

Creating Resilient and Energy-Efficient Cities through Local Partnerships

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ABSTRACT

City governments understand the large role that improved building efficiency plays in reducing a city's carbon footprint and achieving citywide sustainability goals. Unfortunately city governments often lack the capacity necessary to work as deeply as they would like on this issue. Local organizations and consultants have a unique opportunity to make positive impacts by partnering with city governments to provide that much-needed capacity, while also advancing their own missions. This paper will examine how local partners have used their technical expertise, outreach networks, and other strengths to support city governments with the knowledge and tools needed to develop and implement energy efficiency policies and programs, with a particular focus on benchmarking and transparency. Three case studies are provided from the City of Atlanta, the City of Chicago, and the City of Philadelphia to showcase various ways local partners have engaged, the additional capacity they have provided, and how they have developed a close relationship with the cities. Based upon these three deeper case studies and interviews with staff from additional local organizations, this paper will synthesize common themes and best practices as to how local partners can engage with city governments successfully.

Introduction and Background

At least half of the buildings that will be in use in 2050 have already been built (Institute for Building Efficiency 2010), and many of those are in cities. Across the United States, buildings account for more than 40 percent of total energy consumption and 45 percent of total U.S. carbon emissions (EIA 2012). In the largest cities, the impact of buildings is even higher: buildings account for between 50 and 75 percent of citywide carbon emissions.²

City governments know that in order to make a meaningful impact on their emissions, they must address their building stock. A key first step fifteen major cities and one county have done is to pass a benchmarking and transparency ordinance (Building Rating 2015). These ordinances require both public and private buildings over a certain square footage (usually 25,000 square feet or 50,000 square feet) to track and report their energy performance annually and make that information available to the public. A free online tool called ENERGY STAR Portfolio Manager provides covered buildings with an ENERGY STAR 1-100 score. The score is based on overall national performance, so a score of 50 means a building is average while a score of 75 means a building is in the top quartile of all similarly situated buildings nationwide. This score is equivalent to a "miles-per-gallon" rating for buildings that creates more information in the marketplace. This kind of policy has become a best practice across large U.S. cities.

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² Based on community-wide greenhouse gas inventories and sustainability plans in several cities (City of Chicago 2012; City of Los Angeles 2015; City of New York 2014; City of Orlando 2016; Cox 2015).

City governments often lack the staff, budget, and technical expertise to work on energy efficiency issues by itself (Freedman Consulting and Bloomberg Philanthropies 2015). This is where partnerships with local organizations become so important. The purpose of this paper is to describe how organizations have successfully partnered with city governments to pass and implement city-wide benchmarking and transparency ordinances and other energy efficiency initiatives. The best practices identified are intended to help local partners such as nonprofit organizations, professional associations, and technical experts who are interested in engaging with cities to work collaboratively in this space.

Methodology

This paper is based on a larger body of research on various partnership models from cities that have passed benchmarking and transparency ordinances as well as interviews³ conducted with several staff members in local organizations. The case studies selected for this paper are illustrative of the kinds of work and models of engagement developed. However, the best practices will be pulled from the findings of the greater research and not only from the three case studies presented in this paper.

Goals and Objectives

The goal of this paper is to offer valuable and practical insights that can be implemented by local organizations interested in partnering with cities on energy efficiency initiatives such as benchmarking and transparency policies. This paper will help answer the following questions:

- How can a local organization that is interested in working with a city government on energy efficiency support the creation, adoption, and implementation of an energy efficiency policy, especially a benchmarking and transparency ordinance?
- What were the entry points for organizations to engage successfully on benchmarking and transparency policies and related initiatives?
- What are the common organizational practices that led to successful partnerships with city governments?

Common Themes and Best Practices

Although each partnership formed between the organizations interviewed and the respective city governments is unique, there are some common themes and best practices as to what makes a successful partnership.

