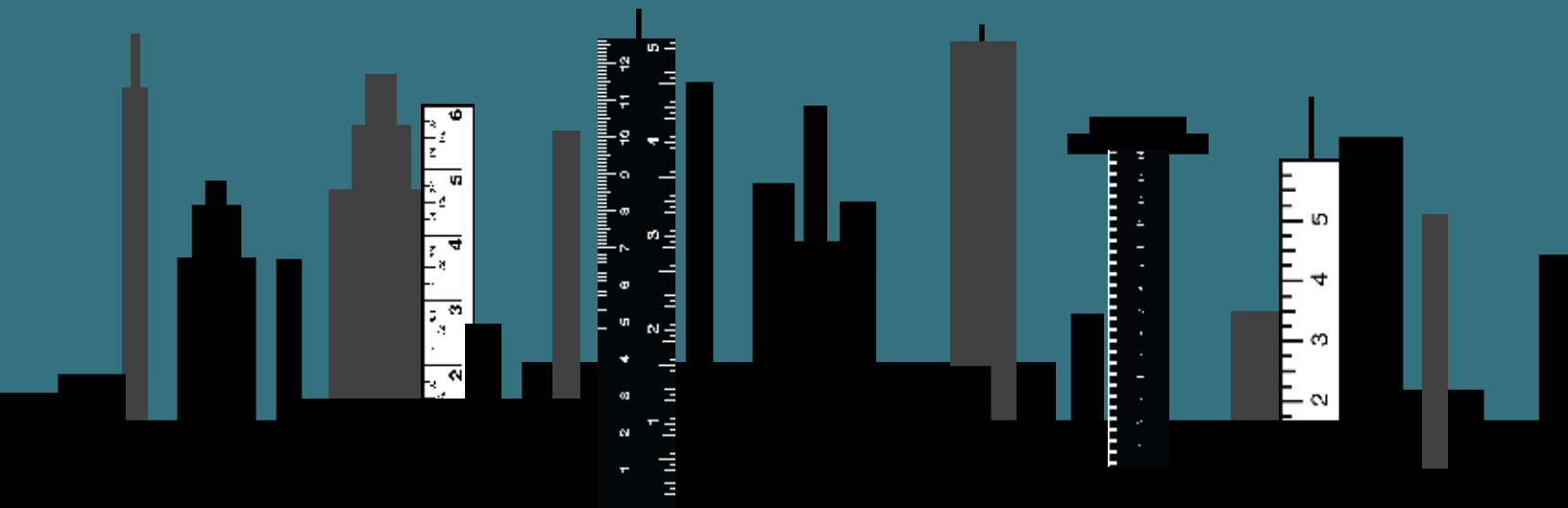


OFFICE BUILDING BENCHMARKING GUIDE

engaging the hard-to-reach



Developed by Fourth Sector Strategies in cooperation with StopWaste.org and the Cities of Berkeley, Boulder, Oakland, Salt Lake City, San Francisco, and San Jose



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EXECUTIVE SUMMARY

Building energy benchmarking uses data to measure how efficiently a building performs over time and how it compares to similar buildings. As an indicator of energy performance, benchmarking can drive up demand for energy efficiency. Buildings labeled more efficient can command higher rents, have lower vacancy rates, and result in higher property values. City-sponsored benchmarking programs can increase awareness of building energy performance as well as highlight opportunities for improving building efficiency. Because of this, benchmarking is considered an important element of comprehensive strategies to reduce a city's greenhouse gas emissions.

Most city benchmarking efforts have focused on larger, more visible or iconic buildings, such as high-rise, or Class A office buildings. Starting with large buildings allows for benchmarking a considerable percentage of a city's total building area with a relatively small number of buildings. However, small buildings often make up the majority of a city's building stock, especially in small and mid-size cities. These "hard-to-reach" buildings cannot be ignored, but owners and managers of such buildings often lack the resources of large or Class A buildings. They require different and more intensive outreach efforts and will be more effectively engaged if momentum is first generated with easier-to-reach sectors. Additionally, establishing relationships with hard-to-reach sectors through other city-sponsored programs will make it easier to solicit their participation in benchmarking efforts. Finally, a sales personality is more important than technical skill in outreach staff. People who approach energy efficiency as a service to sell gain greater participation than those who assume the need or desire for energy efficiency already exists.

This guide draws on: 1) a comprehensive review of literature related to engaging hard-to-reach sectors in energy efficiency programs; 2) the experience of city sustainability staff captured through informal interviews; and 3) action research conducted in the San Francisco Bay Area to test and document various approaches.

Key Findings

I. ANALYZING THE MARKET

Selecting Building Data Sources

Tax assessor data should be used for tracking compliance with mandatory policies; however, CoStar is helpful for initial program design. CoStar contains information such as owner concentration, building class, number of stories, LEED and ENERGY STAR® certification, geographic information like latitude and longitude and business district, and owner and property management contact information, including addresses and phone numbers.

Conducting a Building Inventory

A building inventory helps with setting realistic goals and designing an effective program. Hire a data analyst to garner specific insights for your city.

II. DESIGNING YOUR PROGRAM

Implementation Strategy

Phase implementation to build momentum. Target larger buildings first, or, in cities comprised primarily of small buildings, target more visible or iconic buildings, including: government buildings; schools; historic buildings; and LEED or ENERGY STAR® certified buildings.

Program Types

Benchmarking competitions are more resource intensive than simple recognition programs, and the hard-to-reach prefer recognition programs over competitions.

Competitions that encourage a suite of green practices are helpful for engaging tenants, who may not see a role for themselves in benchmarking-only programs.

III. OVERCOMING BARRIERS

Messages

If a city or state ordinance is in effect, compliance is a strong motivator, especially for the hard-to-reach. Develop messages around compliance and other non-energy benefits of benchmarking to different stakeholders (i.e. owners, managers, and tenants).

Tailor marketing materials with the messages that your outreach partners want to deliver. Make it easy for your partners to help with outreach.

Messengers

Utilize internal and external free resources, including other city departments, local or regional utility providers (e.g. customer reps), and professional groups from the community.

Engage membership-driven organizations, such as BOMA and Chamber of Commerce. For the hard-to-reach, use a survey to identify other groups such as Business Improvement Districts or trade associations.

Marketing & Promotion

Utilize any free internal and external resources for promotion (e.g. websites, print/e-newsletters and blasts, and utility bill insertions).

Direct mail and mass media are expensive and have limited value for voluntary programs.

Training & Resources

Provide varied training formats in different locations and at different times. Make training fun and allow for networking opportunities. Take advantage of free training offered by the EPA and utilities.

Offer a help-desk or other technical assistance. Technical assistance is the key to supporting the hard-to-reach.

One-on-One Engagement

One-on-one engagement is a critical element of any benchmarking program.

City staff, interns, trained professionals, or energy service providers can conduct outreach. Energy service providers can provide significant outreach support, but they typically do not engage potential clients until an ordinance is in effect.

INTRODUCTION

About this Guide

This guide is designed for cities seeking to develop or expand voluntary building energy use benchmarking programs. The guide is also of value to cities with benchmarking requirements that are seeking to engage owners and managers in hard-to-reach sectors, such as smaller buildings or Class B and C office buildings.

Sections build on each other sequentially. Along the way, “tips” and “time-checks” are provided for the key tasks identified. The guide assists with defining program scope, understanding and overcoming barriers, identifying appropriate outreach strategies based on available resources, and evaluating outcomes. The guide also provides a survey tool, data template, and sample marketing materials, as well as other resources.

This guide incorporates the findings of published program evaluations and best practice research as well as interviews with city staff (Arlington, Austin, Berkeley, Boulder, Chicago, Houston, Portland, Salt Lake City, San Francisco and Seattle) and utility program implementers administering benchmarking programs. We also conducted interviews with potential outreach partners from various sectors including local BOMA chapters, Chambers of Commerce, Business Improvement Districts, commercial real estate firms (property and asset management), and energy service providers. Additionally, we conducted telephone surveys, interviewing small (<50,000 square feet) Class B and Class C office building owners and property managers. Telephone surveys were conducted with small building owners and managers in Berkeley, Oakland, San Jose, San Francisco, Boulder, and Salt Lake City.

Why Encourage Benchmarking?

In the United States, the commercial and residential building sector accounts for approximately 40% of total energy consumption, more than either transportation or industry.¹ The percentage of energy use of buildings in cities can even be higher – up to 75%.² For commercial buildings, energy represents the single largest controllable operating expense, with energy expenditures averaging more than \$2 per square foot.³ Yet, according to the EPA, 30% of building energy is used inefficiently or unnecessarily,⁴ providing significant opportunity for reductions in both energy use and carbon emissions. Thus, the building sector has become a central focus of many local climate action plans.

Over the past few years, energy benchmarking policies, as means to improve building efficiency, have been gaining traction in cities throughout the country. In 2010, New York City was the first to implement a mandatory rating and disclosure program. To date, eight other cities and two states (see box) have joined NYC in enacting benchmarking policy. Even more municipalities and utilities have sponsored voluntary benchmarking programs, often as precursors to ordinances. Some of these programs have resulted in significant energy savings. In 2012, an EPA analysis of 35,000 benchmarked buildings around the U.S. found that benchmarked buildings experienced, on average, 2.4% energy savings annually. Buildings that benchmarked for three consecutive years saw an average energy savings of 7% during that period, and buildings that started out as poor performers saved even more.⁵ Other research suggests that

benchmarking is an important first step toward reducing energy consumption and an effective means to inform and motivate building owners to undertake energy efficiency improvements. In California, over half of the people who had benchmarked their buildings reported taking steps to reduce energy consumption.⁶

EARLY ADOPTERS

Benchmarking & Disclosure Ordinances

Cities

- Austin
- Boston
- Chicago
- Minneapolis
- NY City
- Philadelphia
- San Francisco
- Seattle
- Washington, D.C

States

- California
- Washington

Learn more at: BuildingRatings.org

Benchmarking Tools – ENERGY STAR® Portfolio Manager

A benchmark is simply any point of reference against which something can be compared. So although a building could use a single utility bill as benchmark of its energy use, encouraging widespread benchmarking across a city or region requires more sophisticated benchmarking tools. Many such tools have been developed or are in development by private companies and state governments. They often normalize for factors that impact raw billing data, such as facility type, occupancy, weather, and operating characteristics. ENERGY STAR® Portfolio Manager, developed by the Environmental Protection Agency (EPA), is the tool specified by all existing U.S. commercial building benchmarking and disclosure policies.

Portfolio Manager is a free, secure, online interactive energy management tool that allows users to track and assess energy and water consumption of a commercial building or a portfolio of buildings. Many building types (e.g. office, hotel, grocery, data center, etc.) above 5000 square feet are able

to benchmark their energy performance against similar buildings with a percentile rank 1-100 ENERGY STAR® score, and all buildings can determine their weather-normalized energy use intensity (EUI), a building's energy use per square foot.

Portfolio Manager was upgraded in 2013 to a user-friendly interface that offers many valuable features, in addition to providing ENERGY STAR® scores and EUIs. These include:

- Web Services (formerly known as Automated Benchmarking Services) – Portfolio Manager links to utilities allowing for the electronic transfer of energy data, reducing the time required by customers to benchmark, and facilitating ongoing customer monitoring of building energy use.
- Carbon Footprint Calculator – Portfolio Manager calculates a building's greenhouse gas emissions from energy use. The tool can also track avoided emissions from green power purchases or onsite renewable energy installations.
- Set Investment Priorities – Portfolio Manager has a built in financial tool that allows cost savings comparisons across buildings in a portfolio.
- Report Generation & Sharing – Portfolio Manager can generate ENERGY STAR® performance documents for each building, which can be easily shared. These reports may be used to:
 - Satisfy *LEED for Existing Buildings: Operations & Maintenance (LEED-EB: O&M)* requirements
 - Document performance in energy service contracts
 - Communicate energy performance to tenants, owners, and potential buyers or renters
 - Comply with local benchmarking or disclosure laws.

1-100 ENERGY STAR® SCORE

The 1-100 ENERGY STAR® score compares a building to other similar buildings across the country, using a combination of 12 months of energy consumption data and basic building information (e.g. square footage, occupancy, operating hours, and demand characteristics such as the number of personal computers or heating and cooling needs). A score of 50 represents median energy performance, while a score of 75 or better indicates that a building is a top performer and may be eligible for the widely recognized ENERGY STAR® certification. There are over 80 use types in Portfolio Manager that may be eligible to receive the 1-100 rating.

Although Portfolio Manager is the tool of choice, it has limitations. It can help users with a portfolio of buildings target lower performing buildings for investigation and improvement and, for single buildings, a benchmark can be valuable for identifying changes in performance over time. Like other tools, however,

Portfolio Manager is not designed to identify specific energy-saving opportunities within buildings or evaluate the effectiveness of different building improvements. The ability to use Portfolio Manager to compare energy performance to similar buildings is hampered when process loads are present, especially in mixed-use buildings, such

BENEFITS OF BENCHMARKING PROGRAMS FOR LOCAL GOVERNMENTS

- Conserves resources
- Reduces greenhouse gas emissions
- Enhances electricity reliability
- Supports the local economy – particularly jobs related to energy efficiency
- Increases transparency of building efficiency
- Optimizes efficiency programs' ability to target high opportunity buildings
- Allows the value of efficiency to be reflected in property values and lease, vacancy, and capitalization rates
- Improves the building stock and stimulates the economy with non-energy benefits resulting from improved lighting, comfort, and indoor air quality

as an office building with a busy restaurant or a grocery store with a large on-site food preparation operation. In those scenarios, the additional energy use may reflect increased economic activity as opposed to inefficiency (see *Appendix E. Sample Outreach Materials – David Brower Center* case study).

There are two technical and data access hurdles. First, users need to access energy use data. Many utilities interface with Portfolio Manager through Web Services so that energy data can be loaded directly into a building's Portfolio Manager profile. Alternatively, utilities can provide energy information to customers in a spreadsheet format that integrates with Portfolio Manager. In any case, coordination with the utilities is critical to streamline the transfer of utility data and make participation easy for building owners.

The second challenge involves providing building level data when there are multiple meters and/or non-owner utility account holders within a single building. In the absence of a whole-building monthly data aggregation service, a building owner must get authorization for energy information from each account holder in order to aggregate it for benchmarking, and this can present a hurdle to participation.⁷ If all the energy information for every meter in a building is not collected, the benchmarking information and ENERGY STAR® score will not be accurate.

