

BOOK REVIEW

ASSESSING LOCAL POLICY EXPERIMENTS TO COMBAT CLIMATE CHANGE

*AN URBAN POLITICS OF CLIMATE CHANGE:
EXPERIMENTATION AND THE GOVERNING OF
SOCIO-TECHNICAL TRANSITIONS*

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In *An Urban Politics of Climate Change* (2015), Harriet Bulkeley and her co-authors present eight case studies of climate change mitigation via energy efficiency in housing in different global cities. The authors explore the mechanics of these climate “experiments” and the way they vary contextually in terms of national priorities, regional- and city-governance structures, and social and economic conditions in communities.

This book joins a growing literature on locally-driven climate planning. The local climate planning literature has focused on eliciting the reasons that cities engage in climate planning (Millard-Ball 2013; Sharp, Daley, and Lynch 2011) and categorizing the contents of climate plans (Bassett and Shandas 2010; Wheeler 2008). Bulkeley and Bestill (2005) called for research that clarifies the broader political, economic, and social context in which local climate planning occurs. This book provides a more nuanced understanding of how climate planning is shaped by non-state network governance and multilevel governance by state actors.

While previous studies have focused on the *why* of climate planning, this book provides illuminating detail on exactly *how* climate experiments are “made, maintained and lived” (199). The cases demonstrate successes and failures at all three stages: the initial organization and partnerships involved in deploying a set of energy-efficiency technologies or retrofits (making), how well they continue through individual behavior (maintaining), and what their spill-over effects are on the embeddedness of climate politics in everyday life in the city over time (living). The authors explore in detail why, in some of the cases, these goals never disseminate beyond their experimental nature, while in others they successfully become part of the fabric of the city. Factors contributing to this variation include different levels of cooperation across sectors and scales of government and variation in the level of partnership with residents who are living with the climate experiments.

Bulkeley and her co-authors argue that policy “experiments” can be a potential vehicle for overcoming institutional, political, and other barriers to climate planning and for advancing a social justice agenda. They present cases where the target audience is affluent residents who can afford to invest in home energy retrofits and cases where subsidizing improvements for low-income residents has a triple benefit of reducing energy use, reducing costs, and creating jobs. In the “making” of climate experiments, we get a picture of cooperation between local governments, financial institutions, private sector actors, and community groups on emission reductions.

The authors show how home energy-efficiency interventions are better maintained when residents are included in the design of the program. Whether the experiments were “lived” depended on whether they built and expanded political constituencies for climate mitigation policies and led to broader acceptance and uptake of emissions-reduction activities.

The eight cases in the book include two on low-carbon housing developments, one middle-class in Bangalore and one low-income in Monterrey, Mexico. Two others are cases of residential energy retrofits, one in Philadelphia and one in Cape Town, South Africa. Of these, one is a public-private partnership and the other is an NGO-public partnership. The authors also look at solar energy in private rental housing in Berlin, solar hot water in publicly owned housing in Sao Paulo, as well as individual energy use in Hong Kong and energy retrofits in public housing in Brixton, a low-income London neighborhood. It never becomes exactly clear why the book focuses on energy in the residential sector to the exclusion of emission reductions from urban transport, water use, or waste, for example. The emphasis on behavior and consumer buy-in keeps planners in the background and makes it hard to see how these experiments might change systems and incentives at the citywide or regional scales. Still, the variety in how partnerships are structured and whether the experiments are locally-driven or more top-down makes these cases interesting.

The Philadelphia case engages with the potential tradeoffs between framing a project around emissions reductions and generating interest by making it relevant to other areas of people's lives. The experiments that had a lasting impact tended to balance these. In Philadelphia, the experiment involved signing up affluent row-house owners to have their roofs painted white to reflect sunlight. The homeowners saw it as a money-saving action and participated based on their trust in a neighbor who acted as a leader. The authors note that while the project successfully mobilized social capital in the service of emissions reductions, participants did not come away with a strong understanding of the project's connection to climate change or an interest in further climate related policies or improvements to their neighborhood or city. They argue that this limited the broader success of the project.

In the Cape Town experiment, city officials strategically used the frame of climate-change mitigation to tap into national and international resources, while attracting interest from low-income residents by addressing immediate economic and health disparities. The city garnered support from financial institutions by framing energy security for poor residents as a climate issue. At the same time,

Cape Town residents benefited from reduced spending on heating their homes and improved health because the retrofits reduced the amount of wood they were burning indoors. The project also provided economic benefits for residents through direct training for local workers who installed the retrofits, as well as a reduction in lost work days for residents suffering from smoke inhalation.

The Brixton experiment illustrated the potential benefits of aligning the priorities of governments and communities within regions to achieve lasting emissions reductions and make environmental projects equitable. The Brixton "low-carbon zone" was part of a broader climate agenda that extended beyond home energy efficiency to include energy generation, transit, and other urban issues, and it aligned the interests of multiple scales of government and sectors. Cooperation of regional and local government actors was coupled with outreach to residents that engaged them on issues beyond home energy use that they associated with climate mitigation, such as urban gardening. Low-income residents received the cost-savings benefit of retrofits, and some received job training and employment as a result. The London low-carbon zones were successful both in turning a top-down emission reduction agenda into one with local ownership, as well as in incorporating issues of economic inequality, such as the cost of home heating.

This book provides compelling stories of cities succeeding and failing at integrating the economic, social equity, and environmental aspects of sustainability. Yet it would have been interesting to see a greater variety of climate mitigation experiments represented beyond residential energy use, such as transportation and water use, or greater detail on projects that attempt to link multiple interventions. The focus on the scale of the individual resident and their personal investment in climate mitigation left room for greater nuance in the book's discussion of urban and regional climate governance and its impact on emissions reductions. However, the authors' critical perspective on metrics for success in urban climate experiments makes it an informative read for scholars of regional governance and sustainability planning.

REFERENCES

- Bassett, Ellen, and Vivek Shandas. "Innovation and Climate Action Planning." *Journal of the American Planning Association* 76, no. 4 (2010): 435-50. doi:10.1080/01944363.2010.509703.
- Bulkeley, Harriet, and Michele Betsill. "Rethinking Sustainable Cities: Multilevel Governance and the 'Urban' Politics of Climate Change." *Environmental Politics* 14, no. 1 (2005): 42-63. doi:10.1080/0964401042000310178.
- Millard-Ball, Adam. "The Limits to Planning Causal Impacts of City Climate Action Plans." *Journal of Planning Education and Research* 33, no. 1 (2013): 5-19. doi:10.1177/0739456X12449742.
- Sharp, Elaine B., Dorothy M. Daley, and Michael S. Lynch. "Understanding Local Adoption and Implementation of Climate Change Mitigation Policy." *Urban Affairs Review* 47, no. 3 (2011): 433-57. doi:10.1177/1078087410392348.
- Wheeler, Stephen M. "State and Municipal Climate Change Plans: The First Generation." *Journal of the American Planning Association* 74, no. 4 (2008): 481-96. doi:10.1080/01944360802377973.