

Adoption of benchmarking and transparency policies in the United States

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Abstract

Fifteen cities in the United States have adopted commercial energy efficiency benchmarking and transparency policies. With new evidence demonstrating the efficacy of these policies, we would anticipate greater adoption. However, we have found that although benefits are being realized, policies may still not be passed. The stalling of the Energy Efficiency Resource Standard and the Renewable Portfolio Standards are good examples of policies that have demonstrated significant efficacy, but only have about one-half of the potential states participating. With such growth the adoption of benchmarking policies in recent years and near-term potential growth, it is important to understand what factors are driving the adoption of these policies. The study allows for a better understanding of the factors driving adoption particularly in the collaboration between public and private sectors, property types, square footage, reporting requirements, data disclosure requirements and type of data disclosed. It is not well understood why such variability has been seen across the jurisdictions that have adopted these policies. Factors driving this difference potentially are the city's sustainability policy history, governance structure, demographics, and interest groups. The study presents the results of interviews of city staff who were instrumental in the development and implementation of benchmarking policy in the 15 adopting cities. The intent here is to explore the cities' motivations of adopting this policy, the strategies and methods used to adopt the policy and lessons learned.

Introduction:

Much of the world's population now lives in cities. With the world's economic and social activity largely occurring in cities, they are now the largest contributors to greenhouse gases. According to the United Nations Settlement Program, cities account for 70-75% of greenhouse gas emissions (UN-Habitat, 2011). Although these emission sources are localized, greenhouse gases are not constrained by national borders. Therefore, it had been anticipated that much of the climate change mitigation policies would be led from a national or global level to coordinate and direct mitigation efforts. This desire for a global, top-down directive for mitigation has some merit and can help with coordination and cooperation if the governance of this global effort is done appropriately. This has not been the case, and much of the efforts to mitigate climate change, particularly in the United States, have been done at the subnational level¹.

Although the efforts to stem climate change should be a global effort, it is city governments that are on the front lines of climate change and are forced to take both mitigation and adaptation actions to blunt the impact of climate change on their community (Krause, 2010, Bae and Feiock, 2012). Fortunately, cities have jurisdiction over many of the rules and regulations, as well as service delivery that will directly drive action to deal with climate change. This includes building codes, land-use planning, transportation, power distribution, etc. that impels them to take the lead in several climate impact related areas (Bae and Feiock, 2012).

¹ COP 21 in Paris of this year did indicate a greater level of international cooperation, however, much of these efforts are up to states and cities to develop and implement the greenhouse gas reduction policies.

Due to the potential high cost of mitigation, adaptation and resilience, and the fact that action by one city does very little to reduce the overall risk, it is not easy to sell and invest in programs for greenhouse gas reductions at a local level. Accordingly, many cities continue to largely pursue climate related initiatives that are low cost, low risk, i.e. the low hanging fruit such as energy benchmarking and building audits (Wheeler, 2008 and Krause 2011). Further, even by pursuing these lower cost/risk activities it can be difficult to develop support for these mitigation efforts. To overcome this issue cities attempt to communicate the localized benefits of taking action by pointing to economic development and local environmental improvements (Lindseth 2004). Cities are finding success by tying greenhouse gas reductions to improvements in air quality and public health, as well as making arguments around the energy-water nexus. They also promote investment in energy and water efficiency, as well as investment in renewable energy as providing significant benefits to the city's economic base (Garrett-Peltier 2011).

Building energy and water benchmarking policies represent opportunities for low-cost, low-risk resource conservation and climate change mitigation. Benefits related to air quality, water supply, job creation, public health, quality of life and costs to business can be realized with benchmarking. Recent reports by the Department of Energy (DOE)² and Urban Land Institute (ULI)³ demonstrate the link between climate change and community benefits. To date, 15 cities and counties have adopted a mandatory benchmarking policy for public and private sector facilities⁴. The first cities to adopt were Washington, DC and Austin, TX in 2008, and over a dozen cities have slowly followed this lead, with Boulder, CO being the latest to adopt in October, 2015. The intent here is to better understand what motivated and influenced the adoption of these mandatory benchmarking policies. We are particularly interested in the actors that were involved in the policy making process and the processes that were followed to get to the final adoption outcome.