There are other concerns about the time needed to complete an initial benchmark. It can take weeks for a user to gather the necessary authorizations and enter all the building and meter information needed to provide an accurate score or EUI, especially if multiple meters and/or utility account holders are involved.⁸ Additionally, although the report generation and sharing features in the upgraded Portfolio Manager were designed to facilitate communication, the current system of adding contacts to a user account entails a multi-step approval process that adds time to the initial benchmarking process. Most users cannot benchmark a building in one sitting, especially if they are utilizing Web Services. Once contacts have been approved and the initial benchmark has been completed, changing or updating building information and generating reports is quick.

“Working with the utility provider to implement electronic data transfer services is crucial. In Boulder at this time, requested utility data is received in various formats that then must be transferred into Portfolio Manager by hand. This sort of transfer is doable for some buildings, but is labor intensive for large portfolios with numerous business tenants.”

~ Elizabeth Vasatka, Business Sustainability Coordinator, City of Boulder

“Ease of accessing utility data, especially for buildings with multiple tenants, is critical.”

~ Nicole Ballinger, Outreach Advisor, Energy Benchmarking & Reporting Program, City of Seattle

Building energy benchmarking has emerged as a key policy tool to increase demand for energy efficient buildings and motivate energy performance improvements. However, despite the market transformation potential of this policy tool, participation in voluntary benchmarking efforts remains extremely low. While EPA reports that nearly 40% of US commercial floor area has benchmarked with Portfolio Manager, this is primarily due to high participation rates among very large buildings. For example, when all buildings in California are considered, only 3.5 percent of commercial buildings have been benchmarked.⁹

Cities are made up of many small and medium buildings — in many cities 90% or more of commercial buildings are smaller than 50,000 square feet (see **Table I** for examples). Office space often covers about a third of that commercial building area, and 90% or more of office space is Class B and C.* The dominance of small buildings, and Class B and C office buildings, requires attention to these sectors, but they are harder-to-reach than the larger Class A buildings.

Table I. Hard-to-Reach Characterization of Buildings in Example Cities (based on 2013 CoStar analysis)

City	Office space		Class B and C		Buildings <50,000	
	% total commercial buildings	% total commercial space	% total office buildings	% total office space	% total commercial buildings	% total commercial space
Berkeley	20%	26%	100%	95%	96%	58%
Boulder	43%	41%	100%	90%	91%	55%
Oakland	15%	29%	98%	67%	94%	46%
San Jose	24%	32%	94%	67%	89%	37%
San Francisco	21%	43%	93%	52%	93%	44%

Owners and managers of smaller buildings generally require more comprehensive outreach and greater assistance to motivate them to action in energy efficiency. Typically, owners of small buildings do not have the onsite resources and staff common in larger buildings, such as a building engineer, to take ownership of the benchmarking process. They often rely on third party energy service providers to identify energy saving opportunities and undertake improvements. Furthermore small building owners are less commonly members of well-known professional organizations such as the Building Owners and Managers Association (BOMA), which has proven to be a critical partner in several outreach and recruitment efforts for both mandatory and voluntary programs (see **Messengers**). Whereas Class A building owners and managers recognize the marketing value of benchmarking and its potential to result in lower vacancy rates or higher rents, the Class B and C building owners and managers interviewed were more skeptical that benchmarking would be of much value in this regard.

From the examples shown in Table I, the smaller cities (Berkeley and Boulder) have more than 50% of total commercial area in buildings less than 50,000 square feet, so voluntary programs or mandatory policies should not ignore these “hard-to-reach” buildings. In the larger cities (Oakland, San Jose, and San Francisco), big buildings (greater than 50,000 square feet) comprise more than 50% of the commercial area, so benchmarking goals may be achieved without specifically engaging the hard-to-reach smaller buildings.

“Small building owners make decisions more like homeowners. They need more assistance to identify needs and implement work.” ~ Alisa Kane, Green Building & Development Manager, City of Portland

“Larger buildings and Class A buildings typically have more in-house resources to spend time figuring out Portfolio Manager, whereas smaller building owners find themselves reaching out for help.” ~ Jessica Handy, Director, LEED AP, CodeGreen Solutions

* We use CoStar definitions (<http://www.costar.com/about/glossary.aspx?hl=C>). Class A office buildings are extremely desirable investment-grade properties with the highest quality construction, materials, and systems, significant architectural features, abundant amenities, first rate maintenance and management; and above average rental rates. Class B and C are more utilitarian buildings with average management and maintenance. They depend chiefly on lower price to attract tenants and investors.



Understanding Barriers

Understanding perceived and actual barriers is an important step in designing an effective program. Surveys and interviews can identify barriers and ways to increase participation. In addition, a survey itself can serve as an outreach tool to raise awareness about your benchmarking efforts.

TIP

Relationships are the key to engaging hard-to-reach sectors. If you have pre-existing relationships with smaller building owners or have had success engaging these sectors in other city-sponsored programs, they will be more receptive to participating in a benchmarking program.

Surveys can be conducted by city staff, interns, or outside parties through individual interviews or focus groups (both of which are time consuming), or paper/ electronic surveys (which typically have very low response rates). Surveys should address barriers, benefits (potential messages), resources (workshops, technical assistance, etc.), recognition, and professional networks (potential messengers). A sample survey is provided in **Appendix B**.

We found that the selection of respondents not only impacted survey implementation time, but also led to different feedback. Randomly selected respondents in the East Bay fell more broadly into the “uninitiated” category, having little or no prior benchmarking experience, while the pre-selected Boulder respondents had either worked with the City on other energy efficiency initiatives or were part of an ongoing commercial real estate key stakeholder group (though none had benchmarked before). Boulder respondents were far more receptive to both the survey experience and expressed greater overall motivation to benchmark. Even though Boulder respondents were owners and managers of small buildings, the rapport they have with the city made them easier to engage in benchmarking. A study in California found similar results.¹⁰

For the hard-to-reach smaller Class B and C office buildings, perceived and actual barriers to participation in a benchmarking program include:

- Time required to complete benchmarking process (gathering building and utility data, adding contacts, etc.)
- Learning how to use a new tool / ease of use
- Availability of technical assistance
- Getting approval from each tenant for energy use disclosure
- Figuring out multiple meters associated with each building
- Concerns about data reliability and low scores hurting market competitiveness
- Costs of hiring someone to benchmark buildings or costs of potential upgrades

Our survey results indicate that “time” is the biggest constraint. This may be the time to coordinate with multiple tenants, time to retrieve multiple meter information, or time to input the information into Portfolio Manager. Some perceive benchmarking as an additional burden or an intrusion of local government into business operations. Others expressed concern that benchmarking is redundant with other energy efficiency programs or local or state requirements.



In the California East Bay, survey respondents were found by randomly selecting small to medium Class B and C office buildings from CoStar and cold calling the contacts listed. Implementing the survey this way took an average of two hours per respondent. Actual phone-time conducting the survey averaged only about 15-20 minutes per call. Most of the other time was spent trying to reach an actual respondent, documenting of the survey responses, and sending follow-up emails as appropriate. Survey implementation in Boulder and San Francisco took an average of 25-30 minutes per respondent. These cities called respondents with whom they had existing relationships (Boulder) or who had already participated in a benchmarking program (San Francisco). The method selected will influence your results. For example, the Boulder and San Francisco respondents were noticeably more aware of benchmarking and open to participating than the East Bay respondents.

ANALYZING THE MARKET

The first step in building market analysis is to gather information on your city's building stock. With building data, program designers can determine sectors, sizes, neighborhoods, and buildings to target for voluntary programs and roll out approaches or size classes for mandatory programs.

Building Data Sources

There are several sources of comprehensive building data – the county tax assessor database and commercial databases (e.g. CoStar, LoopNet, Dataquick, Property Shark, etc.) that compile detailed information about commercial buildings, primarily for real estate purposes. CoStar has been the commercial database used most widely for benchmarking market analysis. Neither tax assessor nor commercial data set is 100% accurate, but for coarse screening and program design purposes both have advantages and disadvantages. See **Table 2** for comparison of tax assessor and CoStar data sets.

County tax assessor and CoStar data pick up slightly different buildings. The cities that have used both data sets conclude that for commercial buildings, CoStar captures more of the building stock (more

square footage) and also provides substantially more information about the buildings. For example, San Francisco found 300-400 buildings in CoStar that were not identified in assessor data.

TIP

Partnering with a data consultant to draw upon the available data sources to provide an analysis of your building stock, can help you prioritize target buildings, sectors, or neighborhoods.

Other data sources are also available. The U.S. Department of Energy recently released the *DOE Buildings Performance Database*, an interactive database of energy use intensity for tens of thousands of buildings. This information can point to types of buildings

with high or highly variant energy use intensity. Cross-referencing these building types with CoStar data specific to your city can help you prioritize target sectors. Additionally, CoStar provides latitude and longitude coordinates of buildings. This enables one to conduct geospatial analysis in mapping software to better understand which neighborhoods or business districts have high-energy savings potential. A data consultant can help you pull together data from an array of sources to gain hidden insights on patterns and trends in your city's building stock.

“We used both County Tax Assessor data and a summary compiled from CoStar and found challenges with both. The assessor information is not organized in a manner that is immediately useful for building energy efficiency purposes, and a large amount of time and effort was needed to manipulate and filter data. Ideally, it would be nice to hand off the raw data to a professional to organize into a meaningful data set. That said, it is worth the investment in CoStar, as it ultimately led to a data summary that was far more useful for conducting an inventory beyond square footage.”

~ Peter Nelson, Sustainability Coordinator, Salt Lake City

Table 2. Comparison of Building Data Sources

	COUNTY TAX ASSESSOR	CoSTAR
Building Types	Covers all buildings (both residential and non-residential); however, it is important to note that assessor data is based on parcels, not buildings. Since buildings increase the value of property, they are included in assessor data.	Collects information on commercial, industrial, and multi-family buildings. There is enough information collected on building uses that this information can be easily configured to match Portfolio Manager building type categories.
Contact Information	Reliably collects information for the responsible taxpayer, whether a person or a LLC, and includes names and addresses.	Offers ownership (80% of buildings) and management contact information, including names, addresses, and phone numbers. Contact information is not always reliable.
Building information	Includes square footage, building age, and building use types.*	Provides information on building class and type, square footage, stories, address, closest public transit stop and walking time, building age (60% of buildings), date of renovation, latitude and longitude information (helpful for mapping/geospatial analysis), LEED or ENERGY STAR® certification, and much more.
Limitations	Does not typically list the building class, nor does it include other building information provided in CoStar.	Does not reliably collect information on public buildings or owner-occupied buildings.
Cost of data	Data is available for free.	Data is available by county for a 12-month subscription fee, usually amounting to \$2000-3000 for the year.
Format	Data is collected at a county versus city level. Data is not presented in a standard format making it more difficult to sort and filter.	Data can be pulled for the entire county or specific cities. Data must be exported in small batches of 500 buildings.

* Note: While some assessors provide a building use type, these do not necessarily match laymen's categories or those within Portfolio Manager. In Salt Lake City for example, categories had to be determined from the Assessor's notes on an individual basis. In Boulder, staff had to work with the Assessor's office to correlate use categories.

KEY TASK



Building Inventory

Whatever you choose, it is useful to look at both number of buildings and total building area in the categories you select. Focusing on smaller buildings will require outreach to more buildings overall, but it may be easier to reach the building's decision maker. Focusing on larger buildings could result in benchmarking more total square footage, but this approach may come with a different set of challenges.

Different ways to classify the building stock:

- Building Type (multi-family, hospitality, retail, industrial, office, etc.)
- Building Size Category (e.g. 25,000 - 50,000 square feet)
- Building Class (Class A, B, or C)

Microsoft Excel allows for data manipulation, and it is fairly straightforward to create histograms showing the distribution of buildings according to these classifications. Further analysis can tell you the specific number of buildings or size thresholds that will meet your goal. For example, analyzing Berkeley's CoStar building data reveals that the city could benchmark 75% of its commercial office space if all 87 office buildings greater than 15,000 square feet participated. Or the city could benchmark 50% of its total commercial space by requiring that all commercial buildings greater than 25,000 square feet complete the benchmarking process, and such a policy would only impact 169 buildings.

Depending on your goals, which could vary from raising general awareness to decreasing greenhouse emissions, other criteria to consider include:

- **Energy Use Intensity (EUI)** – Which buildings have the highest energy demand? For commercial buildings, these typically include convenience stores, groceries, and hotels (buildings with refrigeration needs).
- **Neighborhoods or Business Districts** – Are there regions in your city that have high concentrations of buildings in your target market?
- **Building Age** – Energy opportunities vary by building vintage. Older buildings may have outdated equipment, presenting opportunities for investments in energy efficiency, but new buildings often have higher energy demand because of their more technologically advanced systems.
- **Owner Concentration** – Who are the largest building owners and property managers in your city?

“Where a law applies to building owners, local property records from an Assessor-Recorder are the bedrock for formal notifications and tracking compliance. However, assessors track properties, not buildings, so other data sources such as commercial real estate databases were necessary to build a clean dataset of buildings. No single resource was perfect.”

~ Barry Hooper, Green Building Program Coordinator, San Francisco Department of the Environment

KEY TASK



Data Analysis

As described above, for voluntary programs targeting the commercial sector, CoStar proves a useful and user-friendly source of building data. CoStar data can be easily exported into Excel for manipulation. Templates are included in **Appendix C**. Since data analysis may be time consuming or entail additional costs, some cities choose to forgo this step and design a program around obvious leads, irrespective of their building stock. For example, in the *Arlington Green Games*, staff chose to work with highly visible property management firms with a high concentration of buildings. These firms were easily identifiable without CoStar or other data analysis. For its voluntary program, Berkeley targeted LEED buildings and real estate companies who are civically engaged and have relationships with city staff (see **Strategy**).

TIME CHECK



For a small to medium size city, such as Berkeley, it probably takes an hour to download data from CoStar once you are familiar with the system. It takes another hour to match building uses to the ENERGY STAR® Portfolio Manager categories (for someone familiar with Portfolio Manager). For someone proficient with Excel, it would take an additional several hours (5-10) to manipulate and analyze the data to present it as it appears in the template (Appendix C). Allow more time to graph or chart it.

