

R E S P O N S E

# Response to *The Quiet Revolution Revived: Sustainable Design, Land Use Regulation, and the States* by Sara Bronin

by Felicia Marcus and Justin Horner

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The focus of much dialogue and debate in the public eye over climate change and greenhouse gas emissions (GHGs) tends to focus on industrial emissions of pollution for manufacturing or the production of electricity. Emissions from transportation sources (like trains, planes, and automobiles) and from the heating, cooling, and lighting of buildings themselves are less readily visible, yet each constitutes roughly a third of America's total greenhouse gas emissions. In *The Quiet Revolution Revived: Sustainable Design, Land Use Regulation, and the States*,<sup>1</sup> Sara Bronin correctly focuses on the importance of facilitating the creation of "green" buildings, and identifies what she sees as significant barriers, at the local level, to the implementation of greener buildings.

While agreeing with Bronin's objectives, we feel that *The Quiet Revolution Revived* could benefit from consideration or reconsideration of three particular areas: (1) the article's conflation of "green building" regulation and "land use" regulation; (2) transportation energy related to building location; and (3) recent federal, state, and local efforts that are addressing all of these issues in ways consistent with what we see as Bronin's intent. Our intent here is less to critique the article than to provide other information that interested readers should know about reducing GHG emissions related to buildings. In short, we think there are both times when localities will lead states and times when states need to step in to facilitate important policy objectives. In this case, there are other vehicles to achieve greater GHG reductions that do not require even a "quiet revolution" in order to have a tremendous impact.

## I. "Green Building," "Building Codes," and "Land Use": The Importance of Terminology

From a technical perspective, *The Quiet Revolution Revived* conflates "green" building standards, building codes, and design standards into "land use" policies, when, in fact, the terms are considered separate in practice. "Land use" generally refers to the type, general size, and use of a structure for a given location (that is, residential vs. retail vs. industrial; offices vs. restaurants vs. drugstores), whereas the article focuses more specifically on building codes and design standards. The question the article tackles is not whether we put residential or mixed use on a particular parcel (which is a land use question), but rather, since we know we're putting, say, a house, on a particular parcel, how do we make it green? Bronin recognizes this important distinction between zoning and design standards in her Section Ia, but the paper would benefit from a more precise treatment of each of the three elements.

The distinction is important because there are a variety of measures at both the state and local levels that encourage "green" principles outside of zoning or other aesthetic requirements.<sup>2</sup> California's Title 24, for example, is a national leader in energy efficiency without being characterized as a "green building" regulation. Changes to existing codes, or environmental performance standards within existing codes, can do as much without the "green" trappings.

Building codes are extremely important; indeed, they are far more important from an environmental standpoint than

1. Sara Bronin, *The Quiet Revolution Revived: Sustainable Design, Land Use Regulation, and the States*, 40 ELR (ENV'T L. & POL'Y ANN. REV.) 10733 (Aug. 2010) (a longer version of this Article was originally published at 93 MINN. L. REV. 231 (2008)).

2. We think it is also important to note that there is really no consensus definition of "green building," so even that frame can lead to misunderstanding. NRDC, for one, prefers the admittedly clunky phrase "environmentally sustainable materials, design and construction."

anything design review could regulate. Most of a building's energy use (and the strategies that are used to make buildings more efficient) is entirely invisible (location being the clearest example).<sup>3</sup> According to the U.S. Green Building Council, nearly 70% of all the environmental impacts of a building are the results of decisions made in the first 10% of the design phase of construction, meaning that the energy profile of the building is basically set before anyone actually knows what the building will look like.

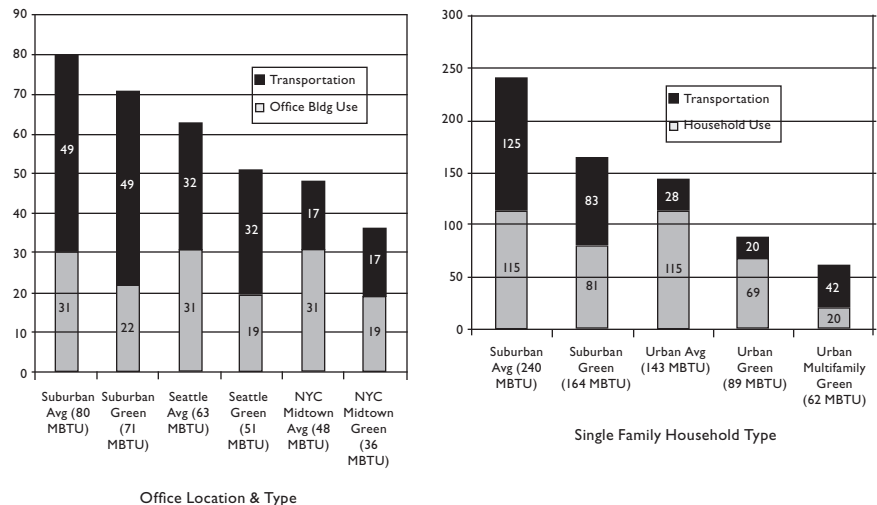
Yes, some localities limit solar panels, but that is not necessarily synonymous with limiting or discouraging green building overall. Bronin concludes that "[t]he evidence reveals that the dominant mode of land use regulation nationwide bars the reforms that environmentalists and the building industry have worked together to develop,"<sup>4</sup> when no such case is made. Indeed, some local building codes that encourage green building (in San Francisco or San Mateo County, for example) are actually stronger than state building codes. We would all like the level of authority with the broadest and "greenest" reach to be the one to implement our ideal policies, but we must also leave room for local innovation.

