



# CALIFORNIA BUSINESS PROPERTIES ASSOCIATION

1121 L Street, Suite 809 • Sacramento, CA 95814 • Phone (916) 443-4676 • Fax (916) 443-0938 • www.cbpa.com

## OFFICERS

**Chairman of the Board**

PAUL CUNHA, SD Deacon

**Vice Chairman**

GREG McWILLIAMS, Newhall Land/Lennar Corporation

**Vice Chairman**

THOMAS ENGBERG, Capital & Counties Development Group

**Secretary/Treasurer**

FRAN INMAN, Majestic Realty Co.

**Legal Counsel**

JO ANNE BERNHARD, Jo Anne Bernhard Law Offices

**President and Chief Executive Officer**

REX S. HIME

**Senior Vice President of Governmental Affairs**

MATTHEW HARGROVE

## DIRECTORS

JAMES CAMP, NAIOP California State Council

STEPHEN CASSIDY, Cassidy, Shimko, Dawson & Kawakami

VICTOR CASTILLO, Syufy Enterprises

ROB CORD, Building Owners and Managers Association of CA

MICHAEL DEAN, Wendel, Rosen, Black & Dean

KEITH EYRICH, The Irvine Company

JOHN GABRIEL, L.A. Fitness International

AMY GLAD, Pardee Homes

JEFF HICKOX, Institute of Real Estate Management of California

TRUDI HUGHES, Wal-Mart

BETSY LAIRD, International Council of Shopping Centers

STANLEY LAMPORT, Cox, Castle & Nicholson LLP

MICHAEL LOGAN, Target Corporation

PAUL LOUBET, Regency Centers

DENNIS MULLINS, Klein, DeNatale, Golner, Cooper, Rosalie & Kimball

RICK NEWMAN, Lowe Enterprises

ARTHUR PEARLMAN, Arthur Pearlman Corporation

RUSS PRATT, The Pratt Companies

EILEEN REYNOLDS, Tejon Ranch

MALCOLM RILEY, The Riley Companies

FRANCISCO URIBE, The Home Depot

DOUG WIELE, Foothill Partners

## ADVISORY BOARD

SUZANNE MINDT, Commercial Real Estate Women of Sac.

MARY COBURN, California Downtown Association

ROLAND PETERSON, California Downtown Association

ADAM MICHAEL GEEB, IREM Central Coast

FARZANEH TOFIGHI, IREM Los Angeles

STEVEN HUSSEY, IREM Sacramento

ELIZABETH GROSSMAN, IREM Orange County

CHRISTOPHER DONOHOE, IREM San Francisco

MACK LANGSTON, IREM San Diego

ROBERT NIBLOCK, Retail Industry Leaders Association

STEVE CENTER, NAIOP San Diego

TERRY THOMPSON, NAIOP SoCal

MICHAEL MORRIS, NAIOP Inland Empire

STEVE BURNETT, NAIOP Sacramento Valley

ALISON HAWKINS, NAIOP San Francisco Bay

MICHAEL HANNEKEN, CCIM-North

JEFF ARMOUR, Armour Family Properties

MICHELE BABCOCK, Donahue Schriber

THOMAS BAK, Trammell Crow Company

RICHARD BAYER, The Macerich Company

EDWARD BEDWELL, Pacific Gas & Electric Company

DENNIS BERRYMAN, Pacific Investors Group

THOMAS BIAGINI, Biagini Properties, Inc.

JOHN BUCKSBAUM, General Growth Properties

JOE BYRNE, The Byrne Companies

LISA COWELL, The Westfield Group

ROBERT DEAN, Grubb & Ellis

ERIC DOUGLAS, Walgreen Company

RICHARD ELLIS, Albert B. Glickman & Associates

PAUL FREEMAN, South Coast Plaza

JOHN GOODMAN, Chicago Title Company

LARRY HARMSEN, ProLogis

GORDON HESS, Ellis Partners LLC

STEVE HOPKINS, Hopkins Real Estate Group

LEW HORNE, CB Richard Ellis

PILAR HOYOS, Walson Land Company

JERRY HUNT, Blake Hunt Ventures

VICTOR LACAGNINA, Americal Management Company

KEVIN LUNDY, Wendy's International

JIM MAGINN, Watt Commercial Properties

GIL NEILSON, Shea Properties

BILL PARRISH, WP2DC, Inc.