“When we initially got the CoStar data set we didn’t have the time to analyze it carefully. Nor did we use size to target a specific sector in the first round of our Energy Smart program. But once the buildings were sorted by size, type and ownership, the CoStar data became really useful for targeting and prioritizing outreach in our second round. Having the template was very helpful. Obviously, the data becomes extremely useful when determining the thresholds for a mandatory policy.”

~ Billi Romain, Sustainability Coordinator, City of Berkeley Planning Department



Setting Goals

Once you have an understanding of your city's building stock, you can more easily set realistic goals and define metrics for your program. Goals and metrics should guide your outreach strategy and evaluation plan. These metrics may include:

- **Number of overall participating buildings or building owners** – Consider targeting easier to reach, more visible sectors first to build momentum.
- **Number of participating buildings in a particular class or age category** – If you have already successfully engaged larger, more visible buildings, now may be the time to target the hard-to-reach, smaller office buildings. However, working with this sector will prove far more challenging, requiring more resources in terms of outreach and technical assistance. A trickle down approach is effective. We recommend engaging this sector only after you have significant momentum with your more visible buildings.
- **Square footage benchmarked** – Consider targeting larger buildings or building owners with large portfolios. Larger buildings have more potential for capturing the bulk of energy consumption, as consumption is commensurate with square footage, not number of buildings.¹¹
- **Annual program improvement** – Set a goal of improvement. Your metric could be participation rates, such as number of buildings or total square footage, or improvements in benchmarking scores of participating buildings from year to year.
- **Action taken** – This could include the number of audits conducted, behavioral changes, or actual energy retrofits or retrocommissioning projects.
- **Energy savings and greenhouse gas emissions** – This could include the annual reduction of kWh of electricity, natural gas therms, or metric tons of CO₂ (avoided emissions) from measures implemented as a result of benchmarking.

TIP

Keep in mind the phase of your program when choosing metrics. Newer benchmarking programs may want to raise general awareness, and simple metrics, like participation rates, are adequate for evaluating success. More advanced programs, implemented as part of climate action plans, should utilize more complex metrics that quantify energy savings or greenhouse gas emission reductions.

“The key to success is to provide one-on-one time and attention. Be friendly, open and available, and very visible.”

~ Kelly Zonderwyk, Energy Program Specialist, Arlington Initiative to Rethink Energy

“Strive for measurability. Push participants to benchmark before, during and after the program so they can see the difference. Try to equip them with some kind of operational and maintenance best practice advice. If possible, help them to identify low- and no-cost improvements.”

~ Sarah Hall, Sustainable Real Estate Manager, Commercial Sector, Northwest Energy Efficiency Alliance

DESIGNING YOUR PROGRAM

12

Strategy

Of the eleven cities and states with mandatory commercial benchmarking policies, five* exclusively target buildings larger than 50,000 square feet. Most policies implement a phased approach targeting larger buildings first. Larger buildings are associated with well-identified professional networks that facilitate

BUILDING BENCHMARKING LOW HANGING FRUIT

- LEED and ENERGY STAR® certified buildings
- Class A buildings
- Public sector buildings
- Buildings greater than 50,000 square feet
- Schools
- High profile buildings

outreach, and they often have onsite resources and building management staff to lead the benchmarking process. Larger buildings, although comprising only a small percentage of total buildings in any city, represent a significant percentage of total floor area. In essence, larger buildings provide a more favorable outcome to effort ratio.

For voluntary programs, we recommend a phased approach, where the hard-to-reach sectors are engaged after there has been success with larger and higher profile buildings (see Low-hanging Fruit). For example, Berkeley, which only has one Class A building and has many small buildings, focused efforts on widely recognized owners and buildings, as well as historic and architectural landmarks in the city. Once these

key players signed on, others more readily followed suit. Other strategies involve working with property management firms that represent a large number of buildings. Each of the following sections will explore various program design considerations.

“First, reach out to those buildings that already have benchmarked and are ENERGY STAR® certified and bring them in as champions. They are great peer examples when reaching out to similar buildings in your city to encourage them to benchmark.”

~ Nicole Ballinger, Outreach Advisor, Energy Benchmarking & Reporting Program, City of Seattle

“Targeting a particular sector by type of business or geographic area, such as all hotels or all downtown buildings, is an effective strategy to engage property owners and drive up participation rates.”

~ Billi Romain, Sustainability Coordinator, City of Berkeley Planning Department

“Engaging the big guys doesn’t necessarily engage owners of the far larger number of small buildings, but it builds a foundation. Its best to start with the largest buildings first.”

~ Barry Hooper, Green Building Program Coordinator, San Francisco Department of the Environment

* Chicago, Minneapolis, Philadelphia, New York City and Washington DC.



Program Types

Voluntary programs range from focusing on a particular building sector, such as offices, to broadcasting the program to all sectors, sometimes including residential. Some voluntary programs focus exclusively on energy benchmarking (e.g. Berkeley and Boulder), while others use benchmarking to motivate energy saving actions (e.g. Portland, Seattle, and Boise). Still

others, like Chicago, Houston and Arlington, have focused on a suite of sustainability initiatives (benchmarking, energy, water and waste reduction, and transportation). The target sector of each program also varies. Programs that focus only on benchmarking typically engage building owners and managers, while those focused on a broader set of green practices and behavioral change also target tenants (see **Appendix A. Voluntary Programs At-a-Glance**).

Voluntary benchmarking programs have also been used by many cities as a precursor to mandatory commercial

building benchmarking and energy disclosure ordinances. Almost all cities that have implemented mandatory benchmarking policies started with a voluntary program for one or two years.

Voluntary programs are effective for: 1) initiating outreach to stakeholders to gain support for mandatory policies; 2) learning more about your city's building stock and energy upgrade potential; and 3) developing relationships with building owners and recognizing early actors who can serve as effective spokespeople and champions for the mandatory program.¹²

Some cities, such as Chicago, will continue to implement voluntary programs even after rolling out ordinances. San Francisco, given greater resources, expressed that it too would have implemented additional rounds of its *24/7 Energy Challenge*. Berkeley, which has an ordinance under development, hopes to continue its *Energy Smart Awards* recognition program to accompany a mandatory policy. If an ordinance requires disclosure of energy use and a building audit, as in the case of San Francisco, a voluntary component, such as a friendly competition for improved benchmarking scores, can encourage building owners or occupants to actually invest in energy saving activities (see **Incentives**).

“Benchmarking is a foundational practice. When we launched the Portland Office Showdown in 2007, the first iteration of what later became the multi-faceted Kilowatt Crackdown, we focused just on benchmarking.”

~ Sarah Hall, Sustainable Real Estate Manager, Northwest Energy Efficiency Alliance

“Many of the participants in our voluntary Green Office Challenge (GOC) program later became supporters of our benchmarking ordinance. About 85 organizations wrote letters on behalf of the ordinance because they understood the value of energy savings from their prior experience in the GOC.”

~ Aaron Joseph, Deputy Sustainability Officer, Office of the Mayor, City of Chicago

RECOGNITION VS. COMPETITION

In our survey of hard-to-reach property managers and owners of Class B and C buildings smaller than 50,000 square feet, respondents in all regions overwhelming indicated a preference for recognition programs (as opposed to competitions), where all buildings that participate are recognized regardless of scores earned. Class B and C building representatives may not want to compete because they view the risk of losing to be much greater than the likelihood of winning; that is, they don't think their buildings will exhibit exemplary energy performance. Thus, recognition, for the hard-to-reach, seems to be a greater motivator than competition.



Incentives

Voluntary benchmarking programs typically involve some sort of incentive to encourage building participation. While financial rewards for benchmarking alone are not recommended,¹³ suggested incentives include:

- **Eco-Labeling** – Benchmarking is a necessary pre-requisite for either ENERGY STAR® or LEED certification. Studies have shown that eco-labeled building command higher rents and have lower vacancy rates than average.¹⁴
- **Rebates** – Benchmarking is a required activity to qualify for utility rebates for energy retrofits (e.g. Houston and San Diego Gas and Electric).
- **Recognition** – All participants receive formal recognition by the city (e.g. Berkeley and San Francisco)
- **Competitions** – Several cities (e.g. Arlington, Boise, Chicago, Houston, Portland, San Francisco and Seattle) have implemented very successful challenges, contests, or “friendly” competitions with multiple award categories. These efforts are typically more resource intensive. Challenges can be as simple as recognizing the first 20 buildings to participate, or in the case of Houston, can offer over 30 award categories. The EPA’s *ENERGY STAR® Guide to Energy Efficiency Competitions for Buildings & Plants* is a resource for developing competition programs.



Recognition Levels

Whether running a simple “participation” program or a competition, recognition is key. Whereas recognition programs formally acknowledge the participation of all participants through a website, newspaper ad, and/or event with the mayor, competitive programs determine award categories and recognize the top achievers. The standard categories – Best in Class, Most Improved, and Most Efficient – are intended to drive up demand for efficiency improvements. These categories can be further broken down by building size classes. Additionally, award categories can be set for different target audiences, such as owners and tenants. Houston also added an award category for promotion partners, incentivizing participants to refer peers to the program.

Although award categories can be an effective way of recognizing certain model behaviors, it is unclear how much effect awards have over straightforward recognition in encouraging program participation. In fact, promoting awards may have a negative effect for hard-to reach-buildings with little or no experience with benchmarking and no track record with energy savings. It may be that multiple awards in multiple categories are more effective in large cities, like Houston, which had 12 award categories, most with three tiers (1st, 2nd, and 3rd place), but less effective in smaller cities. Some programs, like Arlington’s, blend the two, creating award categories of Gold, Silver, Bronze, and Recognition for all participants. Most competition programs have at least four award categories with three places per category, and offer awards for both most improved and highest performing buildings.

Chicago sees the value of ongoing recognition. During its *Green Office Challenge* (GOC), awards were offered on a monthly, as well as cumulative basis, providing opportunity to recognize participants along the way, which helped to sustain momentum throughout the course of the GOC.

The hard-to-reach property managers and owners interviewed indicated that all recognition was positive. Of the following no single type of recognition emerged as more valuable than others:

- Listed on City website
- Listed on Chamber of Commerce or other local business association website (e.g. East Bay Environmental Network, BOMA, Buy Local)
- Window decal
- Local newspaper ad or story
- Recognition event with City Mayor or other dignitary

Houston, which had success with both high rises and small buildings, highlights the importance of mayoral recognition. During the *Houston Green Office Challenge*, the mayor was involved at the launch, in ongoing promotion, and at the awards ceremony.

Program Duration

A key criterion of successful programs is a time limit. Because effective programs demand significant outreach and dedicated staff resources, four to six months is a short enough period to provide and maintain the support required and a long enough period to effectively publicize the program, solicit participation, and see results.

For programs that encourage an array of green business practices (benchmarking, energy, water, and waste reduction, etc.), or more intensive energy reduction goals, one year is the standard time period, with enrollment taking place in the first few months and tracking progress of participating businesses taking place over the remaining period. Better Bricks, which has run *Kilowatt Crackdown* programs in Seattle, Portland and Boise, actually involves participants over a 16 month period, with enrollment prior to the official launch and awards given after the one-year implementation period. Rounds 1 and 2 of *Chicago's Green Office Challenge* (GOC) lasted for a year, but Round 3 was shorter. In Round 3, participants could enroll at any time during the *Challenge*, and earn monthly recognition for their accomplishments as Chicago's platform was continuously adding new activities.

“Mini-competitions amongst business associations pitting one business district against another may also encourage participation. Competitions could either be for the most buildings and/or square footage benchmarked.”

~ Alisa Kane, Green Building & Development Manager, City of Portland

OVERCOMING BARRIERS

In developing an outreach plan, there are several key components to consider: developing content, engaging partners, conducting outreach, and providing training and technical assistance.

KEY TASK



Messages

Most people, except perhaps professional building managers, do not spend much time thinking about therms and kilowatt hours, and saving energy is not the end goal for many building owners and occupants. Instead saving energy is a means to a different outcome such as enhanced productivity, improved comfort, and cost savings. Effective messaging about a benchmarking or energy efficiency program will emphasize the non-energy benefits of a proposed activity.¹⁵

For tenants this might include:

- Cost savings (reducing utility bills or controlling operational expenses)
- Environmental benefits (GHG reductions)
- Indoor air quality (better HVAC systems)
- Increased worker productivity (better lighting, increased comfort)

For owners, this might include:

- Cost savings on full-service or owner-occupied buildings
- Higher occupancy rates, rents, and property values
- Enhanced capitalization rate of energy efficient and eco-labeled buildings

BENCHMARKING PAYS OFF

According to a national study in 2008 by the CoStar Group, rental rates in ENERGY STAR®-rated buildings command a \$2.40 per square foot premium over similar buildings and have 3.6% higher occupancy rates. Report authors also found that ENERGY STAR® properties sold for an average of \$61 per square foot more than peers without the ENERGY STAR® certification.

In addition to talking points or messages, case studies and testimonials are very effective at conveying the value of benchmarking in language and terms relevant to the decision maker. While case studies can demonstrate details about costs and benefits, simple testimonials from other participants can be very persuasive. Peer advocates or champions may also be reliable positive references for the program.

Research indicates that business and building owners are primarily interested in measuring how they compare to their neighbors and how they improve over time.¹⁶ Portfolio Manager assigns ratings based

“Frame benchmarking as an opportunity with a focus on benefits (cost-savings, recognition, etc.). Vivid and actionable messaging resonates best.”

~ John Caner, CEO, Downtown Berkeley Association

“Any sustainability initiative should include education and messaging about cost savings.”

~ Sharon Fredlund, Executive Director, BOMA Silicon Valley

THE VALUE PROPOSITION

Interviews with the real estate community, as well as business associations such as BOMA, Chamber of Commerce, and Business Improvement Districts, underscore cost-savings, bottom-line benefits, and return on investment (ROI) as messages that truly resonate. Compliance also gets people's attention.

peer groups identified through the national Commercial Building Energy Consumption Survey (CBECS). The EPA can normalize for weather and unique building characteristics, but to qualify for a 1-100 score, buildings must meet certain size and type criteria. All buildings (regardless of type or size) can benchmark against themselves over time and this can be a useful selling point, especially for those buildings that don't qualify for an ENERGY STAR® rating.

Our survey results indicated that no single message was particularly effective in soliciting participation of the hard-to-reach, so it's best to be able to articulate multiple benefits. Many respondents mentioned cost savings and ROI (of energy efficiency investments) as the primary drivers for tenants and owners alike. Some respondents felt that eco-labeling and "green" recognition were of value in their particular city.