What is benchmarking and transparency policy?

Benchmarking is the process of regularly measuring the energy and/or water use in your building and comparing this consumption to other similar buildings or in some cases comparing it to your building's previous performance. The most common metric for energy benchmarking is energy use intensity, or kBtu⁵ per square foot. Transparency is the sharing of this data to the public in some fashion. The type of transparency varies across jurisdictions and can range from individual building information and consumption being fully shared to the sharing of aggregated building performance data. The aggregations can be based on square footage, building type, industry, etc. Many buildings are currently benchmarked and tracked in the US Environmental Protection Agency's free software tool, Energy Star Portfolio Manager. Additional data on benchmarked buildings can also be found on DOE's Building Performance Database.

Benchmarking energy use in existing facilities is a fairly common practice among municipalities. According to the U.S. Conference of Mayors 2016 (COM 2016) survey⁶, 62% of cities benchmark the energy performance of their own buildings. Cities are also actively working to encourage benchmarking of non-city properties. The survey finds that 35% of cities encourage

²<http://energy.gov/sites/prod/files/2015/05/f22/DOE%20New%20York%20City%20Benchmarking%20and%20Transparency%20Policy%20Impact%20Evaluation....pdf>

³ <http://http://uli.org/wp-content/uploads/ULI-Documents/SFenergybenchmarkingreport.pdf>

⁴ <http://buildingrating.org/jurisdictions>

⁵ Thousand British Thermal Unit

⁶ How Energy Technologies are Reshaping America's Cities

energy benchmarking of non-city buildings. For those cities that encourage non-city buildings to benchmark, much of the encouragement comes through the support of voluntary programs, like Department of Energy Better Buildings Challenge. Further, 44% of the Cities encourage participation through utility incentives or rebates and education campaigns aimed at private-sector building owners and managers. Finally, a small, but growing percentage of cities mandate benchmarking of non-city buildings. With the data from the COM 2016 survey demonstrating a preference for voluntary programs by the private sector⁷, it is important to better understand why cities are choosing mandatory programs. Are these cities implementing mandated programs graduating from voluntary programs, or have the limits of a voluntary program been realized?

Policy Adoption Literature Overview

A city's adoption of a policy is driven by a variety of factors both internal and external to the city. In many cases, policies diffuse across governments. The diffusion is largely driven by learning, as well as competition among jurisdictions. The demographics, economics and institutional setting of a jurisdiction also directly influence this adoption (Berry and Berry, 1990, 1999 and Berry and Baybeck 2005).

Internal Factors. The internal factors of the diffusion model is informed by Mohr (1969) which argues that the likelihood of adoption or innovation is inversely related to the strength of obstacles and directly related to the motivation to innovate and the resources available to overcome these obstacles. We first consider the motivations to take action. This can be influenced by the severity of a problem within a government (Allard 2004). In the case of benchmarking we would anticipate that severity can be measured by the existence of some negative externality such as poor air quality. Further, motivation, as well as obstacles, are determined by public opinion and attitudes, as well as electoral security of politicians (Berry and Berry 1992). Lubell et al (2009), find that some barriers to adoption of sustainability policies could include a city's fiscal health and socio-economic status. Motivation is enhanced and obstacles are overcome, by resources to take action. Resources would include level of professionalism within a legislative body and bureaucracy, as well as fiscal strength of a government (Daley and Garand 2005). Other internal factors to consider include demographics, interest group mobilization and community preferences (Bulkeley and Betsill 2003; Lubell et al 2009). Further, Bae and Feiock (2012) argue that government structure influences the adoption of greenhouse gas policy. When discussing GHG reductions, city managers typically discuss emission reductions through the improvement of city operations, while mayors are more likely to think of greenhouse gas reduction on a community scale. Specifically, city-manager government systems have a significant impact on adoption of internal GHG policies, but have no impact on the adoption of policies that would directly impact the community.