MICHAEL PERRY, Wall Street Property Company

PAULA PRAHL, Best Buy

TOM PURCELL, Spring Creek Investors

JOHN REININGA, The Reininga Corporation

TOD RIDGEWAY, Ridgeway Development Company

JOSEPH ROTH, IKEA

TOM SCHRIBER, Donahue Schriber

DON SHAW, Safeway Inc.

RICHARD SHOEMAKER, Federated Department Stores

STEVE STWORA-HAIL, Downey Brand Attorneys LLP

GRAHAM TINGLER, Space Center Inc.

ROBERT URAM, Shappard Mullin Richter & Hampton LLP

ROBERT WEBSTER, Bohannon Development Company

KIMBERLY WINSTON, Starbucks Coffee Company

DANIEL WINTON, Daniel K. Winton Law Offices

September 30, 2008

The Honorable Mary Nichols  
Chair, California Air Resources Board  
1001 I Street  
Sacramento, CA 95812

Via Online Submission and Regular U.S. Mail

**Re: Green Building Carbon Credits White Paper**

Dear Chair Nichols:

The California Business Properties Association (CBPA) is pleased to have the opportunity to comment on the California Air Resources Board's (ARB) Appendices to the Draft Scoping Plan. As indicated in CBPA's comment letter, we are providing ARB the enclosed white paper prepared by CBPA's Special Legal Counsel, Donald Simon, entitled "*Green Building Carbon Credits: A Structure for Promoting Greater Energy Efficiency in the Real Estate Sector to Address Climate Change.*"

Mr. Simon verbally presented this concept at the recent September 2, 2008 meeting of the Green Building Climate Action Team Advisory Committee meeting. It was warmly received by attending representatives from both the private real estate industry and the non-profit public interest environmental community.

We ask ARB to thoughtfully consider the concepts outlined in this white paper, and we hope to schedule a meeting in the near future with appropriate staff to continue dialogue on this important opportunity that we believe would empower the real estate sector to help achieve California's goals under AB 32.

CBPA thanks you for your consideration of our views and for your continued hard work on this important issue. We look forward to working with you further.

Sincerely,

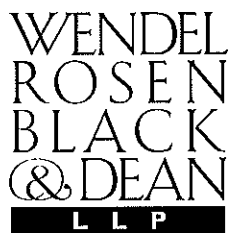
California Business Properties Association

Wendel, Rosen, Black & Dean, LLP

/s/

Matthew Hargrove  
Sr. Vice President

Donald S. Simon  
Special Counsel



ATTORNEYS AT LAW

1111 Broadway, 24<sup>th</sup> Floor  
Oakland, CA 94607-4036

Post Office Box 2047  
Oakland, CA 94604-2047

Telephone: (510) 834-6600  
Fax: (510) 834-1928  
dsimon@wendel.com

---

## **GREEN BUILDING CARBON CREDITS**

### **A STRUCTURE FOR PROMOTING GREATER ENERGY EFFICIENCY IN THE REAL ESTATE SECTOR TO ADDRESS CLIMATE CHANGE**

---

**Donald S. Simon, Esq.**  
**Wenel Rosen Black & Dean, LLP**

The research, analysis and preparation of this white paper was partially funded by the joint efforts of BOMA International, The Real Estate Roundtable, U.S. Green Building Council and the California Business Properties Association.

015625.0001\1042961.1

## I. Introduction and Summary

Energy use in buildings accounts for approximately one-third of U.S. greenhouse gas emissions (“GHG”) through a combination of electricity consumption and fossil fuel combustion. Improving the energy efficiency of new and existing buildings is internationally recognized as one of the lowest cost means to reduce GHG emissions.<sup>1</sup> Yet the “low-hanging fruit” of greening buildings is typically not included in carbon markets created under Climate Change laws.

