well. Chain stores typically have store prototypes focused on building the brand, with limited flexibility to incorporate landlord requirements. Local "mom and pop" operators are often focused more on near-term cash solvency than broader sustainability motivations. The practical ability of the landlord to control the tenants' behavior is limited by the market's expectation: The landlord will let the tenant do what they want with the space, so long as it fits within the shopping center rules and regulations, and does not violate use restrictions or otherwise conflict with the other tenants.

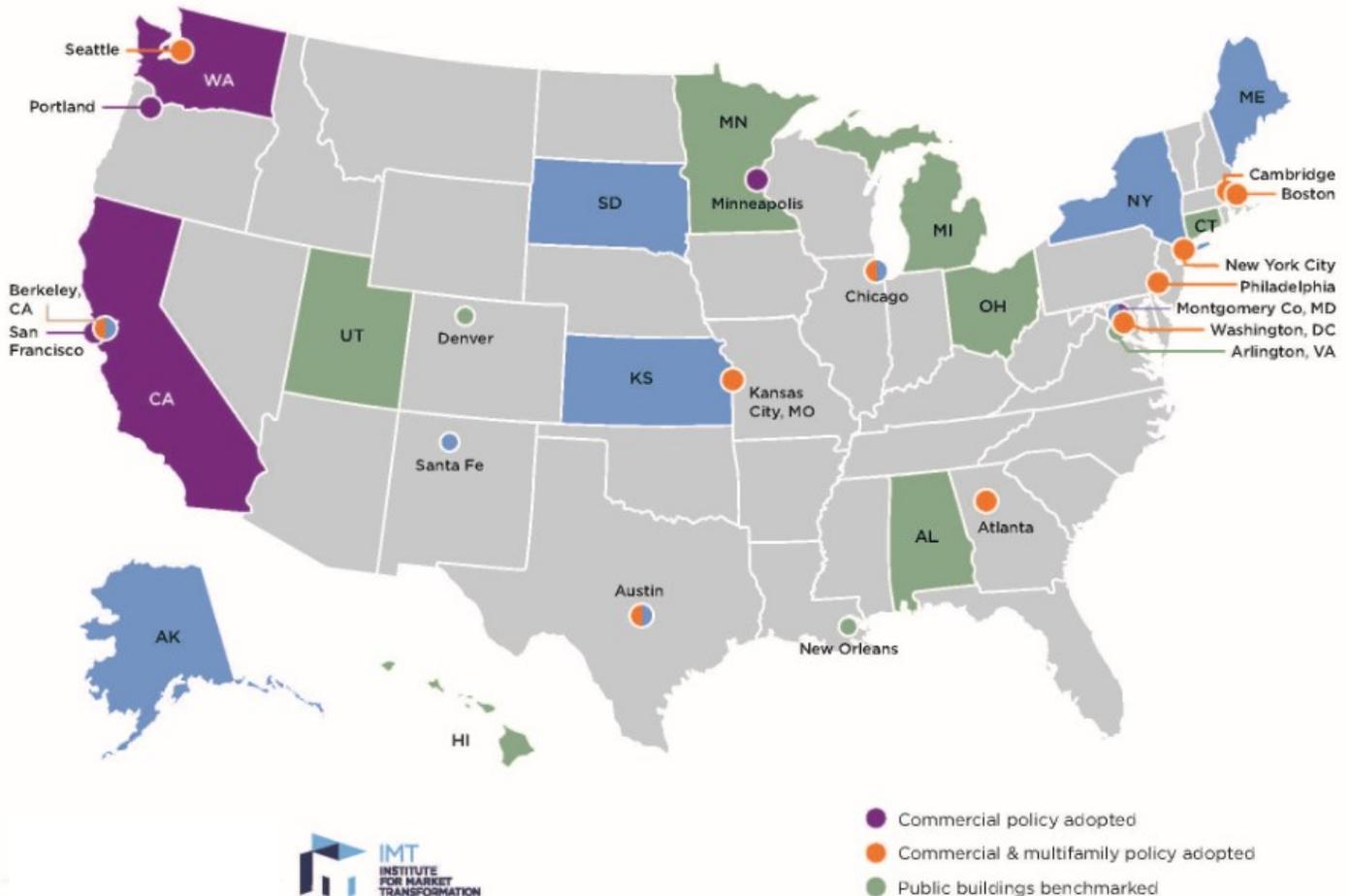
### *Durability*

Durability takes the measured value impact to the next level: To matter to real estate investors, tenants and the customer, sustainable characteristics have to be as real as the underlying property, and the measured effect has to be verifiable and perceived as ongoing. Assuming that the lease structure allows for recovery of capital improvements, a shopping center owner who installs LED lighting in the parking lot and other common areas can expect the energy savings to continue for a decade or more. More consideration must be given, however, to impacts such as rent premiums that are attributable to the sustainability features of the property. For example, if

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### Map 1-1

#### U.S. Building Benchmarking and Transparency Policies



Source: Institute for Market Transformation. Updated 6/2015. Used with permission.

a new LEED-certified shopping center is shown to lease at a rent premium, and the property owner signs the majority of the tenants to five-year leases, is this a durable value impact? While the property may have a competitive advantage in the current market, will that still be the case five or 10 years out when other centers in the area have also incorporated sustainable features?

#### *Runs with the Land*

Sustainable projects and features may have benefits that appear to enhance the value of the property, but if they are not part of the real property, they will not affect market value. For example, does a leased solar photovoltaic (PV) system contribute to real property value? While the solar PV system may be affixed to the roof, the equipment is owned by a third party and thus not part of the shopping center real property. Similarly, buying renewable energy credits does not add to the

underlying value of the real estate, though they may count towards green or sustainability certifications.

#### *Market Is the First Word in Value*

Retail property owners are well-versed in analyzing trade area demographics including daytime population and household income. Assessing a market's sustainability orientation, or the degree to which a particular market has incorporated the principles of sustainability into purchase and lifestyle decisions, is harder to define, much less analyze.

From a valuation standpoint, market value hinges on whether the particular market values the specific property and property attributes. While this may seem abundantly obvious, the "it's the right thing to do" aspect of sustainability can sometimes cloud the issue of whether a particular sustainable feature will have a discernible value impact in a particular market. For example, conventional