Social Learning. Governments make decisions by analogy; they compare themselves with other governments, and use them as a frame of reference to learn about particular policies. (Berry and Berry 1999). They may focus on proximate governments due to similarities in values, familiarity, cross-mixing of population and media, and ease of communication (Mooney 2001). Information gathered from familiar and similar governments reduces uncertainty of policy outcomes and may increase likelihood of adoption (Boehmke and Witmer, 2004). The expectation is that as the

⁷ This includes the commercial and industrial sector.

number of governments adopting benchmarking policies grows, there will be an increasing likelihood that those who have yet to adopt will adopt. Further, it has been suggested that governments look beyond their neighbors to learn about specific policies. Grossback et al. (2004) find that governments pay attention to and learn more from other governments that are ideologically similar. The similarity helps the adopting government to reduce uncertainty as to where the issue/policy fits along the liberal-conservative continuum. Learning also occurs with participation and membership in national, regional and local organizations. These organizations help to build capacity, develop a network, and promote learning among its members, such as Urban Sustainability Directors Network, C40 Cities Climate Leadership Group, as well as advocacy groups like the Natural Resource Defense Council and Institute for Market Transformation.

Competition. Diffusion and adoption occurs because of competition among governments and public pressure to adopt successful policies (Boehmke and Witmer, 2004). Governments compete with others to gain an economic advantage by attracting good things and repelling bad things (Bailey and Rom 2004). A basic premise of the diffusion model is that because governments must compete for human and capital resources, they have an incentive to pay attention to and keep up with other governments in their policy choices (Bailey and Rom 2004). More specific to renewables, the environmental policy literature finds governments compete through the adoption of environmental policies they feel will make them more attractive to business (Daley and Garand, 2005). The severity of a policy problem relative to other governments will influence the adoption of policies (Dillingham 2014). States look to other states to determine how their problems stack up with other states. If the state's problem is not as severe as that of competing states then the likelihood of adoption will decrease. If the state has a higher level of severity in comparison to other states adoption will increase. The relative severity can be considered by looking at quality of life and cost of doing business measures across states. Increasingly, governments are competing to ensure they are providing a higher quality of life than others. Air quality plays a role in the retention and recruitment of resources (Smith and Huang 1995) and clean energy policies are passed to improve air quality (Brennan and Palmer 2012). Also, a business's expenditures on energy are an important factor in determining location (Michelsen, 2013; Gerlagh and Mathys, 2011). Higher prices for the factors of production will result in higher costs of production and lower output levels. Higher operating costs due to higher energy rates, or higher costs due to the inefficient operations of building may increase the likelihood of choosing not to locate or relocating to another city (Michelsen, 2013). Energy efficiency programs have been found to decrease the cost of operation and improve business productivity (Geller and Attali 2005). Due to threat of higher energy costs and the efficacy of energy efficiency programs, states with higher electricity costs compared with peer states have a significant higher likelihood of adopting energy efficiency policies (Dillingham 2014).

Clean energy adoption studies

There has been a good bit of work looking at the adoption of clean energy policies across states. Many of the studies focus on the renewable portfolio standard (RPS)⁸ and look at internal

⁸ Renewable Portfolio Standard – is a state level regulatory mandate to increase production of energy from renewable sources such as wind, solar, biomass and other alternatives to fossil and nuclear electric generation.

factors of the states to predict the likelihood of policy adoption (Vachon and Menz 2006, Huang et al 2007, Padilla and Serrano, 2006, Lyon and Yin, 2007). Chandler (2009) Dillingham (2014) makes the first effort to look at the adoption of clean energy policies across states taking into account both external and internal factors using event-history analysis (EHA), a form of pooled cross sectional time-series analysis. The EHA approach allows for a better understanding of the adoption of these policies over time. There has been some research to better understand the diffusion and adoption of clean energy policies. Krause (2011) has conducted the most comprehensive study looking at the adoption by cities of the US Mayor's Climate Protection Agreement (CPA). Krause considers whether activity at the state level influences city participation in the US Mayor's CPA, as well as the role of internal factors of the city. She finds that state greenhouse gas emissions policy making and goal setting has no effect on cities joining the US Mayor's CPA, while local demographics, interest group involvement, city structure, city size and ideology do. Bulkely and Betsill (2003) find that the presence of a champion within the local government greatly increases likelihood of adoption. Further they find, along with Lindseth (2004), that the adoption of local policies is driven by the influence of networks of technical experts and the ability of these experts and entrepreneurs to frame the policy in a way that is relevant to local concerns. Studies by Zahran et al (2008) find that cities that have a high concentration of high GHG industry/activity are less likely to adopt voluntary greenhouse gas reduction policies. While those cities with greater affluence, a more educated population and active green interest groups are more likely to adopt green policies or participate in programs such as the US Mayor's CPA (Zahran et al 2008).