In the world of Climate Change regulation, there are two major classifications of GHG emission sources – direct and indirect. Direct sources release GHGs directly into the air, like power plants and other smokestack industries. Indirect sources are activities that consume what the direct sources produce, like buildings that consume electricity produced by power plants.

California is currently developing the world’s most comprehensive regulatory system for addressing Climate Change. The conventional wisdom among regulators in California and elsewhere in the world is that market-based programs, like cap and trade, should be restricted to direct industrial sources, because there are fewer of them and they are already heavily regulated. This generally forecloses the possibility for green building projects to generate carbon credits, despite their unrivaled cost-effectiveness. As a result, a valuable incentive for voluntary GHG reductions is lost, the low-hanging fruit of increasing energy efficiency in buildings goes unpicked, and industrial (direct) sources are required to shoulder a greater share of required GHG reductions, all of which increase the societal cost for addressing Climate Change and make it less politically feasible to accomplish.

Under this conventional wisdom, GHG reductions from the real estate sector and other indirect sources are sought through stricter building codes mandating ever-increasing levels of energy efficiency and through limited government incentives programs. But neither mechanism achieves the depth of cost-effective reductions possible. Building codes typically affect only new construction, because existing buildings are “grandfathered” and new code requirements apply only to substantial renovations. This is hugely problematic. Existing buildings account for the vast majority of real estate sector GHG emissions, because there are far more of them and they are significantly less energy efficient than new construction. Government incentives are helpful but inadequate and undependable because they do not achieve sufficient market penetration and rely on limited government funding that can disappear in lean budget years. Cap and trade carbon markets provide a much larger funding source that could partially finance energy efficiency improvements if buildings are allowed to participate. The European carbon market totaled \$30 billion in 2006<sup>2</sup> and some predict that trillions of dollars will change hands each in year in global carbon markets by 2030.

<sup>1</sup> See, *Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost?*, U.S. Greenhouse Gas Abatement Mapping Initiative Study (McKinsey & Company et al., December 2007). [http://www.mckinsey.com/client-service/ccsi/pdf/US\\_ghg\\_final\\_report.pdf](http://www.mckinsey.com/client-service/ccsi/pdf/US_ghg_final_report.pdf), and Green Building In North America, Secretariat of the Commission for Environmental Cooperation, March 2008, [http://www.cec.org/files/PDF//GB\\_Report\\_EN.pdf](http://www.cec.org/files/PDF//GB_Report_EN.pdf).

<sup>2</sup> The European carbon market fell sharply at the end of 2007 as it became clear that regulators had freely awarded too many carbon credits for the initial 2005-2007 regulatory compliance period. Supply far exceeded demand and

Carbon regulation is evolving. Europe initiated the first GHG cap and trade system, but green buildings are unable to participate. Several eastern U.S. states advanced matters with the Regional Greenhouse Gas Initiative, which provides carbon credits for green building activities that reduce direct GHG emissions from onsite fossil fuel combustion for heating, but no credit is provided for reducing electricity consumption, which accounts for much greater (indirect) GHG emissions. The Australian state of New South Wales leapfrogs all other programs by providing carbon credits for green building projects that improve energy efficiency in fossil fuel combustion and electricity consumption.

For decades, the world has looked to California for innovative leadership in business, public policy and environmental protection. California should continue this tradition by structuring its cap and trade market under Assembly Bill 32 ("AB 32") in a way that enables new and existing buildings of all types to generate carbon credits for direct and indirect GHG reductions that satisfy statutory requirements. Whatever California does will greatly influence whatever federal legislation finally emerges from Washington, which in turn will greatly influence international efforts, because the next international treaty must be implemented before Kyoto Protocol expires in 2012. Once again, California has the unique opportunity to lead. The stakes have never been higher.

This paper outlines the potential structure and benefits of a voluntary green building carbon credit ("Green Building Credit") that empowers the real estate industry to monetize energy efficiency and sell the resulting GHG reductions into the cap and trade carbon market or a parallel market funded by cap and trade auction revenues.