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car drivers may not appreciate the loss of priority parking to electric car-charging stations located right in front of the grocery store. The tenant may not care that their electricity comes from solar PV on the roof, which may be all but invisible to the customers and employees. Certainly, it is easier to foresee a positive value impact to building out prime pad space with a structure featuring a living roof, solar panels and transit proximity in a market exhibiting sustainability-oriented behaviors versus one that is not. But even in a market that is deemed sustainability-oriented, sustainability uptake may be affected by demographic factors within that market. In this respect, statistical studies implying a broad-based premium for sustainability-related features can be misleading when applied to a particular property in a specific market.

Value advantages to sustainable properties may also be attributed to other factors, such as increased NOI. If the acquisitions team is looking primarily at return on investment (ROI) metrics, the quantitative link between the reduced operating expenses due to the sustainable features that leads to higher NOI, yielding a superior overall rate of return, may be lost. While the increased NOI may capture the direct value impact of the reduced operating expenses of the sustainable feature, if the indirect value impacts of the feature or project are not examined, it is possible that the full value impact may not be realized. Looking beyond ROI metrics to factors such as improved tenant retention or enhanced marketability leading to reduced absorption may yield additional market support for sustainable features.

### Realizing the Potential Value Impact

Thus far, the discussion has addressed thresholds that need to be met so that there may be a potential for a positive value impact. As any owner or investor knows well, however, unrealized potential is akin to the difference between theory and practice. Therefore, what are some specific steps that a retail property owner can take to move from a potential impact to a realized value impact? Realizing the value potential of sustainability features requires three steps:

Step 1: Align the cost and benefit equitably between landlord and tenant

Step 2: Benchmark and document the performance—before and after

Step 3: Communicate with all relevant stakeholders

#### *Step One - Align*

Retail property owners are well aware of cost-benefit misalignments. For sustainable features, the issue extends beyond aligning upfront cost with economic benefit to aligning the interests in achieving the sustainability initiative embedded in the upgrade or renovation. For example, the ultimate goal of energy- and water-efficiency upgrades is to reduce use of energy and water. The upgrades can fulfill part of that goal, but without tenant cooperation via changed use behaviors, the benefit is not fully realized. That is, technology can only go so far; management policies and use behaviors must also change.