To understand how policies diffuse across governments and why jurisdictions adopt the policies they do, it is important to consider a variety of factors. Diffusion models are typically employed to study how external factors such economic competition and social learning among states, as well as internal determinants of the state, influence state decision making (Berry and Berry 1999). The purpose of this early research is not to deploy a fully parameterized diffusion model. Rather, because this is early on in the adoption process, it is important to begin to identify and define the components of benchmarking policy adoption that would be most appropriate. Future research will then be better informed to conduct larger scale study that can explain the likelihood of adopting benchmarking policies. The intent of this paper is to take the first step, using the policy diffusion framework that takes into account internal factors, competition among governments and social learning (see figure 1), to better understand the likelihood of cities adopting a benchmarking and transparency policy.

Research Design

This is our first attempt to better understand the motivations, obstacles and processes involved with passing mandated benchmarking policies. We start with qualitative focus to better understand the meaning and context of the policy situation. As more cities adopt and our data set expands, we will be able to take a quantitative approach, modeling the likelihood of benchmarking policy adoption in cities.

Sustainable Energy Portfolio Standard – Combination of RPS and Energy Efficiency Resource Standards (EERS). EERS – is a state regulation that requires utilities to decrease energy consumption through a customer energy efficiency programs.

Sample

We interviewed 25 individuals from 13 cities that have passed mandatory benchmarking and transparency policies (Table 1)⁹. We made the best attempt, and were fairly successful, to speak with staff at the City who were instrumental in the policy development and adoption. In 13 of the Cities, we spoke with the original City staff person. To supplement the interviews, we also conducted content analysis of press releases, adopting city web sites and existing secondary research from the Institute for Market Transformation (IMT) and Natural Resources Defense Council (NRDC). This analysis allowed us to corroborate the interviews and fill any holes that may have existed.

Table 1: Benchmarking and Transparency Policies – 13 Cities Interviewed

Jurisdiction	Year Adopted	Covered Building Types and Sizes ¹⁰
Atlanta	2015	Comm & MF \geq 25,000 SF; Public/Gov \geq 10,000 SF
Austin	2008	Comm \geq 10,000 SF; MF \geq 5 units
Berkeley	2015	Comm & MF \geq 5,000 SF; Public/Gov \geq 5,000 SF
Boston	2013	Comm \geq 35,000 SF; MF \geq 35,000 SF/35 units; Public/Gov \geq All
Cambridge	2014	Comm \geq 25,000 SF; MF \geq 10,000 SF; Public/Gov \geq 10,000 SF
Chicago	2013	Comm \geq 50,000 SF; MF \geq 50,000 SF; Public/Gov \geq 50,000 SF
District of Columbia	2008	Comm \geq 50,000 SF; MF \geq 50,000 SF; Public/Gov \geq 10,000 SF
Kansas City	2015	Comm \geq 50,000 SF; MF \geq 50,000 SF; Public/Gov \geq 10,000 SF
Minneapolis	2013	Comm \geq 50,000 SF; Public/Gov \geq 10,000 SF
New York City	2009	Comm \geq 50,000 SF; MF \geq 50,000 SF; Public/Gov \geq 10,000 SF
Philadelphia	2012	Comm \geq 50,000 SF; MF \geq 50,000 SF
Portland	2015	Comm \geq 20,000 SF; Public/Gov \geq 20,000 SF
Seattle	2012	Comm \geq 20,000 SF; MF \geq 20,000 SF; Public/Gov \geq 10,000 SF

Method

As an initial attempt to learn more about the policy making process we utilized open ended questions in a semi-structured interview process. The interview process can provide important insights into the policy making process, better context into the cost/benefit analysis used by decision makers and better insight into the process. This allows for a greater opportunity for the interviewee to speak more freely. We worked to not limit potential responses or impose particular ideas or beliefs based on our own biases and viewpoint. This method allows for some of the flexibility of a more ethnographic approach, but also allows for enough structure to conduct hypothesis testing because all of the respondents have been asked the same questions (Mosely 2013). As we better define the policy making process, we can develop more close-ended questions that more accurately reflect the set of potential behavior and activities pursued in this policy making process. Our questions focus on determining specific motivations, processes and actors. Interview questions were not presented in a way to elicit opinions, theories and musings

⁹ San Francisco, CA and Boulder, CO have also passed mandatory benchmarking and transparency policies, but we were not able to speak with them for this project.