## **II. Green Building Carbon Credit**

### **A. The General Role of Carbon Credits.**

Cap and trade is the favored mechanism for GHG regulation, because conventional wisdom believes the market will find the lowest cost methods to reduce GHG emissions. Regulators establish absolute limits (caps) for total GHG emissions for each of the largest GHG industrial sectors, like electricity, cement and oil refining. Each sector cap is allocated among individual sources, which must comply through on-site improvements or by purchasing carbon credits from others (trade). These trading transactions are conducted through bilateral negotiations or a centralized exchange (like commodities).

Many GHG reduction opportunities exist outside the industrial sectors typically regulated under cap and trade systems. Policy-makers can encourage such voluntary reductions by structuring carbon markets in a way that allows parties to convert their GHG reductions into carbon credits they can sell to regulated sources to offset their emissions. Such offsets provide regulated industries an alternative way to comply with regulatory obligations by letting them

---

the market price for carbon credits of that vintage fell to less than one Euro. This temporary problem was solved by regulators issuing fewer credits for the 2008-2010 compliance period, and carbon was trading at 24.5 Euros (\$35) per ton as of September 5, 2008.

choose between reducing their own emissions or purchasing offsets from others who were able to reduce theirs at lower cost.<sup>3</sup> This reduces the overall cost of Climate Change regulation by letting the free market exploit lowest cost GHG reductions.

## **B. Design Issues.**

By law, California may only credit efforts that produce GHG reductions that are real, quantifiable, permanent, verifiable, enforceable and additional beyond those that would otherwise occur under business as usual.<sup>4</sup> The same general requirements govern offsets in other GHG programs throughout the world. These are the threshold design issues a Green Building Credit must satisfy.

### *1. Double counting.*

The most frequently cited reason for not allowing offsets from green building and other efficiency measures that indirectly reduce GHG emissions is that the same reductions are counted twice, first by the building owner and a second time by the electricity sector.<sup>5</sup> Green building credits would be awarded based on energy savings and the resulting reduction in GHG emissions from the electricity sector. Unless the electricity sector cap is adjusted, this reduction in electricity demand will cause the electricity sector to have a surplus of carbon credits equal to the number of Green Building Credits issued. If the electricity sector is allowed to use or sell those surplus credits, then the same GHG reductions are counted twice. No net GHG reduction occurs, and the electricity sector receives windfall profits by selling carbon credits for fictitious reductions.

This double counting problem is easily solved by reducing the electricity sector cap by an amount equal to the number of Green Building Credits issued. The New South Wales program uses this solution in Australia. New South Wales implemented a carbon credit for energy efficiency improvements to new and existing buildings of all types in 2003 as part of its regulatory system that establishes GHG emission benchmarks for the electricity sector. Utilities meet their benchmark obligations by improving operations or purchasing offsets from others. Double counting is avoided by reducing the sector benchmark by an amount roughly equal to the volume of green building and other energy efficiency credits issued. As of December 2007, energy efficiency and other demand side abatement activities had reduced GHG emissions by 18.5 million tons under the New South Wales program.

---

<sup>3</sup> The term "offset" is often reserved for GHG reductions unrelated to and outside of any regulated industry sector. Because building electricity consumption affects electricity sector emissions, a green building carbon credit is more properly referred to as an emission reduction credit. However, the "offset" term is more readily known, and the general concept is the same, so the green building carbon credit is interchangeably referred to here as an offset.

<sup>4</sup> AB 32, section 38562(d)(1).

<sup>5</sup> Green Building Credits could be created by building owners, tenants or whoever else causes the energy efficiency project to occur. For simplicity, this paper assumes that building owners create and own the credit. In the New South Wales program, Green Building Credits are awarded to the party contractually obligated to pay utility bills, including landlords, tenants and building managers, who may assign ownership of such credits to third-parties. This promotes a third-party market for those seeking to capitalize on the revenue stream green building offsets provide, such as energy service companies.