One of the most direct ways of addressing this split incentive is through changes to the lease. So-called “green leases”<sup>2</sup> provide a work-around to the traditional split incentive problem ubiquitous in retail triple-net leases. The concepts behind most green lease language may not be new or unique to green or sustainable properties or projects. Recovering capital costs is not a new idea, yet without green lease language that allows, for example, for the landlord to recoup capital costs from energy-efficiency upgrades that save the tenant energy costs, it may prove difficult to successfully implement sustainability initiatives. Likewise, clauses that require the tenant to cooperate with energy and water-use reporting is essential for Step Two below. Other important lease language to consider may include cooperation with green certification programs, tenant energy/water use to not adversely affect the balance of the shopping center, landlord ability to provide and sell site-generated energy to tenants, landlord control of the roof for solar PV, and landlord approval over tenant build-out, such as low-flow plumbing fixtures and low VOC finishes and adhesive.

The “Retail Green Lease Primer” released by the Retail Industry Leaders Association (RILA) and the Institute for Market Transformation (IMT) details specific lease modifications that a property owner can consider to help overcome the split incentive issues common to standard lease agreements.<sup>3</sup>

#### *Step Two – Benchmark*

As discussed previously, measuring building performance and in particular, measuring and documenting the effects of sustainable upgrades on

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<sup>2</sup> For more information about green leases, see Institute for Market Transformation, “[Retail Green Leasing](#),” retrieved September 10, 2015, and the Rocky Mountain Institute and the Building Owners and Managers Association (BOMA) International, “[Working Together for Sustainability: The RMI-BOMA Guide for Landlords and Tenants](#),” June 2012, retrieved September 10, 2015.

<sup>3</sup> Retail Industry Leaders Association and Institute for Market Transformation, “[Retail Green Lease Primer](#),” 2013, retrieved September 10, 2015.

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building performance, is required to demonstrate a value impact.

Benchmarking may be as simple as separately measuring and recording such factors as actual energy and water use, not just cost, over time. Tracking and recording energy use intensity (EUI) as measured in kBtus per square foot (sf), by type of fuel (natural gas or oil versus electricity) can help identify and clarify how and where energy is being used in the building, and facilitate comparison to similar properties and market standards. Access to tenant-controlled energy and water-meter data is critical in order to fully understand building performance, which may require lease language referenced in Step One.

More complex properties may require a more sophisticated approach, such as ENERGY STAR Portfolio Manager, the most commonly used benchmarking tool for energy and water use in the commercial real estate sector. Portfolio Manager measures and compares actual

performance of a property to its peers based on reported occupancy and use.

The Department of Energy (DOE) recently released the Building Energy Asset Score (Asset Score) tool that focuses on rating the building envelope and mechanical systems, as well as suggesting potential upgrades. The primary difference between these two benchmarking tools is that Asset Score rates potential performance independent of actual occupant influence, while Portfolio Manager reflects actual performance based on existing occupancy and use as measured by utility bills.

Benchmarking tools can be especially useful for assessing the feasibility of major upgrades with multiple areas of impact. For example, while the energy savings of re-lamping with lower-wattage LED fixtures may be easy to calculate without sophisticated software, the operating cost savings of a chiller replacement may be more difficult to ascertain without a more sophisticated energy modeling analysis. Once the baseline operational

**Figure 1-1**

### Documenting Sustainable Improvements: A Checklist

Documentation provides the vital link between sustainable improvements and property value impacts. Identifying a point person or team to maintain the data and facilitate communication with any lenders, appraisers or investors that may be involved with the project ensures that any value-affecting information does not fall through the cracks. Below is a checklist of key elements to track:

1. **Total upfront costs:** While sustainable projects may or may not cost more than a conventional project, the fact is, any project has an associated cost. These data can be useful for establishing a basis for the cost approach in an appraisal, or for working with tenants on strategies to equitably balance the costs and benefits of a project.
2. **Energy, water/sewer and waste:** Efficiency improvements to these elements can have a direct value impact but will require diligent documentation:
  - A. *Document both use and cost.* Use established metrics when available, such as energy use intensity (EUI) measured in kBtu per sf, for energy use. For areas with mandated benchmarking, track the project's performance and compare to area-wide data.
  - B. *Disaggregate all utilities.* Even if the project's scope does not target all three areas, measuring and tracking use and cost individually provides critical data that can be used to measure project performance and can provide solid baseline data for future projects.
3. **Changes to operating strategies:** Changes to a property's operations and maintenance that affect the property's operating expenses can be just as important to track as energy use reduction and savings from re-lamping. Salient changes to document may include lease language that is incorporated to allow for recovery of capital improvement upgrades or changes to property maintenance such as green cleaning strategies that may decrease (or increase) operating expenses.
4. **Third-party certification reports:** LEED scorecards, ENERGY STAR Portfolio Manager report, or other green building certification worksheets or project checklists, can provide an important starting point for understanding the scope of the sustainable project. Third-party commissioning of both the mechanical systems and the whole building provide critical evidence that the property will perform as designed. Energy audits establish baseline operation and can also identify areas for potential improvements.
5. **Technical specifications, plans and warranties:** Connecting sustainable improvements to value requires more than just reporting the cost and savings. Plans, specifications, warranties, performance contracts and the like help the appraiser, lender and investor understand exactly what was done, and how it will impact building performance.

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**Figure 1-2**

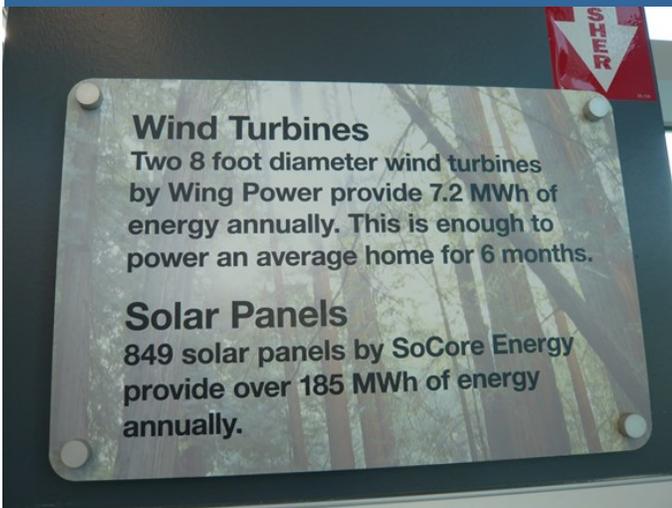
Green Roof With Solar PV Visible From Highly Trafficked Interstate: West Elm Store, Emeryville, Calif.



Source: Timothy P. Runde and Stacey L. Thoyre. Used with permission

**Figure 1-3**

Signage Detailing Sustainable Features: Walgreens NZE Store, Evanston, Ill. Calif.



Source: Timothy P. Runde and Stacey L. Thoyre. Used with permission

benchmark is established, sensitivity analysis of various energy upgrade scenarios can be used to guide the decision process, as well as to assess performance post implementation.

**Figure 1-4**

Prominently Located Solar and Wind-Powered Parking Lot Lighting Lining Shopping Center Entryways: Persimmon Place Shopping Center, Dublin, Calif.



Source: Timothy P. Runde and Stacey L. Thoyre. Used with permission

### *Step Three - Communicate*

Communication is essential to realizing the value effect of sustainability initiatives. Even when energy use is reduced and leases are in place that equitably align the benefit with the cost, the marginal increase in the NOI may not be recognized in the market without adequate communication of the results of Steps One and Two. Figure 1-1 provides a checklist of key elements to document.

Existing investors, potential buyers, lenders and appraisers need documentation of the work completed and the resulting performance communicated in a way that they can understand so that proper attribution of the capital costs and ongoing savings can be made. Simply reporting a 15% decrease in energy use is not enough. Valuation requires a baseline energy cost and EUI for the property before, a benchmark for comparable properties in the market, detailed description of the work performed, the cost, the projected operational savings, and the actual performance (EUI and energy cost) as it becomes available.