¹⁰ Comm – Commercial; MF – Multi-Family; SF – Square Feet

about the process. Focusing on a specific policy, energy efficiency benchmarking, rather than energy efficiency policy adoption in general, allows for the interviewee to focus on one particular topic and better remember the actions, processes and actors involved with the adoption of this specific policy. We conducted the interviews over the phone. Each phone interview took approximately one hour.

Results

Based on the City interviews, we were able to begin to discern the why and how of benchmarking. We are able to categorize the motivations for adoption and processes to reach adoption in four categories which include competition, social learning, internal determinants and stakeholder engagement. We provide the results in each area in the following section.

Competition

Motivation to adopt. The primary motivation for each city to adopt an energy benchmarking policy was largely driven by their desire to mitigate climate change. Although the motivation was largely GHG mitigation, much of the framing of the motivation had a more local flavor. In line with Lindseth (2004) cities framed the GHG savings in a local manner focusing more on how this policy leads to jobs creation, improvement in quality of life, reducing water consumption¹¹ and economic development. There was an evolution in the framing of this motivation over time. Earlier adopting cities largely stated that their motivation was driven by a desire to help improve market transactions and building owners improve operations. This motivation decreased over time and the focus became more on community and societal benefits. The findings here are in line with previous research which finds that cities compete on quality of life factors, as well as on developing policies that attract productive capital and labor (Dillingham, 2014, Mathur and Stein, 2005, Brennan and Palmer 2012.) Cities also argued that the motivation for benchmarking policies was the high impact to cost factor. Benchmarking can potentially significantly lower GHG reductions at a relatively low implementation cost.

Internal Factors

Government structure, formal actors. In 73% of the cities, the internal champion for the policy development and adoption was a council member and/or mayor. The presence of a champion appears to greatly increase the likelihood of and timeline to adoption. The mayor was an active champion in nearly half of the cities and typically was actively supported by a council member. In those municipalities where the mayor was not as engaged, city council members took active leadership roles. In every instance, a strong, supportive senior staff member was instrumental to successfully moving this policy forward with a cross-functional city team. These municipal teams were often augmented with outside expertise in the form of local environmental nonprofits and nongovernmental organizations such as IMT and NRDC that helped to provide additional support, resources and expertise to often resource constrained cities.

Policy ordinance development factors. In all cities, the ordinance development process was interactive often starting with the city developing the ordinance in outline form, frequently based on task force recommendations, and then taking it out for public comment. In nearly half of the cities, additional requirements, including audits and/or retro-commissioning, were added based

¹¹ This refers to the energy-water nexus where a reduction in energy consumption reduces water withdrawals by thermoelectric power plants.

on local market preferences. In 40% of the cities, audits were added as the next logical step on the path beyond benchmarking to create a policy package. The appetite for going beyond benchmarking with the adoption of additional requirements is rooted in the local political and business environment. Benchmarking ordinances typically have a transparency component. Transparency continues to be one of the more negotiated items in each jurisdiction. Due to concerns about the confidentiality of proprietary information and a fear of being shamed, two of the most common arguments against, there is room for negotiation of what that transparency looks like. Examples include a variety of platforms such as Metered New York and Philadelphia's Energy Benchmarking maps which display benchmarking data contextually, to only disclosing the top 50% of performers in Atlanta, to phasing in the granularity of transparency in Chicago.