## 2. *Additionality.*

Another regulatory design prerequisite is that offsets must represent “additional” reductions that would not have otherwise occurred under business as usual. For example, a standard definition precludes crediting actions already required by law because they would have occurred anyway. Additionality criteria determine the baseline and counting methods used to quantify the number of credits a given project creates. In some systems, a customized process is used for each project, such as in the Clean Development Mechanism under the Kyoto Protocol. But such project-by-project analysis creates high transaction costs that undermine the financial viability of offset projects. The preferred and more effective method is to use standardized measurement and verification protocols.

Markets thrive when participants are able to predict a return on investment (“ROI”) so they can better evaluate the capital investment necessary to achieve a desired return. This is especially important for Green Building Credits, because energy efficiency measures often require substantial capital expenditures. Predictability is enhanced when baselines and protocols rely on objective standards and readily available information. This enables building owners to quantify the ROI for green building investments. In new construction, building codes provide an objective and quantifiable baseline for determining additionality and quantifying offsets. For existing buildings, a more sophisticated approach may be necessary, since building codes seldom require upgrades in the absence of significant renovations.

Existing Green Building Credit programs use various protocols and methodologies to quantify carbon credits for different building types and green building improvements. The Regional Greenhouse Gas Initiative and the New South Wales programs award credits based on how much energy the green building improvements *actually* save in comparison to a baseline. For new construction, baselines are determined with reference to building codes. For existing buildings, baselines are tied to actual energy consumption before the green building improvements were made. All calculations and data are verified by independent third-party audits. The New South Wales program gains additional leverage by using the same measurement protocol that the Australia Green Building Council uses for its Green Star building certification program. California could similarly leverage existing systems. Assembly Bill 1103 (2007) already requires benchmarking of existing commercial buildings using the Energy Star Portfolio Manager tool. Title 24, Energy Star Target Finder, or LEED (ASHRAE 90.1) could similarly provide a benchmark for new construction.

Additionality concerns can also arise when green building projects are partially funded through government or utility incentive programs. The fairest way to address these situations may be to reduce the number of Green Building Credits in proportion to the percentage of public funding received. Therefore, if public funding pays 20% of the owner’s total costs, then the owner would acquire carbon credits equal to 80% of the avoided GHG emissions. New South Wales uses this approach.

### **C. Alternative Design Structure To Avoid Potential Impacts To Cap And Trade Compliance Markets.**

Regulatory experience with cap and trade is relatively limited, causing many regulators to prefer a conservative, limited cap and trade market design with fewer participants and restricted use of offsets. Instead, California's regulators are discussing buildings in the context of stricter building codes, increased utility incentive programs and imposing mandatory retrofit requirements at time of sale. Unfortunately, the imminent dangers of irreversible Climate Change do not afford society the luxury of an overly conservative approach that delays important GHG reduction strategies. Both interests can be served by constructing the Green Building Credit as a parallel market separate from the cap and trade compliance market.

Regulators would use a standards-based approach by approving a measurement and verification protocol as rigorous as for any compliance offset; however, Green Buildings Credits would not be used for compliance purposes. Instead, they would be funded by a quasi-governmental entity with revenues generated from the sale (auction) of cap and trade allowances. This would protect cap and trade program integrity and avoid various regulatory concerns. In California, that quasi-governmental entity could be the California Climate Trust proposed by the Air Resources Board's Economic and Technology Advancement Advisory Committee.

This structure could be maintained indefinitely. However, the goal should be to eventually transition the Green Building Credit into a compliance offset after the cap and trade market has proven stable and regulators have gained confidence in the Green Building Credit protocol and resolved double-counting, additionality and any other concerns. This would empower "learning by doing" without jeopardizing the larger priority of a well-functioning cap and trade market. It would also make the Carbon Trust into an incubator that develops and refines new, market-based GHG reduction strategies. And although these Credits would not satisfy compliance obligations (at least initially), this structure would ultimately lessen the burden on regulated sectors by enabling real estate to contribute toward overall, economy-wide GHG reduction targets, like AB 32.