³ Fourteen interviews were conducted in 2015 with representatives from the following organizations: A Better City, Center for Energy and Environment, DC Sustainable Energy Utility, Delaware Valley Green Building Council, Elevate Energy, Environmental Protection Agency – Region 3, Natural Resources Defense Council, Pacific Gas and Electric Company, Retiree Environmental Technical Assistance Program, Sierra Club – Montgomery County, Southface, Urban Green Council, US Green Building Council – Illinois, and US Green Building Council – Northern California Chapter.

Beginning the Partnership

The strongest partnerships were formed when there was alignment of missions, goals, and values between the city government and the local organization. However, getting to that alignment and building the trust to work together could be challenging, especially if the city had recently undergone an administration change or if the local organization did not have a pre-existing relationship with the city from prior work. In these instances, local organizations took the initiative and requested an introductory meeting with city staff. At these meetings, it was not only important to discuss the potential partner's expertise, goals, and interests with city staff, but also for the local organization to have a clear understanding of what was important to the city and how the partner could show value and contribute to that goal. Once an initial meeting occurred, successful local partners engaged often with the city to increase visibility and name recognition.

Local work on energy efficiency in buildings started, for simplicity sake, in one of two ways. First, the city could realize that other cities are working in this space and decide to start investigating the local opportunity. Or second, a local organization could pitch the opportunity to work on this issue to the city and make the case that this should be a sustainability priority.

In the first case, city governments often knew that local partners would be necessary to execute a successful initiative because of internal resource constraints. Cities familiar with crafting policy tended to request help to develop, pass, and implement energy efficiency policies from organizations with established expertise and proven a track record of success in working with government (though not necessarily at the local level). Substantive partnerships often developed out of the city initially inviting the local partner to be on a task force or advisory committee for the policy.

In the second case, in which the local partner brought the opportunity of energy efficiency to the city, there are a couple key considerations. The local organization should have a clearly defined expertise that is tied to the initiative. And the local organization should have a well thought out proposal for how to actually implement the energy efficiency program being pitched. The city would want to know the opportunity, risks, challenges, costs, and benefits, and the local organization should be prepared to answer these questions robustly when making the pitch to the city.

Building Trust to Ensure a Successful Partnership

Fruitful partnerships are built on trust, particularly cities trusting local partners with work, access, and sensitive information. Local organizations built trust with the cities in many different ways. Setting realistic expectations and following through on commitments were critical. And local organizations that found ways to “show value” to the city in times of need were trusted more and given more opportunities to work with the city. This meant that a local organization needed to determine what their strengths were and what value-add they provided to the city (or what gaps they could fill in the city's overall program). This was especially important in cities with multiple local partners.

Maintaining regular communication with the city was also key. And in those communications, successful partners were the ones who were deferential and courteous with the city. Praise also helped: local partners who showcased the city's wins and leadership to the organization's membership and/or networks were appreciated by the city.

Supporting a City’s Energy Efficiency Initiative

There are many aspects of a benchmarking and transparency policy: development of the ordinance language, stakeholder engagement, outreach and education, advocacy, and implementation of the ordinance (determining which buildings need to comply, assisting building owners through the compliance process, data analytics, etc.).

Cities tended to need outside partner support at each of these stages, so determining where a local organization could “plug in” was important. Some local organizations had expertise in more than one area and were able to support benchmarking programs in several ways, while others had more focused areas of expertise. While it was important to be clear about the expertise and value an organization could provide to cities, being flexible was equally important; a city could ask an organization to focus on a different set of tasks and activities outside of its normal scope, but this could turn into a new, meaningful, and lasting work stream for the local partner.

Challenges while Working on Benchmarking and Transparency Policies

There are many different types of challenges when working on benchmarking and transparency policies: technical, logistical, and political. Understanding what is involved in implementing a policy could be challenging, so the local partner must find resources on the policy and get answers to questions.

On the logistical side, working jointly with other partners was challenging in that coordinating could be time-consuming and slow down momentum. Some cities spent a significant amount of time during the development of the energy efficiency policy getting all local partners aligned and working toward a common goal. Once a clear division of roles was delegated among supporting organizations and all were working toward that common goal, collaboration among local partners usually became easier.