"Messages that would resonate with my members include: COMPLY WITH LAW; SAVE MONEY OR MAKE MONEY; CERTIFY YOURSELF AS GREEN OR ENVIRONMENTALLY SOUND. Give them something to brag about."

~ Paul Junge, Vice President, Local Chamber Relations, California Chamber of Commerce

"Semantics are important. BOMA can provide insights on how to frame a municipality's green efforts so that messaging will be better received by BOMA members."

~ Stephen Shepard, Executive Director, BOMA Oakland/East Bay

KEY TASK



Messengers

Although it makes sense to solicit the support of business alliances, chambers of commerce, and community based organizations to conduct outreach, keeping such partners up-to-date and on-message can be an enormous outreach task in itself. However, every program implementer we interviewed underscored the importance of strategic partnerships for outreach. Messages are often better received when delivered from those within the real estate community or other business associations, than from the local government. Minimally, messengers should be engaged to promote efforts on their websites and e-newsletters simply by sharing city program collateral. Interviews from potential partners suggest that case studies, pictures, newsletter blurbs, reports, and twitter feeds could all be useful to disseminate through their existing marketing avenues.

Almost all cities create their own marketing material and then work with their partners to tailor the message for each unique audience. For example, an Oakland Business Improvement District suggested that it was worth mentioning (in addition to bottom line benefits for tenants and owners), that benchmarking would provide positive PR to build on Oakland's reputation as one of "America's Greenest Cities." Such positive perceptions drive business, and generating business is the main concern of its members.

"Partnership with the local BOMA chapter is essential. There is a healthy tension between cities and the real estate community. Team up with a trusted private sector ally, such as BOMA (or Chamber of Commerce if BOMA does not have a local chapter). Partner to design the program and enroll participants."

~ Sarah Hall, Sustainable Real Estate Manager, Commercial Sector, Northwest Energy Efficiency Alliance

"Don't do it alone. Create strategic partnerships. No one wants to hear what the city wants you to do. Avoid the big brother image. Enlist BOMA or other partner as a trusted messenger."

~ Alisa Kane, Green Building & Development Manager, City of Portland

The **Arlington Green Games** is a noted exception to the general strategy of engaging professional associations. Arlington partnered with a few large property management firms, who hosted information sessions in their buildings for tenants. Then, through one-on-one outreach directly in these buildings, staff were able to enroll a large number of participants.

“One of the best ways to get the word out to building owners has been to write a blurb for the BOMA newsletter. It gets read.”

~ Barry Hooper, Green Building Program Coordinator, San Francisco Department of the Environment

KEY TASK



Marketing and Promotion

A clear, compelling, and informative website for a recognition or competition program is necessary to provide legitimacy and support outreach efforts. A website alone is not an effective marketing or outreach tool, but it is a crucial element of an outreach strategy. Chicago's and Houston's *Green Office Challenge*, the *Kilowatt Crackdown*, and *Arlington Green Games* are good examples of well-developed and colorful websites. However Berkeley's *Energy Smart Awards* program was still successful with a far simpler informational website.

TIP

Identify “trusted messengers” and business networks important to your audience. When targeting building owners, keep in mind that many in the hard-to-reach sectors may not have membership in BOMA and that Chamber membership is primarily comprised of tenants. The regional chapter of the Green Buildings Council also emerged as a key partner in outreach efforts (e.g. Chicago and New York City).

Hard-to-reach building owners and program implementers identified other potential messengers, including:

- Business Improvement Districts (BIDs) or neighborhood associations. Relationships with PBIDs (Property Based Improvement Districts) can be especially valuable, as they represent all building owners in a particular neighborhood through tax levies.
- Institute of Real Estate Management (IREM)
- International Facility Manager Association (IFMA)
- National Association for Industrial and Office Parks (NAIOP)
- regional or local associations in each market sector (e.g. hotel, grocery, medical office, restaurant)
- regional business journals

Beyond a website, promotion tactics include direct mail, earned or paid mass media, and social media campaigns. None of these tactics alone has proven effective at driving participation in commercial energy efficiency programs.¹⁶ Research shows that general messaging about benchmarking and energy efficiency does not resonate with people as much as specific information about their particular building. Through direct mail, program sponsors can give potential participants a simulated benchmarking score, with the hopes that this will pique interest in determining their real score, but it's unclear whether this is effective.

Mass media like billboards, mass transit advertisements, radio, and TV ads are expensive and, by design, do not allow for targeting messages to a particular audience. Opower and Facebook have run social media campaigns to encourage energy use competitions in the residential sector, but businesses typically use social media for promoting their services and it's not clear they would look to social media for information about their building's ecological footprint.

Cities have used other outreach methods to enlist participants. For example, for its pilot benchmarking program, Boulder targeted building owners and managers who had participated in other local energy efficiency initiatives, such as its *EnergySmart* program which offers advice and incentives. (*EnergySmart* participants were already knowledgeable about energy efficiency and were eager to identify other savings

potential through benchmarking.) *EnergySmart* Advisors identified leads for the benchmarking program pilot. In addition, city staff promoted the program in presentations to realtor and broker associations.

Houston's *Green Office Challenge* (GOC) utilized a website, newsletter, and mayoral promotion. Staff attended many meetings to engage the leadership of their seven Management Districts, who then reached out to their memberships (see **Case Studies**). Staff reached out beyond the traditional Downtown Class A

towers and had great success engaging smaller office buildings through these Districts.

TIP

Utilize internal resources, such as other city departments and utilities. San Francisco partnered with its utility, PG&E, whose account representatives conducted outreach to customers on behalf of its *24/7 Energy Challenge*.

Others mention the value of cross promotion with other sustainability initiatives. For example, during the cross promotion of Chicago's *Green Office Challenge* (GOC) with its *Bike Commuter Challenge* (especially during Bike to Work Week), registration in the GOC spiked dramatically. The *Retrofit Chicago* program, which focuses on building energy

efficiency, also promotes the GOC, with its emphasis on tenants, as a value-added plug. Tenant engagement is needed to fully capture the savings potential. Whereas upgrades and retrocommissioning are key energy savings investments, occupant behavior can drive down energy use at no cost.

"We went to the community versus asking them to come to us — breakfast, lunch, receptions, informational meetings, and one-on-one."

~ Laura Spanjian, Director, Office of Sustainability, Mayor's Office, City of Houston

"Small businesses don't typically come to Downtown events. Small business may be very passionate about sustainability, and they care, but they engage differently."

~ Aaron Joseph, Deputy Sustainability Officer, Office of the Mayor, City of Chicago

"Our research suggests that reading or hearing about local buildings that have benchmarked and reduced energy use as a result helps owners or managers to envision the same success for their buildings"

~ Gregory Heller, Program Coordinator, Resource Media

KEY TASK



Training

Training can be provided in various formats such as workshops, webinars, one-on-one support, and websites. Our survey of those with no prior benchmarking experience indicated that no single method is preferred. Many people mentioned the convenience of online training, especially where time is a constraint, but others still favor learning in a workshop-style environment. Many liked the idea of one-on-one assistance either in person or over the phone. A majority of respondents in San Francisco, who had all benchmarked previously, also mentioned the value of one-on-one assistance. San Francisco's experience with its ordinance indicates that larger buildings with dedicated building staff often understand the value of benchmarking independently, whereas smaller buildings need more support.

Online training can be provided at no cost by cities, and the EPA offers ongoing webinars via its ENERGY STAR® site. Local utilities may also provide free workshops, online training or help (e.g. Pacific Gas & Electric Company).

Some utilities even offer differentiated training by level of experience, target audience, or phase (e.g. PG&E's *You Have Benchmarked Your Building, What's Next?*). In California, reports provided by the utilities summarizing workshop evaluations showed that workshops uniformly received high ratings and very positive feedback from attendees. Most importantly, workshops have been effective in providing participants with the skills and knowledge to independently benchmark their own or their clients' buildings and seem to increase overall participation. Hosting frequent workshops tailored to a specific facility or industry is another option. For example cities can work with BOMA chapters that are already providing in-house workshops to its members (e.g. Oakland/East Bay and Silicon Valley).

Voluntary program implementers outside of California suggest making workshops into fun, networking opportunities, especially for programs engaging tenants. During the *Arlington Green Games*, for example, workshops were offered in varied formats, times, and locations on an ongoing basis throughout the yearlong competition. Also, Arlington offered training at participants' places of work, rather than asking them to come to a central location. Each of their workshops had catchy titles, such as *Mingling Monday*, *Time-out Tuesday*, and *Webinar Wednesday*. They included breakfast networking and brown bag lunch workshops, as well as special tours and events.

"The one-day training we offered was great, but it had limited participation. And of those who attended, most still needed one-on-one help to complete the benchmarking process."

~ Billi Romain, Sustainability Coordinator, City of Berkeley Planning Department

"Take advantage of any free resources. Tap your internal resources from other city departments, such as Planning, which can provide benchmarking information along with permitting information. And, definitely work with property management firms."

~ Nicole Ballinger, Outreach Advisor, Energy Benchmarking & Reporting Program, City of Seattle

KEY TASK



Technical Support & Resources

Resources, such as free technical support, are critical to a successful program. In fact, program implementers underscored the importance of providing some sort of technical assistance, whether through a help-desk or through one-on-one assistance. If cities have to choose between offering workshops or a help-desk, the latter is recommended. Seattle also uses its help-desk for outreach purposes. When help-desk staff members are not providing technical support, they are calling building owners to remind them about upcoming compliance deadlines.

In addition to providing training or technical assistance to complete the benchmarking process, offer resources on what to do after benchmarking. As the ENERGY STAR® score in itself does not provide guidance on how to improve a building's energy use, it is important to tighten the link between benchmarking and action.

These resources may include:

- General information on what to do after benchmarking – "Next Steps"
- Follow up by utility-sponsored energy efficiency program that can perform energy audits and/or rebates and incentives for retrofits or retrocommissioning
- A list of consultants that could conduct audits or retrofits

"Make the process simple, and communicate it. Show us the way. The municipality can help by providing training and resources, such as a website and two-minute tutorials. If benchmarking is required by an ordinance then technical assistance is definitely needed for those who are not tech savvy, and online resources should be offered for those that are tech savvy."

~ Don Rogers, VP Property Management, CIM Group

"It would be a great value to customers if city websites provided links to quality, vetted providers."

~ Ty Clark, PE, Certified Energy Manager, Principal, Bay Efficiency

"Provide free technical support and incentives so there is value added to the benchmarking."

~ Alisa Kane, Green Building & Development Manager, City of Portland



One-on-One Engagement

The most effective information sharing and promotion strategy is one-on-one engagement with building decision makers. Credibility is key, so supplementing one-on-one outreach with an informative website, promotional activities as described above, and reference materials (like fliers or case studies) is important. There are multiple options for delivering one-on-one outreach. Outreach from city staff is effective, but bandwidth limits the scope and depth of outreach services that staff can provide. Students or recent graduates, when trained and managed through a formal internship program, may do a good job of conducting initial outreach. Boulder implemented a pilot program with “Energy Coaches,” who were building professionals seeking to augment their skills. They spent an average of seven hours per building, providing information and technical assistance on benchmarking, and working with owners and tenants to access energy use data. Both Coaches and building owners/tenants reported positive experiences with this approach; however, it took extensive coordination.¹⁹

Energy service providers or vendors see little role for themselves in voluntary programs, whereas an ordinance creates a strong market for private sector services. In New York, 80% of the benchmarking data was compiled by consultants, and San Francisco estimates that at least half of the benchmarking is completed by professional firms. In cities with ordinances, businesses in the energy efficiency sector are growing their client bases and hiring staff. It is unlikely, however, that the hard-to-reach would pay for private benchmarking support in the context of a voluntary program. For example, in San Francisco, private benchmarking support services start at around \$500.

As service providers do play a significant role in mandatory programs, it is important to engage them early on in the development of an ordinance. Programs seeking outreach support from vendors need to invest extensively in outreach and training to vendors, and this requires ongoing investment and coordination to make sure their messaging is aligned with the goals of the program.²⁰

SELLING IS KEY TO INCREASING PARTICIPATION²¹

SELLERS	TELLERS
Solve problems	Give information
Gain conviction	Leave the decision to the prospect
Translate features into benefits	Present features
Risk rejection	Avoid rejection
Win by closing sales	Try to win by showing knowledge
Use emotional and rational levels	Use rational level
Proactive	Reactive
Accept uncertainty as the norm	Want structure and stability
Intensify needs and wants	Identify needs
Go to everyone	Want everyone to come to them

To their detriment, energy efficiency programs, in general, have undervalued a sales personality relative to technical skill when hiring staff. People who approach energy efficiency as a service to sell gain greater participation than those who assume the need or desire for energy efficiency already exists. Although technical familiarity is important for credibility, moving people to participate in benchmarking and energy efficiency programs requires outreach staff who are “sellers” rather than “tellers.” Sales experience or salesmanship personalities are critical attributes of outreach staff.²¹

“Dedicate staff time — it’s a very labor intensive undertaking. People need resources to help them through the process. Keep communication open. Staff provided one-on-one help and training over the phone or in person. We would meet with participants at their place of business and walk them through Portfolio Manager or assist as needed.”

~ Laura Spanjian, Director, Office of Sustainability, Mayor’s Office, City of Houston

“The success of any rating and reporting program depends on engaging businesses and building owners in a way that is easy and customized to fit their needs. An effective method is to partner with existing energy efficiency programs that provide advisor services that can deliver ongoing one-on-one consultation services that guide them through the process of benchmarking.”

~ Elizabeth Vasatka, Business Sustainability Coordinator, City of Boulder

City of Berkeley 2013 & 2014 Energy Smart Awards

Berkeley implemented small, but successful, voluntary recognition programs with a very limited marketing budget without a direct mail campaign. They created a website, print and digital collateral, engaged trusted messengers such as the Chamber and Downtown Association (PBID), and partnered with the neighboring cities of Oakland and Emeryville to increase participation. Additionally, the Energy Smart Awards program partnered with the East Bay Environmental Network (EBEN) and Oakland/East Bay BOMA, which jointly hosted the recognition event. City resources included a 0.4 FTE staff member who provided significant one-on-one outreach and technical assistance over 6 months. In Berkeley these efforts resulted in participation by 30 owners or managers who benchmarked 150 buildings (some owners had large portfolios) and the development of closer working relationships with key stakeholders in the commercial building sector.