Market Size and Sophistication. Market size and sophistication helped to determine building size thresholds, effected building types and benchmarking tools. The goal of all of the cities was to create the greatest policy impact with the fewest number of buildings. Through the interviews, it was recognized that smaller buildings tended to have less sophisticated owners and managers who may not voluntarily benchmark or have easy access to an energy manager. In 74% of the cities interviewed, the minimum building threshold was set to 50,000 SF. The New York City policy impacts 2% of the buildings but half of the City's building square footage. The 50,000 SF threshold is becoming the standard for large commercial building policies in large-medium cities. Another important factor considered was whether to allow compliance to be phased in by building square footage. For example, having buildings greater than 250,000 square feet be the first to comply and then subsequent years decrease the compliance bar to 100,000 square feet and then to 50,000 square feet. The phase-in allows for those unfamiliar with benchmarking to be appropriately engaged and educated, as well as for the city to adequately manage the process. The phase-in also was used as a negotiation point to bring building owners on-board.

Social Learning

Resource, learning and advocacy networks. How these policies are crafted continues to evolve as the number of benchmarking ordinances in the market has grown. From the initial cities who looked to California and the European Union for policy development inspiration, a learning network and sharing of best practices has developed. Peer information sharing from other cities has been critical to getting policy details put together and starting the policy-maker review process. The first cities gathered and shared policy information and best practice strategies amongst themselves and were aided in this effort by organizations such as the Urban Sustainability Directors Network (USDN) which provided an interconnected web of city staffers with subject matter expertise. Various work streams within the C40 have been developed to aid with the creation and dissemination of information and best practices. Organizations such as ACEEE provided an opportunity to share best practices at scale with peers outside of the networks. The US EPA, which administers the Energy Star Portfolio Manager tool has helped to educate city staff and stakeholders about the benchmarking process and how to best use Energy Star Portfolio Manager, which has become the industry standard reporting tool and has been a strategic collaborator for each city. Organizations such as Urban Land Institute (ULI), NRDC and IMT helped to convene these early policy creators in forums that coalesced early standard development practices and ordinance language.

Adoption of policies is driven by the influence of networks of technical experts and the availability of these experts Through leveraging private foundation funding and

nongovernmental expertise, these networks have provided a foundation where cities can compare strategies and needs. This has also led to the standardization of tools and information gathering and reporting with the goal of making compliance easier as well as creating a platform where cities will easily be able to share and compare data. An example of a more formalized network is the City Energy Project (CEP). The CEP is a foundation supported network managed by NRDC and IMT to support the adoption of benchmarking and transparency ordinances across 10 cities. Through the CEP 10 cities are provided the resources and support by the CEP Hub staff, and at least one city advisor to work through the policy development process. These advisors have access to CEP hub resources, as well as interact regularly through planned calls, working groups, national convenings, and impromptu city to city calls. The network of advisors informs each other of happenings in their city, thereby promoting information sharing and learning.

Stakeholders

Stakeholders are the key to motivating the adoption and implementation of these policies. The route was a bit different in each city, but essentially it was a collaborative process between the city, stakeholders, and often the utility. A variety of stakeholder engagement methods were employed by each city in various ways to ensure the broadest outreach during policy development. Public meetings were viewed as necessary to show the transparency of the process. These meetings were helpful to socialize concepts and development of larger scale pieces to a broad group. The majority of these larger meetings were facilitated by city staff, although in some cases a third-party facilitator was brought in to help with the process. At times this third-party facilitator has functioned as an extension of the city and been very involved in the policy process. The City of Atlanta is an excellent example of this. The City partnered with a local non-profit, Southface, that had institutional knowledge from previous work with the City on other public policy pieces. Southface assisted the City in drafting the policy and facilitated some of the larger stakeholder meetings. Smaller and one-on-one meetings were headed up by City staff and were necessary for working through the nuances of the ordinance proposals. These one-on-one meetings were typically with representatives of key stakeholders.

In a similar fashion, the City of Chicago's Sustainability Office received support from C40 and NRDC in policy development and stakeholder engagement in both broad and narrow contexts. The C40 City Director was previously embedded within the City and had institutional as well as market knowledge. NRDC, as a non-profit with a local base, assisted in coordinating external stakeholder engagement. A coalition of diverse stakeholders were leveraged in small and larger outreach meetings to bring in additional private sector support. Both external partners were able to help the City build relationships and trust within and outside of the municipal government structure that were a valuable part of the process. In other cities, supporters have played a key role in various aspects of the development of policy packages including support at large and, smaller meetings and helping the City walk through the finer points of contention of the policy. With this outside support, the Sustainability Office remained the public face of this effort. While development of private sector supporters was key, it was realized that cultivating support across City departments was also important. The policy design process was led by the Sustainability Office and included input from key City departments and agencies, with Mayoral support, and a working group that was comprised of building owners and managers, a variety of service support companies and industry organizations. After policy design, the Mayor's legislative team led the ordinance adoption process.