And politically, some city governments were guarded at times because information was sensitive. This gap in communication caused confusion and made it difficult for outside partners to be clear on what approach to take in helping the city. Further, governments could be concerned with balancing economic and commercial interests with impactful environmental policies. This could create a misalignment of interests between nonprofit groups (who desire greater impact) and governments (who must balance competing interests).

Financial Resources for Local Partners

Typically, organizations required an average of one to two full-time employees (FTEs) to support city policies at any given time. Enlisting help from volunteers, interns, and fellows helped drive costs down for many organizations. But there were key services many local partners provided, such as overseeing a “help center” for buildings owners to call into and ask questions, which require additional funding above existing grants.

Most local partners could support the city’s energy efficiency initiatives in a sustainable fashion without additional funding. Some were able to absorb the bulk of the costs of their support internally in the short term. This could be done by having a mission that is aligned with the goals of the city so that providing the city support not only helps the community but

advances the organization's own mission and goals. However, securing outside funding from philanthropic sources or similarly-aligned initiatives was critical to maintain this effort for years to come.

Case Study: Southface – City of Atlanta, GA

Southface is a nonprofit organization located in Atlanta with a mission to use market-based solutions to create green jobs, clean energy solutions, and sustainable communities (Southface 2016). Much of the work Southface does is to create sustainable solutions to advance energy efficiency in the built environment through initiatives and advocacy efforts.

A Partnership is Created

Southface began working with the City of Atlanta in the early 2000s when there was an increase in sustainability-related policies being developed by the City. The City enlisted the help of Southface to assist with policy development and community outreach and to provide expert advice on environmental policies and programs. The initial support that Southface provided to the City helped set the foundation for their work on the City's benchmarking, transparency, and audit ordinance, called the Atlanta Commercial Buildings Energy Efficiency Ordinance.

In 2014, as the City began plans to develop the Atlanta Commercial Buildings Energy Efficiency Ordinance, Southface was contacted for support. Southface was a natural fit for helping the City gain support for its new potential policy due its history of successfully working with the City on environmental policies. Additionally, Southface already had relationships with the key demographic the City was targeting – real estate professionals and building owners. Thus, Southface became a key partner to the City and was able to provide the access the City needed to these groups in order to gain the necessary support to successfully pass the ordinance. During this time, Southface's work was funded by the Energy Foundation.

Stakeholder Engagement and Outreach

Southface launched an outreach campaign to gain support for the passage of the Ordinance and built a sizeable coalition of supporters. Due to political considerations, the City initially placed a somewhat hurried deadline for the passage of the Ordinance, which created a knowledge and trust gap between the industry representatives and the City. Southface helped the City navigate these tricky dynamics effectively by facilitating stakeholder engagement session between parties. This helped ease concerns from stakeholders and delivered some support from key groups to the City.

The Atlanta Commercial Buildings Energy Efficiency Ordinance unanimously passed city council in the spring of 2015. Under the legislation, building owners of most buildings over 25,000 square feet are required to benchmark and report to the City their properties' energy use annually. Utilizing the data collected, building owners will complete an energy audit once every 10 years (City of Atlanta 2015).

Implementation Support

Once the ordinance passed, Southface's role shifted from stakeholder outreach and coalition building to setting up and running the help desk designed to educate and inform

building owners about the Ordinance requirements. Southface also put on several educational presentations for building owners before the first compliance deadline. They staffed the help desk and fielded questions coming in from building owners regarding how to input the required information into Portfolio Manager. The peak times for the help center were the months surrounding the compliance deadline.

Capacity Requirements

Southface had three interns that staffed the help desk and spent at least 75% of their time answering questions from building owners. The outreach efforts performed by Southface took about 65% of one full-time employee (FTE) during the ordinance development phase.

Reflections from Southface

Southface points out that the most valuable role they have played on behalf of the City has been that of facilitator and outreach coordinator; getting key groups with differing perspectives to communicate and create common goals was vital in creating a successful energy efficiency program.