Arlington Green Games

The success of the 2011 *Arlington Green Games* illustrates the power of well-designed and supported marketing and training campaigns, coupled with one-on-one outreach. The yearlong competition focused on large office buildings and included both property managers and tenants. The *Games* used a scorecard approach where participants earn points for action taken (evidence of improvement) in multiple categories, including energy, water and waste reduction, as well as tenant behavior.

Arlington developed its own pre-recorded webinars to guide participants through Portfolio Manager, instead of relying on the EPA versions. Ongoing workshops that provided networking opportunities were offered in various formats, times, and locations, addressing a range of green office practices to help participants garner points on the scorecard. Additionally, participants had access to one-on-one assistance in person, over the phone, or via email.

Outreach efforts involved a significant in-person investment and boots-on-the-ground approach to build a connection with participants. Two staff members met personally with every participant initially and then again later on during the year. A lot of time was spent away from the desk, hanging out in office building lobbies, drinking coffee, and participating in happy hours and other networking events. The latter were particularly appealing to the younger professionals who were interested in sustainability but also in networking opportunities. These efforts resulted in higher than expected participation outcomes. The *Games* sought to enroll 50-100 participants but ultimately registered 170.

A second round was launched in 2013 offering three separate competitions for 1) restaurants; 2) retailers; and, 3) apartments and condos. The *Games* are designed to be sector specific, with marketing materials, workshops, and other resources tailored appropriately. Arlington plans to re-launch in 2014 with an emphasis on smaller office buildings.

City of Houston, 2011 Green Office Challenge

Houston had remarkable participation in the first year of its awards program - 375 buildings covering over 75 million square feet, with 176 buildings achieving LEED status. Much of that success can be attributed to the considerable resources available through the Bloomberg Mayors Challenge and partnerships with ICLEI and the Clinton Climate Initiative. The resources allowed the program to hire skilled outreach staff, develop a sophisticated website, offer over 30 award categories, focus on offices, create different messages for building owners and tenants, and offer financial incentives for energy efficiency improvements (with set asides for Class B and C office space). Outreach began the year before the program launch, and key stakeholders were engaged to provide feedback on program design. Houston worked with over 25 partners, and relied heavily on neighborhood management districts to enroll members, many of which represented the smaller Class B and C office space.

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Appendix A. Voluntary Programs At-a-Glance

<i>Program Name</i>	<i>Jurisdiction</i>	<i>Target Building Sector</i>	<i>Green Practices</i>	<i>Program Duration</i>	<i># of Iterations/ Rounds (to date)</i>	<i>Program(s) Showcased</i>	<i># of Participants</i>	<i>Participation (buildings)</i>	<i>Participation (commercial area)</i>	<i>Recognition Type</i>	<i>Key Partners</i>
Arlington Green Games	Arlington County, VA	Multifamily, Office, Retail, Restaurant	Energy, water, and waste reduction, tenant/resident engagement	one year	two	2011 Office Games	170 building managers and tenants	100+ buildings and offices	approx. 15 million sq. ft. (1/3 of office space)	Gold, Silver, Bronze, Recognition	
http://www.arlingtongreengames.com											
The Green Games is part of the County’s AIRE program—Arlington Initiative to Rethink Energy. The inaugural Green Games were conducted from Jan 2011 - Dec 2011, and focused on the commercial office sector. A second round of Games implemented in 2013 offered separate competitions for Restaurants, Retailers, Apartment & Condo Property Managers, and Apartment & Condo Residents. AIRE hopes to launch a second competition for the office sector again in 2014. For the initial 2011 office sector Games, efforts targeted larger office property managers to include the most square footage with the least number of participants. The program was intentionally designed to create a trickle down effect to smaller office buildings, which will be the focus of the upcoming Games. The Games uses a scorecard approach, where participants (managers and tenants/residents) earn points for action taken/ evidence of improvement over the year in multiple categories. The branded approach of the Games entails high-end marketing collateral featuring a catchy sports theme. Well-coordinated and intensive outreach efforts by program staff involve significant face time out in the community. Additionally, the Games offer training, technical assistance and ample networking opportunities.											
Energy Smart Awards	Berkeley, Emeryville, Oakland, CA	Commercial (cross sector)	Energy benchmarking	approx. six months	two (2013; 2014)	2014 Awards	46 building owners and managers	170		Recognition only	Cities of Berkeley, Emeryville and Oakland, BOMA Oakland/East Bay, East Bay Enviromental Network
http://www.ci.berkeley.ca.us/benchmarking_buildings/											
The Energy Smart Awards program was piloted in Berkeley to engage commercial property owners and managers around building energy use, as well as identify champions for building energy efficiency and benchmarking. During its second round, which ended in January 2014, activities expanded to include the neighboring cities of Oakland and Emeryville. In addition to outreach to office and public sector buildings, hotel and groceries were targeted, as they are both public facing and energy intensive. The municipalities also partnered with Oakland/East Bay BOMA and the East Bay Environmental Network (EBEN). For the second round, BOMA and EBEN assisted with promotion and jointly hosted the awards ceremony where mayors and other dignitaries conferred awards to participants, who primarily represented environmental leaders in the business community and larger and/or iconic buildings from the three cities. Involvement from the hard-to-reach was minimal, although this sector was included in outreach efforts. To note, in Berkeley, where participation was the greatest, city staff conducted outreach, coordinated training and provided one-on-one technical assistance (approx. 0.4 FTE over six months).											
Commercial Building Energy Rating & Reporting Pilot Program	Boulder, CO	Commercial (cross sector)	Energy benchmarking	less than six months	one	2012-13 Pilot	17 building owners	40 (20 office) buildings	almost 2 million sq ft.	Recognition only	City of Boulder, Colorado Green Building Guilds Commercial Building Energy Coach Association, EnergySmart
https://bouldercolorado.gov/pages/commercial-buildings-energy-rating-and-reporting-pilot-program											

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<i>Program Name</i>	<i>Jurisdiction</i>	<i>Target Building Sector</i>	<i>Green Practices</i>	<i>Program Duration</i>	<i># of Iterations/ Rounds (to date)</i>	<i>Program(s) Showcased</i>	<i># of Participants</i>	<i>Participation (buildings)</i>	<i>Participation (commercial area)</i>	<i>Recognition Type</i>	<i>Key Partners</i>
<p>As a component of the City of Boulder's Commercial Energy Efficiency Strategy, the city launched a pilot program in September 2012 to explore the development of a standard procedure for rating the energy performance of existing commercial buildings. Of the 17 owners who participated, half had prior involvement in other local energy efficiency initiatives, such as Boulder’s EnergySmart program, which offers advising and incentives. Building on prior relationships was one of the keys to the pilot’s success. Participating buildings represented a cross sampling of the commercial sector, as well as the hard-to-reach. The median size was 15,000 sq. ft., and 27 of 40 of buildings were less than 50,000 sq. ft. The city contracted with the Colorado Green Building Guilds Commercial Building Energy Coach Association Participants to provide Energy Coaches who offered one-on-one assistance to participants to complete the benchmarking process. City resources included a 0.25 - 0.33 FTE staff member to assist with outreach, and oversee the day-to-day coordination with participants and Energy Coaches.</p>											
Kilowatt Crackdown	Boise Metro, ID (greater Boise area)	Commercial office	Energy reduction	one year competition (with kick-off and awards total engagement is approx. 16 months)	one	2013 Program Year	43 property teams from participating buildings	43 buildings	3.7 million sq. ft.	Grand Prize and 1st, 2nd, 3rd prizes for Highest Performing and Most Improved. Special Bonuses (prizes and recognition) for progress throughout year.	BetterBricks, BOMA Boise, Idaho Power
<p>http://kilowattcrackdown.betterbricks.com/boise/</p>											
<p>The Kilowatt Crackdown competitions involve a strategic partnership with BOMA, the utility of a particular city and Northwest Energy Efficiency Alliance (NEEA), which runs the BetterBricks program. Using a multi-sector approach to successfully engage the commercial real estate community, BOMA and the local utility assist with promotion while BetterBricks oversees overall program implementation. For the Boise Metro area program, the yearlong competition was launched in October 2012 and winners will be announced in Spring 2014. In Boise, most participants are BOMA members, and primarily represent buildings over 30,000 sq. ft. Participants receive free consulting, assistance and technical support. Through its network of consultants, NEEA provides Energy Coaches for a set number of hours to guide participants through the competition, assisting with data gathering, benchmarking, coordination, and development of a Project Bank (three-year action plan) and Project Review. Additionally, participants receive a free Scoping Study (estimated \$2,000-\$3,000 per building), which is a technical assessment to identify potential building performance improvements.</p>											
Chicago Green Office Challenge	Chicago, IL	Commercial (office, retail, schools, industry)	Energy, water and waste reduction, transportation, tenant engagement	under a year with ongoing enrollment	three	Round 1 (2011 Program Year)	263 offices (i.e. teams)	98 buildings		Leadership in Tenant Excellence, Leadership in Property Management Excellence (multiple tiers honoring all participants)	City of Chicago, ICLEI, Office Depot, Delta, Green Per Square Foot
<p>http://chicagogoc.com/</p>											
<p>The Green Office Challenge (GOC) began in 2008 as a collaboration between the City of Chicago and ICLEI – Local Governments for Sustainability, with core funding from Office Depot. The 2013 GOC is the third generation Challenge, and it expanded to include a broader cross section of the commercial sector while becoming the niche for tenant engagement. While Rounds 1 and 2 focused on Chicago’s Downtown high rise buildings, Round 3 was open to all buildings throughout the city and engaged smaller businesses. The City plans to launch a 4th GOC in Spring 2014. Rounds 1 and 2 were yearlong competitions; the latest Challenge in 2013 was shorter, and participants could enroll at any time. The new Green Per Square Foot platform offers ongoing activities, resources and education addressing a broad spectrum of sustainable practices. The GOC offers workshops up front, but Delta (one of the key partners) also provides ongoing support including technical assistance and advice to improve office practices as well as secure rebate dollars or undertake retrofits. The new platform is fun and offers team building and networking opportunities – the GOC has witnessed an increase in participation of enrollees from 29% in Round 2 to 60% in Round 3. To note, the City of Chicago recently enacted a benchmarking ordinance, and many of its key supporters were GOC participants.</p>											

Appendix A. Voluntary Programs At-a-Glance

Program Name	Jurisdiction	Target Building Sector	Green Practices	Program Duration	# of Iterations/ Rounds (to date)	Program(s) Showcased	# of Participants	Participation (buildings)	Participation (commercial area)	Recognition Type	Key Partners
Houston Green Office Challenge	Houston, TX	Commerical office	Energy, water, and waste reduction, transportation, tenant engagment	one year with ongoing enrollment	three (2011; 2012; 2013)	2011		375 buildings and tenants	approx. 75 million sq. ft.	Multiple award categories based on baseline and overall Portfolio Manager scores, participation (by District, Manager/Owner, tenant), improvement, and overall winners. Tenant awards (Platinum, Gold, Silver, Bronze) based on scorecard.	City of Houston, ICLEI, Clinton Climate Initiative/C40
http://www.houstongoc.org											
To date, the Houston Green Office Challenge (HGOC) has implemented three rounds (2011, 2012, and 2013), engaging property managers and tenants throughout the city, and has had the greatest participation of all the showcased programs. Similar to the Chicago GOC, tenants use a Green Office Scorecard to address a suite of sustainability practices, while building managers seek to green operations using Portfolio Manager (water and energy benchmarking) and other tools (waste reduction) to measure change. The HGOC relies heavily on partners (approx. 25) for promotion and recruitment, and enlists seven Management Districts to both market the program and to compete against each other. In addition to outreach, city staff members provide one-on-one assistance and training in person and over the phone, often at places of business. During the first year of implementation (2010), a full time staff member was dedicated to the project. Now, in its third year, the HGOC requires 0.5-0.75 FTE staff member.											
Kilowatt Crackdown	Portland Metro, OR (including Clark County, WA, and Multnomah, Clackamas, and Washington Counties, OR)	Commerical office	Energy reduction	one year competition (with kick-off and awards total engagement is approx. 16 months)	seven	2013 Program Year	76 property teams from participating buildings	76 buildings	almost 15 million sq. ft.; approx 25% of greater Portland office market (since program started in 2007)	Grand Prize and 1st, 2nd, 3rd prizes for Highest Performing (Master's Track) and Most Improved (Professional's and Specialists' Track). Special Bonuses (prizes and recognition) for progress throughout year.	BetterBricks, BOMA Oregon, City of Portland, Energy Trust of Oregon, Clark Public Utilities, Portland Development Commission
http://kilowattcrackdown.betterbricks.com/portland/											
The Building Performance Partnership’s Kilowatt Crackdown in Portland is an evolution of commercial real estate competitions that began in 2007, including Carbon4Square and Office Energy Showdown. Similar to the Kilowatt Crackdown in Boise, a multi-sector approach is utilized, involving BOMA and the utilities, with funding through NEEA to design and implement the competition through its BetterBricks program. However, in the most recent competition, the City of Portland joined as a key partner (versus as a participant only), assisting with promotion, outreach and recruitment. Similar to Boise, benchmarking and energy reduction is core to the program. Participants work with Energy Coaches and receive a free Scoping Study to identify low-cost, operational areas to save energy, as well as support to develop a Project Bank and Review. Through the current partnership, Kilowatt Crackdown has become more robust, serving as a conduit to connect interested property managers to other city programs, such as Sustainability at Work (which addresses recycling, procurement, and tenant behavior). Moreover, through the addition of the Specialist’s Track, the program expanded this past year to include buildings smaller than 25,000 sq. ft. (although they did not receive the robust consulting services of the other tracks), whereas previous competitions included only larger buildings.											