If the project requires financing, selection of the financing team is an important decision. Sustainable and high-performance property attributes are not equally well understood by all lenders and appraisers. Communicating the need for a lender and appraiser with experience and knowledge in valuing these types of features and projects early in the process can ensure that all relevant factors

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are understood and properly analyzed. However, even when an experienced financing team is engaged, access to all collected data for the project must be communicated to the team.

From a valuer's standpoint, it can be surprisingly difficult to obtain the needed data to justify stabilizing expenses at a reduced level post-upgrade, for example. Some engineers have indicated that they are concerned about liability when communicating projected energy use data. Further, the operating expense data obtained from the property owner is often not disaggregated between energy, water/sewer and trash. Without disaggregation of these expenses, any savings attributable to specific upgrades such as low-flow fixtures or a lighting retrofit may be missed.

Communication also extends to the other stakeholders in the property—the tenants, customers and the community. Sustainability initiatives that do not affect the NOI—the benefits to the environment and the community at large—provide an opportunity for market differentiation and image enhancement for both the landlord and tenants in the center. Figures 1-2 to 1-4 show several examples of communicating sustainable features to retail customers, the community and current and prospective tenants.

### Conclusion

Market participants interviewed for this article indicated that, at this point in time, sustainability largely remains an issue of operational best practices with scant expectation for any ROI in excess of reduced operational costs. The value impacts of sustainable projects are not, however, limited to new construction or to comprehensive sustainable projects. In fact, as noted in the recent BCSC report,<sup>4</sup> older shopping centers in the United Kingdom had greater potential value impacts for energy-efficiency upgrades than newly constructed or renovated ones. This finding is consistent with the authors' experience. Older projects typically have much less efficient lighting and HVAC equipment than new ones, so the potential for improvement is greater. Further, the relative value impact is greater even if the cost savings per sf is the same, since the older, unrenovated property will typically have a lower unit value. The challenges with these types of properties are existing leases that may not allow for recovery of capital costs, and the price sensitivity of the

tenants to amortized capital costs that may increase CAM charges.

Direct value impacts such as operational cost savings will affect value the same way that any other income-affecting component of value does. However, even when fully and accurately reported and documented, the value impacts due to operational savings are inherently limited by the magnitude of the relevant operating expenses. The indirect value impacts of improved marketability, market differentiation, and the effect on the capitalization/discount rate are likely to be market and project specific and will require more time (and more sustainable shopping centers) to discern. Early findings from the office sector suggest that sustainability practices as measured by LEED certification first proliferate at the top-tier properties, and as such, set a new minimum standard for the best-of-class properties. In this way, sustainability practices can be viewed as positioning the asset for optimal long-term performance, by maximizing operational efficiency, and avoiding or forestalling obsolescence.

Ultimately, the value impact of sustainable improvements, as with other capital improvements, relies on the specific features or project, how it is executed and operated, and the local market's response. However, due in large part to sustainability's focus beyond the "bottom-line" to include societal and environmental concerns, the value impact of sustainable features and projects can be more difficult to quantify, especially for those benefits that indirectly affect value or for those improvements where the cost and benefit are not aligned.

The retail sector faces particular challenges in regard to any cost-benefit misalignment, but those hurdles are in no way insurmountable. The valuation thresholds discussed in this article of measurability, durability, being part of the real property and the market's acceptance of the feature or project's sustainability attributes are all parameters that can be used to analyze a sustainable project's potential for a positive ROI. In addition, a multi-pronged approach of aligning the cost and benefits equitably between tenant and landlord, benchmarking performance initially and over time, and communicating the benefits to all stakeholders all work towards realizing any potential value impact, thereby increasing a project's chances of financial success.

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<sup>4</sup> Neil Blake, Richard Holberton, and Rebecca Pearce, "Sustainable Shopping Centres: Energy, Performance and Value," BCSC (British Council of Shopping Centres) and CBRE, 2015.

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