In a number of the cities, working groups or committees that had previously established municipal sustainability or climate action plans were first tapped to assist the city in the benchmarking policy research and initial development process. These committees had the benefit of a baseline understanding of some city processes, institutional knowledge of the plan and subject matter expertise. These groups also provided an opportunity for cities to cultivate a stakeholder network and identify supporters.

The utilities were one of the major stakeholder groups for each city. In municipalities where utilities provide energy efficiency programs, these policies offer a way to increase participation and meet energy savings goals. Engaging the utilities early on in the process, especially in cities where they are not municipal owned, was the key, in several cities, to start the conversations related to API¹² development and whole building data aggregation.

Engagement of stakeholders is occurring at the national level as well. Efforts to support these policies at the national level ranges from continued collaboration with organizations such as EPA and DOE to network structures through City Energy Project, as well as outreach to property owners and managers, tenants, energy services companies, industry associations and utilities. National engagement and support of benchmarking coming from large-scale property owners and managers such as CBRE, Jones Lange LaSalle, TIAA and Transwestern, and industry organizations such as IFMA, US Business Council for Sustainable Development and others is growing and becoming an important part of the local stakeholder engagement and policy adoption process. Property owners and managers with large portfolios benchmark for a variety of reasons and already have best practices in place that can serve as lessons learned for other organizations. By taking a seat at the table and supporting these policies, organizations such as these impress upon the commercial real estate community the importance of benchmarking and related best practices.

Lessons Learned

The development of energy efficiency policies that are cost effective, spur local economic development, create jobs, reduce the overall impact of the city and improve public health continues. The cities leading this policy development are developing replicable strategies for policy structure and best practices for engagement. Following are some of the lessons and best practices that extend across cities:

- Lead by example and have the city benchmark first to help assure building owners that this is not difficult.
- Creating a baseline with easy to use, industry standard tools (ex. Energy Star Portfolio Manager) and requirements (ex. square foot threshold) is helpful; Many cities worked in partnership with local industry associations, institutions, and EPA to provide materials and free trainings, the private sector also steps in to provide a service to building owners.
- Talk to stakeholders early and often and make sure the net has been cast wide;
- Leverage partner and stakeholder groups to create networks and outreach opportunities;

¹² Application Program Interface – is a set of routines, protocols and tools that are used to build applications and software.

- Do not reinvent the wheel. Other cities and organizations including USDN, C40, ACEEE, EPA, NRDC, IMT and programs like City Energy Project are creating alliance networks, interconnecting stakeholders, and creating repositories of information;
- Each stakeholder group has a different frame and view of the market and situation, tailor the message to the various groups;
- Use data, data and more data to make policy recommendations and overcome opposition;
- Be clear on exemption and covered building requirements to limit oppositional pushback on the front end;
- Engage the utility as early as possible as whole-building utility data is critical; and
- Think through the local political will to identify what requirements, exemptions and messaging will resonate best.

Conclusion

The intent of this project was to better understand the why and how of the adoption of benchmarking and transparency policies. Through extensive interviews of the 15 cities that have adopted this policy, we find that there are some significant similarities among their motivations, as well as their stakeholder engagement and learning process. Cities are largely motivated by the desire to mitigate climate change, but also are fully aware of the need to frame the policy and implement a policy that will provide benefit to their community. Further, we find that many of the obstacles cities face are fairly standard, concern about competitive advantage and shaming by the opposition. The cities have demonstrated a willingness to deal with and mitigate many of these concerns through a variety of transparency approaches. Finally, we find that Cities take tremendous effort to engage key stakeholders and allow for their participation in the policy making process. Many of the successes we see today are coming from lessons learned from the early adopters. Newer adopters appear to be paying attention and adjusting their strategies to take advantage of this information. The outcome appears to be effective policies that provide significant benefit to communities.

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