Southface's history of partnering successfully with the City on sustainability initiatives prior to the Atlanta Commercial Buildings Energy Efficiency Ordinance created a strong foundation for the key role they played in this effort. Taking a market-based approach with the City, rather than a research-based approach, was also important. Southface was able to identify what the real issues were in the market from both the industry and the City's perspectives. This helped situate Southface as a broker and facilitator that was trusted on both sides.

Southface worked cooperatively with other groups, and Southface staff note that enlisting the support of several partners that work collaboratively is important to maximize support for the City and create a successful program launch.

Case Study: Elevate Energy, Natural Resources Defense Council (NRDC), and U.S. Green Buildings Council-Illinois Chapter (USGBC-IL) – Chicago, IL

Background: Chicago Ramps Up Its Sustainability Efforts

Mayor Rahm Emanuel assumed office in 2011 in Chicago and made significant changes to the City's sustainability staffing. He created an Office of Sustainability in the Mayor's Office and hired a Chief Sustainability Officer. The City ramped up efforts to create an action plan for sustainability that would take the Administration through its first term. Released in 2012, the *Sustainable Chicago 2015 Action Agenda* outlined themes, goals, and actions that would help make Chicago a more livable, competitive, and sustainable city by 2015 (City of Chicago 2012). A key component of the Agenda was to take bold energy efficiency measures that would reduce greenhouse gas emissions while boosting the local economy. Launched as part of the U.S. Department of Energy's Better Buildings Challenge in 2012, Retrofit Chicago became one of the first measures that focused on reducing energy in the city's building stock (City of Chicago 2013). About two years after the launch of Retrofit Chicago, the City introduced the Chicago Energy Use Benchmarking Ordinance – a city-wide benchmarking and transparency law.

Strong Partnership and Collaboration Emerges

During the development, and later, the implementation of the Chicago Energy Use Benchmarking Ordinance, three partners stood out as major contributors: Elevate Energy, Natural Resources Defense Council (NRDC), and U.S. Green Buildings Council-Illinois Chapter (USGBC-IL). These three organizations had a very well-coordinated and collaborative partnership with the City and each other.

As the City began developing its Ordinance task force, each partner was able to identify the type of support they could provide during the development and implementation of the ordinance. The tasks divided among the organizations included: data analysis, creating a communications plan, advocacy, coalition building, training and outreach, setting up a help center, cleaning data in real time, verifying the data, and helping with the creation of ordinance analysis reports.

The relationships formed during the development and implementation of Chicago's ordinance between Elevate Energy, NRDC and USGBC-IL, as well as other organizations like ASHRAE-IL, AIA-Chicago, and the Midwest Energy Efficiency Alliance, became so strong that several of the local partners continue to have weekly calls where they identify ways to continue working together on mission-aligned initiatives.

Three Mission-Aligned Organizations

Elevate Energy, NRDC, and USGBC-IL have similar sustainability-related missions, but each has a specific expertise that they brought to the table during the development and implementation of the Ordinance. Strong mission-alignment among the organizations created an immediate sense of common purpose that facilitated collaboration among the partners.

Elevate Energy's mission is to achieve smarter energy use for all by designing and implementing efficiency programs that lower costs, protect the environment, and ensure the benefits of energy efficiency reach underprivileged communities (Elevate Energy 2016). They have provided technical expertise to the City on several of its sustainability policies and programs.

NRDC's broad mission is to safeguard the Earth through advocacy, education and other activities (NRDC 2016). NRDC's City Energy Project, which the City of Chicago joined after the passage of the Ordinance, is a national initiative to create healthier and more prosperous American cities by improving the energy efficiency of buildings (City Energy Project 2016). Working in partnership with cities, the Project supports innovative, practical solutions that cut energy waste, boost local economies, and reduce harmful pollution. During the development of the benchmarking ordinance in Chicago, NRDC's advocacy work was crucial in gaining the necessary political support to get the ordinance passed.

