



The Journal of
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Preface

The quotes below by leaders like Al Gore and Barack Obama set the tone for why we need more research in the area of sustainability, particularly as applied to the field of real estate. We must get it right and we must refrain from biases that serve particular agendas. This independent journal, the *Journal of Sustainable Real Estate*, the first of its kind in the United States, calls upon those interested in fostering truth surrounding the myriad questions of how to become more efficient, healthier, and more productive while recognizing that economics and regulation will drive the market, not environmental evangelists. Those of us focused on real estate, which encompasses where we live, work, shop, and recreate, may not be able to determine if ideas like clean coal are realistic but we can and should investigate the economics driving the market, the true costs, direct and indirect, the management strategies that will support better user and owner decisions, and the state-of-the-art in terms of best practices. These are the types of questions we hope to address in this inaugural issue of the *Journal of Sustainable Real Estate*.

Norm Miller

Editor

Journal of Sustainable Real Estate

“By making buildings and homes more efficient, ramping up renewable energy generation, constructing a unified national smart grid, and transitioning to clean and affordable plug-in cars, we can address our country’s economic and national security challenges....In nation after nation, leaders have concluded that they must design a green stimulus and build the infrastructure for renewable sources of energy and put people to work retro-fitting homes and buildings with CO₂ reducing insulation and windows and lighting and more efficient technologies.

We can revitalize our economy, increase our energy security, and do our part to cut global warming pollution, all at the same time.

We’re committed to changing not just light bulbs, but laws. And laws will only change with leadership.” Al Gore, 2007, Nobel Peace Prize Winner.

“For our economy, our security, and the future of our planet, I will set a clear goal as President: in ten years, we will finally end our dependence on oil from the Middle East. Washington’s been talking about our oil addiction for the last 30 years...Now is the time to end this addiction, and to understand that drilling is a stop-gap measure, not a long-term solution. As President, I will tap our natural gas reserves, invest in clean coal technology, and find ways to safely harness nuclear power. I’ll help our auto companies re-tool, so that the fuel-efficient cars are built in America. I’ll invest 150 billion dollars over the next decade in renewable energy—an investment that will lead to new industries and five million new jobs that pay well and can’t ever be outsourced.” August 27, 2008, Barack Obama.

“... to truly transform our economy, to protect our security, and save our planet from the ravages of climate change, we need to ultimately make clean, renewable energy the profitable kind of energy. So I ask this Congress to send me legislation that places a market-based cap on carbon pollution and drives the production of more renewable energy in America. And to support that innovation, we will invest

\$15 billion a year to develop technologies like wind power and solar power, advanced biofuels, clean coal, and more efficient cars and trucks built right here in America.” February 24, 2009, President Barack Obama.

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We thank the CoStar Group and the support its CEO Andrew Florance for funding this journal in full including prizes. We want to make it clear that while CoStar has provided funding to us and data to many researchers, they have always provided total independence and never asked to see any results prior to publication. I am also deeply indebted to Myla Lorenzo-Wilson, who has worked tirelessly on all the communication with authors, provided content and cover designs, and otherwise managed the entire journal and to the Burnham-Moores Center for Real Estate for their support of this journal. Melissa Sharick, a University of San Diego Master of Science in Real Estate student, also provided valuable research support.

This is the first of many issues until such time that sustainable real estate becomes so mainstream that a separate journal is not needed. While it is a peer-reviewed academic journal, we may on occasion accept summaries of prior work or papers published elsewhere in order to disseminate work or perspectives we feel are important. In this vein, there is an Industry Insight section of un-reviewed work that provides some industry perspective.

We know that ambitious academics must work hard to publish in the most well known and respected journals and, as such, a few colleagues whom I had hoped would contribute to this journal have sent their work to more traditional economic and real estate outlets. We recognize it will take time to become known and cited via the traditional economic literature route, but we expect more viral circulation of papers accepted here and will post all accepted papers on our website www.josre.org, which is also generously hosted by CoStar. So thank you to all who have contributed and to those whose papers were not accepted, please keep submitting your papers for review, and we will try and provide constructive feedback. In this regard, we want to thank our Editorial Board, who reviewed papers, as well as the Advisory Board that provides support and encourages submissions from those engaged in applicable research.

On Behalf of Costar Group

On behalf of CoStar Group, I am very pleased to welcome the publication of the first issue of the *Journal of Sustainable Real Estate*, and to congratulate the authors whose original research is presented in this inaugural issue.

CoStar Group continues to be an active supporter of academic research involving the built environment. As part of our ongoing efforts to increase awareness of energy efficiency and sustainability issues in real estate, CoStar has joined with the American Real Estate Society (ARES) to sponsor the *Journal of Sustainable Real Estate*, with the goal of provoking thought and encouraging discussion by publishing a collection of research papers addressing sustainable real estate issues.

Of all the core categories of energy consumption in the United States, the built sector is the least efficient and has the largest potential for cost-effective improvement. Addressing the impact that sustainability practices can have on this major business sector is critical.

And yet, businesses and public sector organizations face a daunting task in confronting the fundamental challenges presented by climate change, population

growth, and resource constraints. If successful, their decisions may lead to the development of market-leading innovations and technologies and drive changes in business practices and consumer behavior needed to integrate sustainability on a large scale and achieve the economic rewards and long-term viability that sustainable principles offer. However, if we are unsuccessful in meeting those challenges, we collectively face increased costs, diminished opportunities, and a very real threat to our future.