## II. The Importance of Transportation Energy

In addition to design review regulations on the environmental performance of buildings, there is another area that is vastly more important and directly involves land use: transportation and location efficiency.

Green buildings are good; green buildings in the right locations are even better. What a growing evidence base<sup>5</sup> tells us is that where a project is sited can have more of an environmental impact than how a project is constructed or even operated.<sup>6</sup> Building energy use analysis should not only consider what a building is made of and how it is powered, but how much energy will be required by residents, employees, guests, and customers to get to and from the building each day. As the graphs show for residential and commercial development, transportation energy is a significant part of a project's entire energy impact.

Leading proponents of green building and development have accepted the importance of transportation energy. The U.S. Green Building Council (USGBC), the Congress for New Urbanism (CNU), and Natural Resources



Source: Jonathan Rose Companies, LLC

Defense Council (NRDC) have released LEED-Neighborhood Development (LEED-ND), the first effort to describe, catalog, and verify what constitutes green development at the project and neighborhood scale. LEED-ND endeavors to integrate planning and urban design into the evaluation of the environmental performance and energy efficiency of buildings.

Neglecting transportation energy has at least three downsides: (1) as the graphs show, ignoring transportation is simply not a fully accurate way to measure the environmental impacts of a building; (2) it avoids the fact that many traditionally built buildings are more energy efficient than so-called green buildings as a result of their location, which could significantly impact localities' policy approaches; and (3) it prevents an exploration of a real state role in transportation and land use planning (like SB 375 in California<sup>7</sup>), which is the cutting edge at the intersection of land use and building efficiency.

## III. Examples of Innovative Federal, State, Regional, and Local Approaches to Green Building

Bronin recommends overturning the traditional locality-based approach to land use and replacing it with a stronger state role. However, we feel that while states should have strong roles in land use and building code decisions, there are more appropriate approaches short of wholesale preemption of local decisionmaking. Bronin rightly describes the significant political obstacles to a stronger state role, yet we can also say that some of the country's most innovative recent environmental policies around land use have come from within the structure of existing institutions. Importantly, one of these reforms, SB 375, relies heavily on existing regional institutions (in this case, Metropolitan Planning Organizations (MPOs)), which the article largely dismisses as potential actors.

3. For an extended discussion of energy and location efficiency and applicable policies, see DAVID B. GOLDSTEIN, *INVISIBLE ENERGY* (2010).

4. Bronin, *supra* note 1, at 10733.

5. See, e.g., REID EWING ET AL., *GROWING COOLER: THE EVIDENCE ON URBAN DEVELOPMENT AND CLIMATE CHANGE*, (2008).

6. We should note that the USGBC now has a system that measures and certifies building operations. LEED-Existing Buildings: Operations and Maintenance, <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=221> (last visited June 16, 2010).

7. See *infra* Part III A.

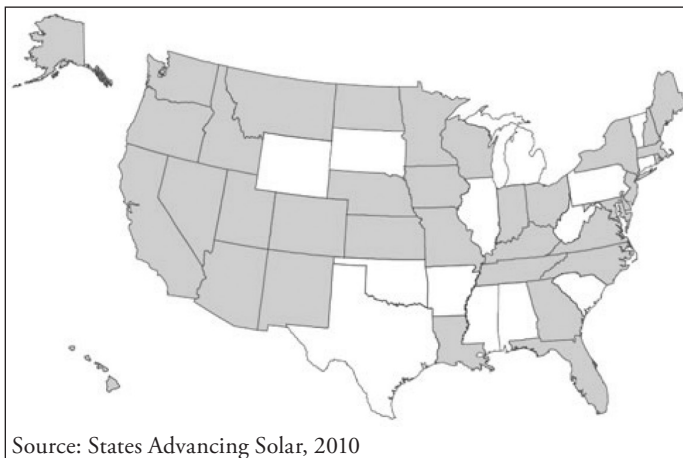
### A. *SB 375 and the American Power Act: The Intersection of Land Use and Transportation*