Appendix A. Voluntary Programs At-a-Glance

<i>Program Name</i>	<i>Jurisdiction</i>	<i>Target Building Sector</i>	<i>Green Practices</i>	<i>Program Duration</i>	<i># of Iterations/ Rounds (to date)</i>	<i>Program(s) Showcased</i>	<i># of Participants</i>	<i>Participation (buildings)</i>	<i>Participation (commercial area)</i>	<i>Recognition Type</i>	<i>Key Partners</i>
San Francisco 24x7 Energy Challenge	San Francisco, CA	Commercial (cross sector)	Energy reduction	one year	one (2009-10)	2009-10		10 buildings	5.6 million sq. ft.	Grand Prize (Kilowatt Cup) and prizes in multiple sectors (i.e. office, hotel, grocery, retail, hospital, supermarket, school, etc.) for Greatest Improvement and Most Efficient. General recognition (certificates and media promotion) for all participants.	San Francisco's Mayor's Office; San Francisco Environment, BOMA San Francisco, Pacific Gas & Energy, US Green Building Council - Northern CA
The 24x7 Energy Challenge was a one-time voluntary benchmarking program implemented with nominal City resources as a part of the larger global WWF Earth Hour, before San Francisco enacted its benchmarking ordinance. The Challenge was possible only because infrastructure was already in place. Pacific Gas and Electric (PG&E) was already offering free benchmarking classes and had established web services early on. Additionally, PG&E reps assisted with promotion to their customers while BOMA played a critical role in enlisting members. Phone banks for Earth Hour were already running, requiring only an additional message for the Energy Challenge. Similarly, the Challenge received mention at all Earth Hour events, on billboards and in PSAs. Participation included only large buildings, though the Challenge was open to all commercial buildings throughout the city. The 24x7 Energy Challenge provides an example of how a voluntary benchmarking program may be implemented as a module as part of a larger campaign or initiative.											

Class B & C Office Building Energy Benchmarking Survey

INTRODUCTION

Hello, my name is _____ and I am calling on behalf of the City of _____, which is interested in developing / running a (voluntary) program for building owners and property managers that helps you better understand and improve your building's energy performance.

I have listed that you are the owner/ property manager for the _____ building at _____ (address). Is that correct?

The City is seeking input to figure out what factors might influence participation in the program. I have a few questions. Do you have about 10 minutes to participate in a short survey? (If not, schedule a different time.)

Are you familiar with building energy benchmarking?

If "Yes," ask respondent for his/her understanding. If unclear, check "No."

- ☐ Yes
- ☐ No

Comments:

Have you benchmarked a building before using the EPA's ENERGY STAR® Portfolio Manager?

- ☐ Yes
- ☐ No

Comments:

How did you learn about ENERGY STAR® Portfolio Manager?

Check all that apply.

- ☐ Participated in a city-sponsored program previously
- ☐ City website
- ☐ Business association
- ☐ Newspaper article
- ☐ Tenant
- ☐ N/A
- ☐ Other:

Comments:

BENCHMARKING EXPLANATION

- Measuring and tracking energy use is the first step to reducing energy usage in your building and identifying potential money saving opportunities.
- The EPA has a simple, free, online tool, called ENERGY STAR® Portfolio Manager, that allows you to track energy usage by linking to your utility bill (such as PG&E).
- Portfolio Manager provides a free, weather-normalized score for your building; meaning the score compares your building to similar types of buildings in similar climates (liken it to "miles per gallon" for a vehicle).
- If your building scores in the top 75%, you qualify for ENERGY STAR® Certification (similar to what you see on appliances), which several studies show result in higher rents and lower vacancy rates.

BUILDING INFORMATION - METERS & BILL PAYMENT

To get started, I will get some basic information about your building(s).

Is the building owner occupied?

- ☐ Yes
- ☐ No
- ☐ Partial

Comments:

Enter % space owner-occupied (if applicable).

How many tenants occupy the building?

What type of electric and gas meters does the building(s) have?

Check all that apply.

- ☐ Single meter – master or house meter
- ☐ Multiple meters

Comments:

Who pays the electric and gas bills?

Check all that apply.

- ☐ Building owner
- ☐ Tenants
- ☐ Shared/fractional

Comments:

BARRIERS

The online process through Portfolio Manager requires that you input basic characteristics for each building(s) and identify each utility meter in your building(s).

(Only for those that have previously benchmarked) What factors did/would inhibit your ability or interest in benchmarking your building(s) again?

Check all that apply.

- ☐ Time
- ☐ Ease of use
- ☐ Availability of technical assistance
- ☐ Getting approval from each tenant for energy use disclosure
- ☐ Figuring out multiple meters associated with my building(s)
- ☐ N/A – never benchmarked
- ☐ Other:

Comments:

(For those that have never benchmarked) What factors might inhibit your ability or interest in benchmarking your building(s)?

Check all that apply.

- ☐ Getting approval from each tenant for energy use disclosure
- ☐ Figuring out multiple meters associated with my building(s)
- ☐ Learning how to use a new tool
- ☐ Other:

Comments:

OUTREACH & SUPPORT

What kind of outreach, training and support would (or did) you find valuable?

Check all that apply.

- ☐ Links to resources on city website
- ☐ An on-line training to enable you to “benchmark” your buildings independently in your own time
- ☐ A free workshop where technical assistance is provided to complete the benchmarking process
- ☐ One-on-one technical assistance in completing the process in person
- ☐ One-on-one technical assistance in completing the process over the phone
- ☐ Reminders by email
- ☐ Reminders by phone
- ☐ Someone to benchmark my building for me
- ☐ Other:

Comments:

BENEFITS

I mentioned that the benchmarking process offers many benefits.

If you were to participate (or have participated) in a city-sponsored benchmarking program, which of the following would (did) you find valuable in encouraging your participation?

Check all that apply.

- ☐ General information on what to do after benchmarking – *Next Steps*
- ☐ Follow up by utility-sponsored energy efficiency program with rebates and incentives
- ☐ A list of consultants that could conduct audits or retrofits
- ☐ Potentially lower operating costs by reducing utility bills
- ☐ Potentially higher rents, lower vacancy rates, or more long-term tenants
- ☐ Possibility of attaining Eco-Rating on my building (LEED or ENERGY STAR® Certification)
- ☐ Compliance with local or state ordinances (Explain, as appropriate to your city/state.)
- ☐ Other:

Comments:

RECOGNITION

The City is looking at different program designs.

If you were to participate, which type of program is more appealing?

Choose one.

- ☐ Recognition only program (recognized for participating, regardless of score)
- ☐ Competition (recognition for best scores in different categories)
- ☐ Other:

Comments:

If you were to participate (or have participated), what kind of recognition is important to you?

Check all that apply.

- ☐ Listed on the City website
- ☐ Listed on Chamber of Commerce website
- ☐ Listed on other local business association website (East Bay Environmental Network, BOMA, Buy Local, etc.)
- ☐ Window decal
- ☐ Local newspaper ad or story
- ☐ Recognition event with City Mayor or other dignitary
- ☐ Other:

Comments:

SCORING or RATING

I mentioned that the ENERGY STAR® Portfolio Manager produces a score, from 0 -100.

Would either or both of the following uses of your score discourage your participation?

Check all that apply.

- ☐ Disclosure of your benchmarking score for internal purposes only
- ☐ Public disclosure of your score (e.g. on a website)
- ☐ Neither would be discouraging
- ☐ Other:

Comments:

RESPONDENT INFORMATION

(Interviewer enter available data beforehand or after interview)

Respondent Name

Respondent Position

- ☐ Building Owner
- ☐ Manager
- ☐ Other:

City/Town (of Respondent)

NETWORKS

Are there any local business or professional organizations with which you communicate regularly?

(read newsletter, participate in meetings, etc.)

BUILDING OWNER/ PORTFOLIO INFORMATION

(Use CoStar, ask only for verification)

Who is the building owner?

What is the City/town of the building(s)?

- ☐ Berkeley
- ☐ Oakland
- ☐ San Francisco
- ☐ San Jose
- ☐ Boulder
- ☐ Salt Lake
- ☐ Other:

How many buildings are under this ownership?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ More than 5

Comments:

What is the building(s) size?

- ☐ 5,000 - 9,999 sq. ft
- ☐ 10,000 - 24,999 sq. ft
- ☐ 25,000 - 49,999 sq ft
- ☐ 50,000 sq. ft or larger

Comments:

Building Class?

- ☐ Class A
- ☐ Class B
- ☐ Class C

Comments:

PARTICIPATION

(For cities with recognition programs) Are you interested in participating in this year's recognition program?

(For Berkeley and Oakland, must submit information by October 31. The date of the recognition event is November 22)

- ☐ Yes
- ☐ No
- ☐ Maybe

Comments:

Who is the best contact person (name and role)?

Name

Role

Telephone

Email

Which contact method is preferred?

- ☐ Telephone
- ☐ Email

Company

Street Address 1

Street Address 2

State

Zip Code

Can we schedule a time that I can help you get started?

BREAKDOWN OF BUILDING TYPES					
Bldg Type	Bldgs (#)	Bldgs (%)	Rentable Area (ft^2)	Rentable Area (%)	Average Size (ft^2)
Multi-Family	1774	46.5%	16,725,149	40.8%	9,428
Industrial/Flex	221	5.8%	3,816,246	9.3%	17,268
Commercial	1819	47.7%	20,428,591	49.9%	11,231

BREAKDOWN BY SPECIFIC BUILDING TYPE					
Bldg Type	Bldgs (#)	Bldgs (%)	Rentable Area (ft^2)	Rentable Area (%)	Average Size (ft^2)
General Retail	738	40.6%	5,422,700	26.5%	7,348
Office	355	19.5%	5,324,372	26.1%	14,998
Warehouse	205	11.3%	3,822,641	18.7%	18,647
Hotel	25	1.4%	797,570	3.9%	31,903
Other-Public Assembly	38	2.1%	536,047	2.6%	14,107
Hospital	4	0.2%	505,851	2.5%	126,463
K-12 School	15	0.8%	500,878	2.5%	33,392
Medical Office	77	4.2%	444,654	2.2%	5,775
Parking	8	0.4%	406,662	2.0%	50,833
Other-Storage	7	0.4%	385,123	1.9%	55,018
Other-AutoRepair	82	4.5%	359,219	1.8%	4,381
Supermarket	14	0.8%	340,889	1.7%	24,349
House of Worship	35	1.9%	307,918	1.5%	8,798
Other-Food Service	86	4.7%	289,070	1.4%	3,361
Senior Care Facility	25	1.4%	259,359	1.3%	10,374
Other-Auto Dealership	14	0.8%	180,711	0.9%	12,908
Bank-Financial Institution	17	0.9%	144,206	0.7%	8,483
Other	13	0.7%	143,508	0.7%	11,039
Other-Service	30	1.6%	126,048	0.6%	4,202
Other-Food Sales	18	1.0%	48,375	0.2%	2,688
Other-DayCareCenter	8	0.4%	38,503	0.2%	4,813
Residence Hall-Dormitory	3	0.2%	35,277	0.2%	11,759
Other-Public Order and Safety	2	0.1%	9,010	0.0%	4,505

BREAKDOWN BY 5,000 SQ FT SIZE CATEGORIES (COMMERCIAL)				
Size Class (ft^2)	Bldgs (#)	% Commercial Bldgs	Rentable Commercial Area (ft^2)	Rentable Commercial Area (%)
<5000	937	51.5%	2,502,134	12.2%
5000 - 9999	413	22.7%	2,832,055	13.9%
10000 - 14999	157	8.6%	1,862,558	9.1%
15000 - 19999	85	4.7%	1,460,372	7.1%
20000 - 24999	58	3.2%	1,275,474	6.2%
25000 - 29999	39	2.1%	1,052,131	5.2%
30000 - 34999	12	0.7%	380,106	1.9%
35000 - 39999	20	1.1%	742,115	3.6%
40000 - 44999	17	0.9%	720,732	3.5%
45000 - 49999	11	0.6%	511,381	2.5%
50000+	70	3.8%	7,089,533	34.7%

BREAKDOWN BY SIZE CATEGORIES (COMMERCIAL)				
Size Class (ft^2)	Bldgs (#)	% Commercial Bldgs	Rentable Commercial Area (ft^2)	Rentable Commercial Area (%)
<5000	937	51.5%	2,502,134	12.2%
5000 - 9999	413	22.7%	2,832,055	13.9%
10000 - 24999	300	16.5%	4,598,404	22.5%
25000 - 49999	99	5.4%	3,406,465	16.7%
50000+	70	3.8%	7,089,533	34.7%

BREAKDOWN BY SIZE CATEGORIES (COMMERCIAL OFFICE)				
Size Class (ft^2)	Bldgs (#)	% Commercial Bldgs	Rentable Commercial Area (ft^2)	Rentable Commercial Area (%)
<5000	158	44.5%	440,717	8.3%
5000 - 9999	72	20.3%	486,160	9.1%
10000 - 24999	73	20.6%	1,150,323	21.6%
25000 - 49999	29	8.2%	1,006,871	18.9%
50000+	23	6.5%	2,240,301	42.1%

GREEN BUILDINGS				
Size Class (ft^2)	Energy Star (#)	Bldg Type	LEED Certified (#)	Type
<5000	0	-	0	-
5000 - 9999	0	-	1	Other/Public Order and Safety
10000 - 24999	2	General Retail, Hotel	4	Other/DayCareCenter
25000 - 49999	0	-	0	-
50000+	1	Office	3	K-12 School, Office, Other
Total Commercial Area (Sq.Ft)		20,428,591	does not include multi-family or industrial	
Total Area Eco-Labeled (Sq. Ft)				
Percent Eco-Labeled				

BREAKDOWN BY NUMBER OF STORIES (OFFICE)			
Building Type	Stories (#)	Total Area (ft^2)	Buildings (#)
Office	1	748,050	104
Office	2	1,646,846	166
Office	3 - 4	1,890,198	69
Office	5 - 10	834,046	12
Office	>10	197,901	2

BUILDING CLASS BREAKDOWN FOR OFFICE BUILDINGS							
Bldg Class	Bldgs (#)	% Office Bldgs	% Commercial Bldgs	Rentable Area (ft^2)	% of Office Area	% Commercial Area	Average Size (ft^2)
A	1	0.3%	0.1%	250,000	4.7%	1.2%	250,000
B	101	28.5%	5.6%	2,729,998	51.3%	13.4%	27,030
C	253	71.3%	13.9%	2,344,374	44.0%	11.5%	9,266