Above all, confronting what I believe to be one of the greatest challenges of our time requires innovative thinking and fundamentally questioning the accepted status quo in our real estate and business practices. It requires careful consideration of alternatives, clear-eyed analysis of risks, and thoughtful debate on the merits of pursuing different strategies for securing our future and achieving our long-term goals.

That is why CoStar is proud to sponsor independent research into sustainable real estate. In doing so, our goal is to help in a small but meaningful way those investors, developers, appraisers, lenders, asset managers, government officials, and land use regulators gain a better understanding of the issues associated with sustainable real estate practices.

As more and more providers and occupiers of business real estate integrate sustainability into their business strategies, we believe there will be competitive advantages for innovative companies to unlock opportunities and capture profitable growth. Through our support for this journal, our hope is that independent research in this area can spur additional interest and provide the insight and recognition that helps bring about those needed changes.

In addition to sponsoring academic research, CoStar offers qualified university professors and their students access to CoStar's comprehensive online information services for use in their research and in the classroom. More than 1,100 professors and graduate students at more than 100 universities are currently enrolled in the program. To learn more about this program and research resources available through CoStar, I encourage you to visit www.CoStar.com/specialprograms/costaruniversity.aspx. More information on the *Journal of Sustainable Real Estate* can be found at www.CoStar.com/JOSRE.

Andrew Florance
Chief Executive Officer
CoStar Group

From the Director of Research at USGBC

Buildings represent a nexus of impacts and opportunities for people and the environment. We have ample documentation of the far-reaching consequences of buildings for energy use, water consumption, greenhouse gas emissions, human health, occupant productivity, and myriad other factors. The magnitude of these impacts means that the design, construction, and operation of buildings also provide far-reaching opportunities to reduce negative impacts and ultimately strive to make active, positive contributions. This convergence of impacts and opportunities means that buildings must be central to any effort to address the sustainability of human activities.

Understanding this confluence of impacts and opportunities requires new interdisciplinary approaches and strong connections between theory and practice. As with so many new fields of study, the issues associated with green buildings and real estate do not fit neatly into existing academic categories. Rather, the most pressing and potentially rewarding intellectual challenges are arising at the boundaries and interfaces between disciplines. This new journal provides an urgently needed vehicle for rigorous, peer-reviewed communication for the growing green building research community that strives to bridge these boundaries and create novel scholarship at the confluence of disciplines. Over time, this journal has the potential to become a critical outlet for new work and, consequently, an essential part of the intellectual foundation for this rapidly growing research community.

This journal can fulfill this potential by providing a forum for the rigorous exchange of ideas and seeking an editorial balance that blends concepts and empirical observations to advance both the theory and practice of green building. In this inaugural issue, the editors and contributors have demonstrated this balance with an exceptional collection of papers. Going forward, I encourage the research community to reflect on the example set in this issue and the broader goals and aspirations of this new publication. For me, this reflection leads to a belief that this journal will provide an important outlet for findings that will help shape the future of green building. I am looking forward to working together to fill its pages for years to come.

Chris Pyke

Director of Research

US Green Building Council

Introduction

This issue of the *Journal of Sustainable Real Estate* begins with a paper by Richard Reed, Anita Bilos, Sara Wilson, and Karl-Werner Schulte that compares international sustainable rating tools. While Leadership in Energy and Environmental Design (LEED), developed by the United States Green Building Council (USGBC), is well known in the United States and utilized in over 55 countries, there are many other measurement systems. We can all learn from each other and any model, LEED, CASBEE, BREEAM or Green Star and so forth should be considered works in progress. For example, while LEED is fairly easy to understand and fairly transparent, it may not sufficiently weigh factors that are of most importance in different geographies and climates. Over time, based on the kind of discussion and dialogue presented here and elsewhere, we expect these measurement systems to adapt and improve for their intended purpose.

The second paper, by Sofia Dermisi, is on the effect of LEED rating on office assessed values. It is not clear that appraisers, yet alone assessors, understand much about sustainable real estate features and at the same time some jurisdictions are exempting from property taxes sustainable property improvements, so this will remain an important topic for some time. The third paper is by Franz Fuerst and Patrick McAllister on occupancy rates for eco-labeled office property in the U.S. It is an extension of some of their prior work and continues to support the notion that greener property achieves greater occupancy and in turn supports higher values relative to peer property. The fourth paper is a preliminary effort to understand the role of environment on productivity by Norm Miller, David Pogue, Quiana Gough, and Susan Davis. Using a large data set, this study provides some support for an economic payoff for tenants in buildings with better light and ventilation.

Next we have a paper by Jerry Jackson on the risk of sustainable real estate projects. We then have a series of papers that touch on the challenges inherent in green development. The first, by Jennifer Wang, discusses removing barriers to green development. A second is by Robert Simons, Eugene Choi, and Donna Meister Simons on state and city green policies and market penetration. The third paper is by John Goering on sustainable real estate market penetration. Finally, a paper by Kwame Addae-Dapaah, Liow Kim Hiang, and Neo Yen Shi, Sharon on the sustainability of sustainable real property development. The last paper is by Christoph Rohde and Thomas Lutzendorf on sustainable investment products, which is a natural follow-up to the four previous papers.

The Industry Insight section contains two pieces that provide some initial industry-based evidence of the impact of green building. We hope this first issue of JOSRE is the springboard for further research and exploration of the green building environment.

Norm Miller

Editor

Journal of Sustainable Real Estate