In 2008, California passed SB 375, the nation's first law requiring regional land use and transportation planning to be done together, and to be tied to reducing vehicle miles travelled and GHGs from cars and light trucks. SB 375 is a great example of how different levels of government can play constructive, appropriate roles. A state-level environmental body, the California Air Resources Board, sets a GHG reduction target for each MPO region. The MPOs then create regional plans in cooperation with local governments. Regional plans that meet the GHG reduction targets benefit from prioritized transportation spending and streamlined environmental review of projects.

This common sense approach has gained significant support because it does not explicitly overturn existing structures or judge one as superior to another. In fact, the latest global warming bill recently introduced in the US Senate, the American Power Act, takes SB 375's approach to the national level. The bill would require the U.S. Department of Transportation to set a national goal for cutting global warming pollution and oil use in the transportation sector. States and large metropolitan regions would be asked to set similar targets and over time incorporate strategies to meet these goals into their transportation investment plans.

### B. *Solar Access Laws and PACE Programs: States Are Definitely Getting Solar*

States clearly see the benefits of solar power, and are moving quickly to make it more widespread. Although some localities may limit the use of rooftop solar panels for aesthetic reasons, others promote it actively. The thirty-six states in blue already have measures in place, similar to the California law mentioned by Bronin, to limit local restrictions.<sup>8</sup>



Source: States Advancing Solar, 2010

In addition, the biggest barriers to the installation of solar panels are not just aesthetic. Local regulations also focus on issues of cost, convenience, and public awareness. Just this past April in California, a law was passed that will have a far greater

8. See States Advancing Solar, <http://www.statesadvancingsolar.org/policies/policy-and-regulations/solar-access-laws> (last visited June 16, 2010).

impact on promoting solar panel installation than removal of local design standards.<sup>9</sup> By standardizing a statewide Property Assessed Clean Energy (PACE) financing system and having the state guarantee loans, the bill will make it easier and more affordable for Californians to undertake energy efficiency measures and small renewable energy projects on their properties. PACE lowers interest costs (because of the state guarantee) and allows property owners to amortize the cost of the project through an assessment on their property tax that runs with the property over a long period of time. The law will catalyze voluntary energy retrofits to residential and commercial property while creating a projected 10,500 direct jobs.<sup>10</sup>

### C. *U.S. Department of Housing and Urban Development (HUD): Using LEED-ND to Foster Sustainable Development*

As noted above, LEED-ND is the first effort to describe, catalog, and verify what constitutes green development at the project and neighborhood scale. Just last month, HUD announced that it would use location efficiency and LEED-ND to score grant applications. HUD will invest more than \$3.25 billion in local communities in the next few years, and localities will be strongly incentivized to incorporate the location, design, and green-building approaches contained within LEED-ND.

This is just the latest step in a growing federal recognition of the importance of a comprehensive view of development, one that "captures" as many externalities in good policy as possible. Earlier this year, HUD, the Department of Transportation, and the Environmental Protection Agency created an Interagency Partnership for Sustainable Communities to address the whole raft of building and development-related environmental issues.

## IV. Conclusion

In sum, we appreciate Bronin's treatment of this vital area of policy. All efforts should be made to eliminate unnecessary barriers to more sustainable approaches to building. While a strong state role is often called for, we do not think that fact leads to a conclusion that dramatic preemption of local land use authority is the most important route to reducing GHG emissions from buildings. Indeed, as we hope we have demonstrated, there are ample opportunities within the existing land use regulation system (the proverbial low hanging fruit of energy efficiency being the most obvious) that can be successfully tackled without marking local land use laws as the biggest enemy.

9. SB77 (Pavley): California Alternative Energy and Advanced Transportation Financing Authority: Property Assessed Clean Energy (PACE). Note that implementation of PACE-like programs is currently the subject of litigation. See Federal Housing Financing Authority, FHFA Statement on Certain Energy Retrofit Loans (July 6, 2010), available at <http://fhfa.gov/webfiles/15884/PACESTMT7610.pdf>; Robert Selna, *State sues feds over green loans for homes*, SAN. FRAN. CHRON., July 15, 2010, at <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2010/07/15/MN651EEDEG.DTL>.

10. SB77: Agenda 2010, available at [http://senweb03.senate.ca.gov/focus/agenda2010/bill\\_pace.aspx](http://senweb03.senate.ca.gov/focus/agenda2010/bill_pace.aspx).