### **D. Rationale For Including A Green Building Carbon Credit In the Earliest Stages of Cap and Trade.**

#### *1. Reduced infrastructure and peak load.*

Taking one's foot off the accelerator is the first step for stopping a car. The Climate Change accelerator is the construction of new power plants built to satisfy America's growing energy demand, which has increased an average of 2.2% each year since 1990.<sup>6</sup> As McKinsey & Company noted in a prominent study, cost-effective Climate Change policy requires tackling energy efficiency first, because it can alleviate the need for constructing new power plants and distribution capacity, saving billions of dollars in utility capital expenditures that would

---

<sup>6</sup> National Energy Technology Laboratory report, February 18, 2008, based on U.S. Energy Information Administration data. See [www.netl.doe.gov/coal/refshelf/ncp.pdf](http://www.netl.doe.gov/coal/refshelf/ncp.pdf).

otherwise be imposed on the economy through higher electricity rates.<sup>7</sup> After this infrastructure is built, the economic value of energy efficiency drops, because its cost must then be compared to the cost of taking existing power plants and infrastructure off-line, which is considerably less favorable than avoiding their construction in the first place. Even if the Green Building Credit succeeds only in reducing peak energy demand, it will reduce operating time for the dirtiest power plants, which customarily remain in service to serve peak demand.

### *2. Faster, more permanent GHG reductions.*

Green building provides more immediate GHG reductions than other, more frequently discussed GHG reduction strategies, because it is rapidly deployable and uses readily available, off-the-shelf technology. Other solutions take years to implement, like converting power plants from coal to natural gas or replacing existing electricity generation with nuclear or wind. Technology solutions, like carbon capture and storage and clean coal will not be viable for decades to come, if ever. Evolving scientific understanding of Climate Change reveals a growing urgency to reduce emissions now, and nothing can provide meaningful reductions faster than energy efficiency.

Energy efficiency improvements to existing and new buildings are the “gift that keeps giving” because buildings are long term assets that lock-in their energy and GHG performance throughout their useful life. Every building constructed without optimal energy efficiency represents a lost opportunity, because it costs much less to make buildings energy efficient during initial construction than to do so later through retrofits. For example, the California Air Resources Board notes that solar hot water systems cost twice as much to install in existing buildings than new construction. Consequently, the revenue a building owner might receive from carbon credits is more valuable during initial construction than a later retrofit, because it finances a larger percentage of the cost for energy efficiency improvements. The sooner Green Building Credits are included in regulatory carbon markets, the greater their contribution to GHG reductions will be.

### *3. Domestic creation of new “green collar” jobs and economic development.*

An important co-benefit of a Green Building Credit is that energy efficiency improvements are more labor intensive than most other GHG reduction strategies. This provides substantial workforce development opportunities, especially for relatively low-skill but comparatively high-paying “green collar” jobs in the construction trades that cannot be outsourced to other countries. This co-benefit is exceptionally valuable, given the loss of so many blue-collar manufacturing jobs. Unlike imported offsets, such as the Clean Development Mechanism that funds GHG reductions in other (typically developing) nations to offset domestic carbon emissions, revenue from Green Building Credits remains in California (or the WCI) and supports domestic economic development.

<sup>7</sup> [http://www.mckinsey.com/clientservice/ccsi/pdf/US\\_ghg\\_final\\_report.pdf](http://www.mckinsey.com/clientservice/ccsi/pdf/US_ghg_final_report.pdf), p. xvi.



**E. The Green Building Carbon Credit Compliments Existing Energy Efficiency Programs And Is Superior To Other Strategies Being Contemplated To Fund Greater Energy Efficiency.**

As noted above, California recently adopted AB 1103 (2007), which requires benchmarking and disclosure of energy consumption in commercial buildings. It is expected this will make energy efficiency a competitive building feature. But this benchmark data could also provide the basis for a Green Building Credit protocol, which would leverage AB 1103 beyond disclosure by providing the tool for incentivizing actual energy reductions.

California and a limited number of other states currently promote energy efficiency through financial incentives and consumer education programs. These programs are often administered by local utilities, because they are regulated industries and have the most interaction with consumers. But this structure expects and requires private utility companies to act against their interest by reducing demand for the product they sell – energy. These programs have been modestly successful in states like California, where utility profits are not directly tied to energy sales (i.e. decoupling), but even here, success is constrained by the fact that the core competency of utilities is selling energy, not saving it. And since decoupling is rare, California-type utility programs cannot provide a model for federal or international efforts.