BREAKDOWN BY 5,000 SQ FT SIZE CATEGORIES (OFFICE)					
Size (ft^2)	Bldg Class	Bldgs (#)	% Office Bldgs	Rentable Office Area (ft^2)	Rentable Office
<5000	A	0	0.0%	-	0.0%
5000 - 9999	A	0	0.0%	-	0.0%
10000 - 14999	A	0	0.0%	-	0.0%
15000 - 19999	A	0	0.0%	-	0.0%
20000 - 24999	A	0	0.0%	-	0.0%
25000 - 29999	A	0	0.0%	-	0.0%
30000 - 34999	A	0	0.0%	-	0.0%
35000 - 39999	A	0	0.0%	-	0.0%
40000 - 44999	A	0	0.0%	-	0.0%
45000 - 49999	A	0	0.0%	-	0.0%
50000+	A	1	0.3%	250,000	4.7%
<5000	B	20	5.6%	57,449	1.1%
5000 - 9999	B	15	4.2%	102,451	1.9%
10000 - 14999	B	10	2.8%	116,433	2.2%
15000 - 19999	B	10	2.8%	175,398	3.3%
20000 - 24999	B	13	3.7%	288,582	5.4%
25000 - 29999	B	7	2.0%	194,778	3.7%
30000 - 34999	B	1	0.3%	30,000	0.6%
35000 - 39999	B	5	1.4%	192,065	3.6%
40000 - 44999	B	3	0.8%	126,655	2.4%
45000 - 49999	B	2	0.6%	93,484	1.8%
50000+	B	15	4.2%	1,352,703	25.4%
<5000	C	138	38.9%	383,268	7.2%
5000 - 9999	C	57	16.1%	383,709	7.2%
10000 - 14999	C	28	7.9%	339,532	6.4%
15000 - 19999	C	6	1.7%	104,873	2.0%
20000 - 24999	C	6	1.7%	125,505	2.4%
25000 - 29999	C	4	1.1%	106,370	2.0%
30000 - 34999	C	1	0.3%	31,055	0.6%
35000 - 39999	C	4	1.1%	147,027	2.8%
40000 - 44999	C	2	0.6%	85,437	1.6%
45000 - 49999	C	0	0.0%	-	0.0%
50000+	C	7	2.0%	637,598	12.0%

QUICK LINKS

[ENERGY STAR® Portfolio Manager](http://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/use-portfolio-manager?s=mega) is a free, interactive, online tool for energy and water benchmarking, and is the tool of choice of local and state governments. <http://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/use-portfolio-manager?s=mega>

U.S Environmental Protection Agency's [ENERGY STAR® Guide to Energy Efficiency Competitions for Buildings & Plants](http://www.energystar.gov/buildings/sites/default/uploads/tools/Building_Competition_Guide_FINAL.pdf?1226-279d) is a useful resource for those developing competition programs. http://www.energystar.gov/buildings/sites/default/uploads/tools/Building_Competition_Guide_FINAL.pdf?1226-279d

[Institute for Market Transformation](http://www.imt.org/policy/policy-advocacy/benchmarking-communications) (IMT) is a key resource for any city developing benchmarking policy, but its [benchmarking communications](http://www.imt.org/policy/policy-advocacy/benchmarking-communications), including strategy and sample materials, is a valuable resource for voluntary programs as well. <http://www.imt.org/policy/policy-advocacy/benchmarking-communications>

[Building Rating.org](http://www.buildingrating.org/), a project launched by the [Institute for Market Transformation](http://www.imt.org/policy/policy-advocacy/benchmarking-communications) and the National Resources Defense Council, facilitates sharing of global intelligence and best practices, housing national and international benchmarking policies, reports and other resources. <http://www.buildingrating.org/>

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Description of Materials:

1. **Newsletter:** Downtown Berkeley Association; Fall 2013
2. **Newsletter:** Chamber of Commerce - CA AB 1103 compliance information
3. **E-Newsletter:** Oakland Downtown and Uptown Business Improvement Districts; Dec 2013
4. **Messaging:** Energy benchmarking for commercial buildings - Key messages for building owners
5. **Program description:** City of Boulder, Commercial Energy Building Pilot Program
6. **Press release:** City of Boulder, Commercial Energy Building Pilot Program; Sept 27, 2012
7. **FAQ:** City of Boulder, Commercial Energy Building Pilot Program
8. **Case study:** David Brower Center, Berkeley, CA; Dec 2013
9. **Case study:** Verity Credit Union, Seattle, WA
<http://www.seattle.gov/environment/case-studies.htm>
10. **Program flyer:** San Francisco 24x7 Energy Challenge; Spring 2010
11. **FAQ:** City of Berkeley, Energy Smart Awards Program; April 2013
12. **Messaging platform:** City of Berkeley, Energy Smart Awards Program; April 2013

*For the Downtown Berkeley Association Newsletter
Fall 2013*

Benchmarking Your Building – a Winning Proposition

Berkeley building owners and managers can get help complying with the AB 1103, California's Energy Benchmark Disclosure law *and* win an Energy Smart award from the City of Berkeley for proactively managing energy use. Beginning in 2014, the state law requires buildings over 10,000 square feet to disclose their EnergyStar benchmark score to prospective buyers, lessees and lenders. EnergyStar scores are available by registering for the free EnergyStar on-line software tool, Portfolio Manager. Through mid-January, the City of Berkeley's Energy Smart Award Program is available to help buildings register for the software and be eligible for an Energy Smart Award.

Energy Smart buildings in Berkeley will not only be AB 1103 compliance-ready, they get special recognition from the City at an invite-only award celebration hosted by East Bay Environmental Network (EBEN) and BOMA East Bay. For more information on the awards, contact Billi Romain at bromain@cityofberkeley.info.

Energy Smart Awards information available at the EBEN website
<http://ebenet.org/resources/upcoming-events/energy-smart-awards-program-how-does-your-building-rate-2/>

Info on AB 1103
http://www.energy.ca.gov/ab1103/rulemaking/documents/AB1103_Infographic.pdf

Are You in Compliance with California's New Energy Benchmarking Policy?

AB 1103 implementation begins January 1, 2014

If you own a non-residential building in Alameda County, you may soon have to comply with the California Energy Commission's energy benchmarking policy, AB 1103. The law requires owners of non-residential buildings to disclose their building's energy usage during all real estate transactions, including the sale, lease or financing of the entire building.

Owners will need to use the U.S. EPA ENERGY STAR Portfolio Manager tool to receive a Statement of Energy Performance Report. The Portfolio Manager compares the building's energy usage to similar buildings across the country and scores a building on a scale of 1-100 based on:

- Energy and water consumption
- Age of building
- Type of use(s)
- Operating hours
- Heating and cooling needs

Energy benchmarking is now a requirement, but it also benefits building owners – commercial buildings that consistently participate in benchmarking use 7 percent less energy over a three-year period, which can lead to cost savings. Additionally, studies have shown that rental prices for green office buildings are 3 to 5 percent higher than non-green buildings and selling prices of green buildings are 11 to 19 percent higher compared to non-green counterparts.

AB 1103 Implementation Schedule:

- On or after January 1, 2014, for a building with a total gross floor area measuring more than 10,000 square feet and up to 50,000 square feet.
- On or after July 1, 2014, for a building with a total gross floor area measuring at least 5,000 square feet and up to 10,000 square feet

Get ahead of these requirements by signing up for ENERGY STAR Portfolio Manager today and see how your building performs. For more information on the AB 1103 law, visit

<http://www.energy.ca.gov/ab1103/>.

To get started benchmarking your building, visit:

http://www.pge.com/en/mybusiness/account/diy/benchmarking.page?WT.mc_id=Vanity_benchmarking.

Oakland ENERGY SMART AWARDS Program

BENEFITS - Benchmark your building to:

- 1) Save ENERGY and MONEY
- 2) Manage your building's energy performance
- 3) Earn RECOGNITION (all participants earn an Energy Smart Award)
- 4) Stay ahead of the curve in complying with California state [benchmarking and disclosure laws](#)
- 5) Promote Oakland's reputation as one of the greenest cities in America

GET STARTED NOW – Follow these four steps:

- 1) Download and complete the attached application
- 2) Benchmark your building(s) with [ENERGY STAR® Portfolio Manager](#), a **free**, secure, online resource
- 3) Submit the application and your benchmarking report to info@bomaoeb.org by **January 17, 2014**
- 4) Join your colleagues to be honored at the [BOMA Energy Smart Awards Event](#) on **January 30, 2014**

DID YOU KNOW? Energy efficient buildings...

- Cost less to operate
- Have higher net operating incomes (NOI)
- Greater asset values
- Have higher rental and occupancy rates

IT PAYS TO BE GREEN...

Benchmarking data for energy-efficient buildings can also be used to achieve ENERGY STAR certification. According to a national study in 2008 by [CoStar Group](#), rental rates in ENERGY STAR-rated buildings command a \$2.40 per square foot premium over similar buildings and have 3.6% higher occupancy rates. Another study found that ENERGY STAR properties sold for 16% more than identical buildings without the ENERGY STAR.

Energy Benchmarking for Commercial Buildings

Key Messages for Building Owners

- - ✓ **Lowers energy consumption**
 - ✓ **Informs building owners about energy usage**
 - ✓ **Increased rents and property value**

Energy Benchmarking Benefits

- Eco-friendly buildings are more **attractive to potential buyers and renters**
 - Consumers are becoming more savvy about the environment, sustainability and the importance of a healthy working environment
- Energy-efficient buildings **command higher rents and sale prices**
 - Rental prices for green office buildings are **3 – 5 percent higher than non-green buildings** and selling prices of green buildings are **11 - 19 percent higher compared to non-green counterparts** (Nils Kok, April 2013)
 - Energy efficient buildings use fewer resources and can be cheaper to operate
- Benchmarking provides investors with information about their commercial real estate portfolio, making them more likely to continue investing in energy-efficient buildings
- Prepare for the California state law (AB 1103) that will require benchmarking when a building is sold, leased or refinanced.
- The benchmarking process is free, there's nothing but upside to have your building analyzed

What is energy benchmarking?

- Benchmarking is the process of using the U.S. Environmental Protection Agency's (EPA) [ENERGY STAR Portfolio Manager](#), an interactive online tool that enables building owners to analyze and track their energy and water usage.
- Benchmarking allows owners to gauge their building's performance against others in the marketplace.
- Approximately 20 different states, cities and municipalities have benchmarking laws.
 - California's law, [AB1103](#), set to go into effect in January 2014, requires public disclosure of benchmarking before a non-residential building can be sold, refinanced or leased.

Why is benchmarking needed?

- Similar to the mile-per-gallon comparison to measure vehicle efficiency, **benchmarking creates standardized metrics** to measure commercial building efficiency.
- There are **4.9 million commercial buildings** in the United States **consuming almost 20 percent of the country's energy**. (National Real Estate Investor, April 2013)
- Commercial buildings that consistently participate in benchmarking **use seven percent less energy over a three-year period**. (Energy Star Survey, 2012)

How is benchmarking done?

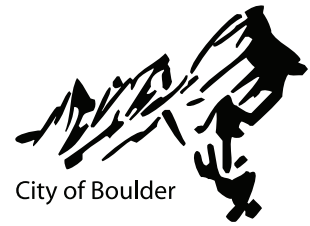
- The U.S. Environmental Protection Agency's [ENERGY STAR Portfolio Manager](#) scores a building on a scale of 1-100 based on:
 - Energy and water consumption
 - Age of building
 - Type of use(s)
 - Operating hours
 - Heating and cooling needs

Online Resources

- [ENERGY STAR Portfolio Manager](#)
 - Learn more about the process of benchmarking and the tools needed to get started
 - Sign up to use the ENERGY STAR Portfolio Manager to have your building assessed
- [PG&E Energy Performance Benchmarking](#)
 - Step-by-step resources on beginning the benchmarking process including on-demand benchmarking webinars, hands-on workshops and FAQs
 - Information on California Energy Disclosure Program AB1103 and the schedule for compliance for non-residential building owners

CITY OF BOULDER

Benchmarking Pilot Program for Commercial Buildings



The City of Boulder is focusing on a commercial energy efficiency strategy to help Boulder's existing commercial buildings become more energy efficient. The next step in the strategy is to launch an energy benchmarking (or energy rating) pilot program in order to better understand public and private sector commercial building energy performance.

The benchmarking pilot program will include a cross sampling of Boulder's commercial buildings; different sizes and uses. The pilot will inform participating building owners, tenants and the city on how existing commercial buildings use energy. It will also allow building owners and tenants to understand their building's energy performance and identify areas where energy efficiency improvements could help them save money.

Pilot Program Objectives

- To encourage the benchmarking and disclosure of energy use data for a variety of commercial buildings in Boulder.
- To gain experience benchmarking commercial energy use with an energy rating tool that is becoming the national standard throughout the country, the U.S. EPA's ENERGY STAR Portfolio Manager.™
- To help inform the development of a benchmarking and disclosure program by:
 - Benchmarking a cross-sample of commercial building sizes and types;
 - Evaluating the time and resources needed to benchmark commercial buildings; and
 - Gaining experience in accessing whole building energy use data.

Pilot Program Design

- The pilot program will subsidize energy coaches* to help building owners obtain energy use data for their buildings, rate their buildings' energy performance using Portfolio Manager™, and report that data.
- Energy performance data for the benchmarked buildings will be reported to the city.

**Energy Coaches are trained professionals that have received a certification in commercial building systems, including how to use the EPA's ENERGY STAR Portfolio Manager™ to track, manage and recommend cost-effective improvements*



Pilot Program Outcomes

Data collected will help the city to understand:

- The sizes and uses of buildings that provide the best opportunity for targeted energy efficiency programs.
- The time, effort and resources it takes a building owner to benchmark their building's energy performance.
- The access and format of building energy use data.

If interested in participating in the pilot and to receive FREE energy tracking and rating services, please contact Anna Gerstle at gerstlea@bouldercolorado.gov, 303-441-3017 by Nov. 30.

Commercial Energy Efficiency Strategy (CEES)

On May 22, Boulder City Council discussed moving forward with a three-part Commercial Energy Efficiency Strategy that includes:

- 1) existing and/or expanded voluntary, incentive-based programs;
- 2) development of a program that could require benchmarking and annual reporting; and
- 3) eventual consideration of prescriptive energy efficiency measures and/or performance standards.

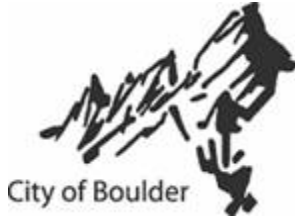
The results of the benchmarking pilot program will inform the second part, which is the consideration of a benchmarking and disclosure program for commercial buildings.

Next Steps in the CEES are focusing on:

- Continuing to encourage businesses and commercial building owners to participate in voluntary programs, services and incentives such as the “10 for Change” program and EnergySmart services.
- Gathering and reporting more information on the energy performance of existing buildings, i.e. benchmarking and disclosure efforts detailed above. This practice is playing out in cities across the country. Boulder will pilot it in the fall of 2012 and consider a benchmarking and disclosure program in 2013.