The Illinois chapter of USGBC is a membership-based professional organization comprised of real estate professionals, architects, engineers, designers, contractors, product manufacturers, state and local government officials, homebuilders, and homeowners who promote the creation of environmentally friendly buildings (USGBC-IL 2016). USGBC-IL played a critical role in connecting the City to these professionals during the development and implementation of Chicago's benchmarking ordinance.

Stakeholder Engagement, Outreach, and Advocacy

NRDC provided direct advocacy, outreach, and coalition building support. NRDC helped cultivate strong supporters for the ordinance by generating coalition letters and sign-on documents that were circulated to professional organizations, nonprofits, and other groups that pledged their support for the ordinance. NRDC's efforts also included direct advocacy work to the City's aldermen.

Elevate Energy's staff educated multifamily building owners and developers about the ordinance. They gathered support from the affordable multifamily community, which was important because Chicago's ordinance would regulate over a thousand multifamily buildings.

USGBC-IL served as a convener during the development of an implementation plan for the ordinance should it successfully pass city council. USGBC-IL organized several key groups, including NRDC, Elevate Energy, AIA, ASHRAE and MEEA, to have a series of discussions on this issue. USGBC-IL was also key in educating its membership on the ordinance and galvanizing support.

The Building Energy Use Benchmarking Ordinance passed city council in September 2013. It required all buildings over 50,000 square feet to benchmark their energy use and make that information available to the public (City of Chicago 2013). Once every three years, the benchmarking data has to be verified by a qualified expert.

Implementation Support

Once the ordinance was passed, Elevate Energy helped fill some gaps where the City did not have the expertise, staff or resources to support the policy's implementation. The activities they led, and continue to lead, include running the help center, ensuring data quality, and providing data analytics. Elevate Energy has been involved in energy and data initiatives for a number of years, which allowed them to provide the City with research and analysis on Chicago's building stock and other important building data that the City was lacking. Elevate Energy also developed systems that helped acquire accurate building contact information – something the City had a hard time getting due to incorrect or outdated tax assessor information.

During the implementation of the ordinance, access to USGBC-IL's network became especially important when the City added a data verification component to the ordinance, which required building and energy professionals—USGBC's key membership demographic—to conduct the verifications for building owners. In order to carry out the verification piece, USGBC-IL and ASHRAE committed to contribute up to 500 pro bono verifications. USGBC-IL subsequently developed requirements for their members to provide pro bono verifications and launched an “energy data jam,” where senior verifiers were paired with junior verifiers and property managers to survey and verify energy data of covered properties. Additionally, USGBC-IL provided compliance-training support for building owners.

Reflections from Elevate Energy, NRDC, and USGBC-IL

Elevate Energy believes that being sensitive to the City's needs is important for building a trusting rapport. Additionally, getting continual feedback from the City and understanding what their processes are like through regular and frequent meetings is essential to remain coordinated. Finally, following through on tasks and assignments and remaining professional and courteous in its communications with the City help build confidence in the organization.

NRDC believes that the organization's leadership on Retrofit Chicago was key to establish trust with the Emanuel administration and a good reputation working on energy efficiency and buildings. NRDC also believes that relationships with the City's alderman were very important for gaining support for the ordinance. Leveraging these relationships brought a tremendous amount of value to the work NRDC did for the City.

USGBC-IL was interested in expanding its work beyond new construction and saw a great opportunity open up to work on existing buildings when the City began developing the benchmarking and transparency ordinance. The City valued USGBC-IL's position as a well-networked organization with strong relationships with other influential partners. In USGBC-IL's case, making commitments that were within their wheelhouse and executing those commitments successfully were key to forming a strong, trusting partnership with the City's new administration.

Capacity, Cost, and Funding

Elevate Energy organizationally spends about 30% of its work on City sustainability initiatives currently. For the benchmarking data analysis and help center support to the City, Elevate Energy received funding from the City Energy Project and a local foundation. Although the funding they received was not enough to cover the full costs of running a help center and performing data analysis, they covered the remaining costs in-house because the benchmarking program was important to advance the organization's mission.