Existing programs create a monopoly structure by delegating energy efficiency responsibility to utilities. Regulated monopolies are an efficient delivery method for basic commodities where customers have identical needs, like electricity and natural gas. But they are inefficient and incapable of providing highly variable services, like energy efficiency improvements. Green Building Credits provide a profit motive that incents private sector competition to develop more sophisticated and successful ways to expand energy efficiency far beyond what the current monopoly system of utility incentive programs can provide. And unlike these current programs that are limited by scarce public funds, Green Building Credits would be funded through carbon markets. Potential funding would be limited only by the comparative cost of Green Building Credits in relation to other GHG reduction activities and any regulatory cap that might be imposed.

Utility programs also typically fund specific measures, like installing more efficient lighting or mechanical systems. They do nothing to spur energy conservation and little to ever-increasing plug loads. But since a Green Building Credit would be quantified based on actual energy savings, conservation and plug load reductions would count the same as efficiency improvements. This would provide an incentive for behavior modification, which the real estate market could motivate through green leasing concepts.

In a properly constructed regulatory system, these Credits would be treated like other commodities. Financial institutions would invariably create new financial products that enable building owners to finance the cost of energy efficiency improvements based partly on the carbon credits they will create over time. Since upfront cost is the biggest hurdle to energy efficiency, this could revolutionize the building industry and exponentially increase the pace of existing building retrofits, all of which would spur private capital investment into increasingly efficient building products and systems.

The Green Building Credit is likewise superior to newer strategies being considered for enhancing energy efficiency. An amendment to the Lieberman-Warner federal Climate Change bill proposed having a set-aside of cap and trade carbon allowances that would be given to local governments to sell and raise money to fund energy efficiency projects in their jurisdiction. This same concept is purportedly being considered in California. The Green Building Credit is a superior strategy, because it promotes market adoption by providing a single measurement and verification protocol that industry can use throughout the jurisdiction, whereas the allowance set-aside provides no such efficiencies because each local government would operate a separate program. The allowance set-aside is merely an alternative currency that would be less efficient than even direct grants to local governments, because it would require them each to become traders in the carbon market.

Because cap and trade will increase the cost of electricity production, some anticipate this will encourage the electricity sector to help finance building energy efficiency improvements in order to reduce their own cap and trade compliance obligations. But this could only work in a load-based point of regulation where the compliance obligation rests with utilities, because they sell electricity directly to consumers and could link specific projects to their service obligations. In the load-based or first-seller point of regulation favored in California, the Western Climate Initiative and federal legislation, the compliance obligation rests with power plants. There is no way to know which power plant is powering a building at any given time, because their electricity is fed into the grid. So the power plant would have no incentive to finance a particular project, because its emissions would not necessarily be reduced, since the building may be receiving its power from a different power plant and reducing that plant's compliance obligations rather than those of the plant that funded the project. Moreover, unlike load serving entities, power plant revenues are not decoupled from electricity sales, so they would have no incentive to decrease demand for their power.<sup>8</sup> The Green Building Credit overcomes this problem by creating a commodity that can be traded without any need to link project carbon reductions to a specific power plant.

### III. Conclusion

A properly constructed Green Building Carbon Credit is supported by the same rationale that underlies cap and trade and other market-based initiatives for addressing environmental problems. By providing a mechanism to seize the low-hanging fruit of building energy efficiency, a Green Building Credit will enable the market to deliver GHG reductions faster and cheaper than otherwise possible.

Each new study shows that Climate Change is accelerating. Society must deploy innovative regulation to harness the power of the market to deliver the immediate reductions needed. The Green Building Carbon Credit is one such prescription. And it warrants serious consideration among those entrusted with devising the solution.

---

<sup>8</sup> In places like California, electricity sales are decoupled from utility profits. But this only applies to load-serving entities. Many power plants are owned by separate entities that are not subject to regulatory decoupling.