NRDC had a fulltime fellow working on the benchmarking and transparency ordinance for about 50-70% of her time during the months leading up to the passage of the ordinance. There was a second FTE that devoted about 50-70 hours to support the City's benchmarking ordinance. NRDC's fellow also devoted about 20% of her time to work on the City's Retrofit Chicago program. Much of NRDC's work for Retrofit Chicago and the benchmarking and transparency ordinance were funded through the fellow's grant. Additionally, NRDC's Midwest office had foundation grants to work on regional energy issues.

USGBC-IL had one FTE spend 50-60% of her time for the first two years on development and implementation of the benchmarking program. USGBC-IL initially did not have funding for their work on the City's benchmarking ordinance and absorbed the costs internally through membership dues and sponsorship of the program. However, once the ordinance was passed, they received a grant from a local foundation for outreach and training support work.

Case Study: Environmental Protection Agency Region 3 - Philadelphia, PA

The EPA Region 3 office is the branch of the Environmental Protection Agency that serves Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia. EPA is a federal agency that is responsible for protecting human health and the environment – air, water, and land. EPA, state, local and tribal agencies work together to ensure compliance with environmental laws passed by Congress, state legislatures and tribal governments.

A History of Working with the City

The EPA Region 3 has a history of working with the City of Philadelphia on many different environmental efforts, including water and waste issues. They also have had frequent contact over the years because the City of Philadelphia has been an ENERGY STAR partner – a program that the EPA administers.

When a change in administration occurred in 2008, the EPA Region 3 wanted to build a relationship with the new mayor. However, the EPA Region 3 did not form a substantial relationship with the new city government until a City Sustainability Office was created after the launch of the City's 2009 *Greenworks Plan* – an ambitious plan that sought to make Philadelphia the greenest city in the U.S. by 2015 (City of Philadelphia 2009). Once contact was made between the new sustainability office staff and the EPA's staff, the City became interested in the kind of support the EPA Region 3 could provide, especially when the idea of creating a benchmarking and transparency ordinance became a reality. In 2012, the Philadelphia Energy and Benchmarking Disclosure Law passed city council, requiring all commercial buildings over 50,000 square feet to benchmarking their energy use and make that information transparent to the public.⁴

Implementation Support through ENERGY STAR Portfolio Manager Trainings

The EPA Region 3 helped support the City's Building Energy Benchmarking Ordinance with compliance assistance, which consisted of putting on in-depth, two-hour regular trainings in computer labs for building owners on how to use Portfolio Manager. Although City staff ran the help center internally, some questions related to Portfolio Manager were bumped over to the EPA Region 3 office to answer. Additionally, EPA Region 3 staff held office hours for troubleshooting. By providing training and office hours for building owners on the topic, the EPA Region 3 was able to provide some customer services that created a sense of confidence and trust in the City's program. After the first year of compliance, City staff became well versed in using Portfolio Manager and required less support from the EPA Region 3.

EPA Region 3 had two FTEs during the first year of compliance working on outreach and presentations for the benchmarking program for about 75-80% of their time.

Reflections from EPA Region 3

EPA Region 3 strongly believes that in order to build trust with a city government, an organization has to add substantive value to the City without expecting anything in return (other than advancing the organization's own mission). In the case of EPA Region 3's partnership with the City of Philadelphia, they added value by providing technical expertise on their own Portfolio Manager tool. Additionally, there was mission alignment, which was important for establishing common goals.

⁴ In the spring of 2015, Philadelphia City Council amended the existing code to require multifamily properties over 50,000 square feet to report and disclose their energy usage.

Conclusion

There is great potential for cities and local organizations to work together on energy efficiency. In many cities, it is absolutely critical due to resource constraints. Building trust between the cities and local organizations is key to getting the work done. And the work can include any number of areas, from technical consulting, to advocacy and outreach, to data analysis. The themes and best practices in this paper are transferrable to other areas of energy efficiency work and likely even other areas of sustainability work. By creating more robust partnerships, cities and local partners can advance their sustainability goals and missions.

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