***For best results, view in HTML**



NEWS

Thursday, Sept. 27, 2012

Media Contacts:

Jody Jacobson, Public Works, 303-441-3122

Sarah Huntley, Media Relations, 303-441-3155

www.bouldercolorado.gov

City launches pilot program to rate the energy performance of existing commercial buildings

The City of Boulder is launching a “commercial building energy benchmarking pilot program” to help inform development of a standard procedure for rating the energy performance of existing commercial buildings in the community. The pilot will inform building owners, tenants and the city on how existing commercial buildings use energy and identify areas where energy efficiency upgrades could help specific businesses or property owners save money. The pilot program began this month and will run through December.

Participating commercial building owners and businesses will be asked to collect energy use data and rate their energy performance in the [ENERGY STAR Portfolio Manager](#)[™], a national standard energy rating tool developed by the U.S. Environmental Protection Agency. Participants will then share the results with the city. A variety of commercial building types and sizes will be included in the pilot to provide an accurate estimate of the time and resources necessary to participate. This will help the city determine the most useful kind of energy data to collect and how to simplify the data-sharing process.

Depending on the results of the pilot program, the city will consider a benchmarking program next year that would require commercial building owners to rate their building’s energy performance and report it to the city.

“The commercial sector accounts for nearly 60 percent of Boulder’s greenhouse gas emissions,” said Business Sustainability Specialist Elizabeth Vasatka, “so involving the business community in energy efficiency initiatives is key to achieving Boulder’s long-term emission reduction goals.”

“Acquiring this energy use data will assist the city in designing programs and outreach efforts that will have the greatest economic impact to the business community,” continued Vasatka. “The city already offers significant incentive-based programs to the business community to encourage energy efficiency. This pilot will benefit participating building owners in that they will learn how their buildings use energy compared to buildings of similar size and type. It will also help the city figure out the best way to use the benchmark data so that, eventually, measuring results community-wide will be simpler.”

More than 1,300 businesses or commercial building owners have participated in the city's energy efficiency programs and services.

Commercial building owners that are interested in participating in the pilot program will receive free assistance from an independent energy coach to evaluate their energy use data and rate their buildings' energy performance. Establishing benchmarks will allow commercial building owners and tenants to identify opportunities to save money through energy efficiency improvements.

To find out if your building is eligible for the pilot or for more information about the program and the city's Commercial Energy Efficiency Strategy, contact Business Sustainability Specialist [Elizabeth Vasatka](#) at 303-441-1964 or visit www.bouldercolorado.gov/cap.

-- CITY --

Commercial Building Energy Rating and Reporting Pilot Program Frequently Asked Questions

Thank you for volunteering to participate in the City of Boulder's Commercial Energy Rating and Reporting Pilot Program, which involves rating a whole building's energy performance with a standard rating tool. The most commonly used tool in U.S. cities today is the Environmental Protection Agency's ENERGY STAR Portfolio Manager™ software.

Your assigned energy coach will assist you in the process of rating and reporting your building's energy performance through Portfolio Manager™, which is a free, online, energy and water management tool. This process will involve acquiring data specific to your building's use type. The energy coach will walk you through the rating and reporting process, gather and input the data into Portfolio Manager™, provide you and the city with the report of your building's energy performance generated by Portfolio Manager™ and conduct a short survey with you, and any tenants involved.

Why is the city doing this pilot?

Boulder's commercial buildings account for nearly 60 percent of the community's greenhouse gas emissions. As part of the city's Climate Action Plan, a commercial energy efficiency strategy has been developed to achieve greater gains in helping businesses and buildings to become more energy efficient. Rating commercial buildings' energy performance is a significant part of the strategy and is useful for building owners to know their performance score. The city wants to help building owners and businesses to identify cost-effective energy efficiency improvements that can reduce energy use and saves money.

What are the benefits to me (the building owner) for rating my building?

You cannot manage what you don't measure. Rating the energy performance of your building establishes a starting reference point to help you understand your building's energy use and is the first step towards making informed decisions about energy-saving improvements that can reduce costs. Buildings that fall into the established Portfolio Manager™ use types will receive an ENERGY STAR rating. This rating, based on a scale of 1-100, is relative to a national survey of buildings similar to yours. Buildings that do not fit one of the pre-existing use types will receive an Energy Use Intensity (EUI) score. An EUI score represents the energy consumed by a building relative to its size and can also be used for rating and reporting.

What if my building has a low rating?

A low rating would indicate opportunity for improvement. The next step would be to evaluate the cost/benefit of measures you could take to increase your building's or businesses' energy efficiency opportunities and learn what incentives may be available through local governments and utility providers to help offset the cost of improvements. Building owners and managers recognize the value that energy efficient buildings can have on improved sale prices, lease rates and terms, as well as comfort.

How will the city use the energy rating data?

This pilot will help the city to better understand the rating and reporting process and the use of Portfolio Manager™. It will also allow the city to evaluate the commercial energy data gleaned from the pilot and identify trends from a broad sample of building sizes and uses. The city will then use this information and the outcomes of a robust stakeholder process to inform City Council on the next steps in developing a rating and reporting program for existing commercial buildings throughout Boulder.

Will the energy rating information be available to the public?

Individual building data will not be available to the public. Various sets of combined, aggregate data will be presented to City Council and will be available to the public in council agenda packets; however, no identifying information will be included in the aggregate forms.

What is the purpose of the building owner survey?

This survey will help the city better understand the time, effort and resources it takes a building owner to rate their building's energy performance by using Portfolio Manager™. The city's intent is to understand and facilitate the rating and reporting process; making it more streamlined, low-cost and useful for the building owner.

The David Brower Center

Built Green and Benchmarked to Stay Green



The David Brower Center was built in 2008 to serve as a vibrant meeting place to inspire and bring together people committed to environmental and social action. Named after David Brower, a Berkeley native who pioneered the modern environmental movement, the Brower Center offers education and arts programs, conference and event facilities and high-quality office space for environmental nonprofits—all in the greenest building in the City of Berkeley.

While the Brower Center is green from the ground up, boasting a LEED Platinum rating (the highest award given by the U.S. Green Building Council Leadership in Energy and Environmental Design program), the Brower Center is constantly seeking out new ways to improve the efficiency of their building operations. Specifically, the Brower Center wanted to assess the operational efficiency of their on-site eatery, Gather Restaurant, which was consuming large quantities of electricity and water, particularly during off hours when the restaurant was closed. Beginning in August 2013, the Brower Center participated in energy benchmarking and conducted energy efficiency upgrades, improving its already state-of-the-art building energy and saving thousands of dollars per year in utilities.

As a cutting-edge facility at the forefront of green building, the Brower Center was built to be 50 percent more efficient than current code requirements, featuring a variety of energy efficient building techniques including: a vast solar photovoltaic array that doubles as a sun shade device; high-efficiency lighting with automatic controls to limit use; and exterior and interior materials that ensure healthy air quality and minimize environmental impacts.

BENCHMARKING

On top of their excellent track record of energy efficiency, the Brower Center pursued an energy benchmarking assessment to determine how they could enhance their already strong green building foundation.

In an effort to improve the performance of the 45,000 square foot multi-use building, the Brower Center participated in the City of Berkeley's Energy Smart Energy Benchmarking program, which offers energy assessments and assistance with implementing energy efficiency measures. Energy benchmarking tracks

a building's energy usage, water consumption and greenhouse gas emissions, and compares the building's performance against similar buildings. Using the EPA ENERGY STAR Portfolio Manager tool, the Brower Center was able to better understand how they were using energy, compare their energy usage against similar-sized buildings in similar climates and uncover areas for added improvement.

ENERGY EFFICIENCY UPGRADES

The Brower Center is a mixed-use building with a restaurant on the ground floor and office space above it. The multi-use nature of the building presented a unique challenge for benchmarking, as many office buildings similar to the Brower Center, with which it would be compared, do not have the high-energy requirements of 24-hour refrigeration and air conditioning that come along with a running restaurant. In fact, with data gleaned from the benchmarking process, the Brower Center determined that the area ripest for efficiency improvements was their highly-regarded artisanal restaurant, Gather.

Gather prides itself in being a sustainably-focused restaurant and specializes in procuring the freshest seasonal ingredients from local farms and creating dishes from scratch. This dedication to a menu of handcrafted dishes means that much of the preparation of the food is done in-house and requires energy and water needs beyond the normal office hours of the rest of the building. To bring down the cost of continuously running kitchen equipment, the Brower Center invested in ENERGY STAR certified appliances and improved the efficiency of their electrical equipment by using timer controlled settings on all kitchen appliances.

In addition to benchmarking energy use, the Brower Center entered water use data into Portfolio Manager. Once they were able to analyze water usage and identify savings opportunities, they installed diffusers and low-flow appliances, including numerous faucets, throughout the entire building. The upgrades made to their water system brought down water usage from 2 gallons per minute to 1 ½ gallons per minute.



To further enhance their energy efficiency, the Brower Center will replace all exterior building lights with LED bulbs in early 2014. While their current lighting system isn't a significant energy expenditure, true to the Center's mission, they are pursuing every opportunity to ensure that the building is as energy efficient and environmentally friendly as possible.

OUTCOME

As a result of benchmarking, the Brower Center will save thousands of dollars a year from energy improvements, above and beyond the Center's current efficiency, reducing their overall energy consumption and keeping energy usage consistent throughout the day. In addition, the Brower Center's website now features a real-time Building Dashboard. This provides the Brower Center's 175 on-site employees and the general community with access to up-to-the-minute building performance data, including electricity consumption, solar production, water and rainwater consumption and natural gas production. The Brower Center will also be honored for their benchmarking effort at an awards ceremony on Thursday January 30th.

Participating in the benchmarking program and using the ENERGY STAR Portfolio Manager allows the Brower Center to compare energy usage and measure efficiency to identify areas for improvement, so that they can continue to set an example not only among similar buildings in the Bay Area, but as a leader across the entire green building industry.

BENCHMARKING:

BANKING ON ENERGY EFFICIENCY

Sustainability has long been a top priority for Verity Credit Union. Over the years, the financial institution has embarked on a number of green initiatives, from offering its members discounted loans for fuel-efficient cars and green homes, to the construction of its headquarters, which received an award for efficient design in 1996.

So when Verity's Facilities Manager Stephen Chandler set out to benchmark the energy performance of the building for the first time in 2008, he fully expected it would rate pretty high. He was surprised to find out that the building performed below average compared to other similar buildings. As it turned out, Verity's energy needs had increased over time, plus the building's heating and cooling system needed fine-tuning. Chandler would not have known the building had room for improvement if not for using the EPA's free benchmarking tool, **ENERGY STAR® Portfolio Manager**.

Armed with this knowledge, Chandler set out to discover how Verity could increase the energy efficiency of the building and improve the energy-use habits of those working inside – while continuing to provide a high level of service to its members. From upgrading lighting and fine-tuning the heating and cooling system, to modernizing the data center, and encouraging employees to power down their computers at the end of the day, in just five years Chandler took the building from an energy score of 48 to a 74 – meaning the building now performs nearly 50 percent better than the average comparable building. He is now working on a plan to take the building to a 75 rating or higher, which would qualify it for **ENERGY STAR** status.

SAVINGS SPOTLIGHT:

Since 2008, Verity Credit Union has reduced its annual energy consumption by 20% — enough energy savings to power nearly 12 Seattle homes annually.

Verity Credit Union Headquarters Stats:

Address	11027 Meridian Ave North, Seattle
Year Built	1996
Size	38,000 sq. ft. (plus 16,000 sq. ft. parking garage)
Type of Use	Retail banking, office space, data center

Verity Credit Union Headquarters
Seattle, WA



“Energy bills only tell you so much. Benchmarking lets you see trends and how your building compares with others. As a facility manager, you should be looking for ways to lower costs, and being energy efficient is a way to do that which benefits your company and its customers.”



STEPHEN CHANDLER
Facilities Manager

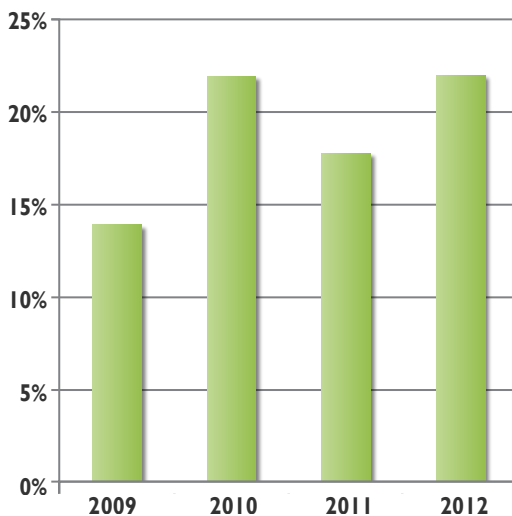


Energy savings continued on back ▶

Credit Union Knows What a Good Investment Looks Like

In 2008, Verity's board of directors made a commitment to stop wasting energy and reduce the credit union's carbon footprint. To do that, they needed to know where it "stood" in terms of energy use and waste in order to know where they wanted to go from there. That's where benchmarking came in. With benchmarking, the company is able to track its energy use on an annual basis and find ways to save energy and money.

Average Annual Cost Savings



NOTE: Savings based on estimated yearly energy costs without energy efficiency upgrades less actual energy costs. Does not include capital costs and weather.

Energy-saving upgrades at Verity's headquarters:

- Installed motion sensors in offices and conference rooms that turn lights off in unoccupied rooms.
- Installed high-efficiency lights in garage.
- Rebalanced air conditioning and heating systems.
- Replaced old servers with new high-efficiency models and moved some data center operations onto virtual servers.
- Installed a motion regulator on the soda vending machine so cooling cycles shorten when no one is around.
- Shut down desktop computers at night and over the weekend.

Many of these improvements paid themselves back in two years or less, such as the heating and cooling optimization. Verity also took advantage of utility rebates for several of these upgrades, further reducing the payback period.

Verity's mission to improve its energy performance doesn't stop here. In the future, Chandler hopes to do even more, such as increasing LED lighting and using an outside air economizer for cooling the data center to further bring down energy use and costs, and hopefully earn the building an **ENERGY STAR**.

**GET STARTED
SAVING
TODAY:**

Owners of all commercial and multifamily buildings 20,000 sq. ft. or larger are required to annually benchmark and report energy performance to the City of Seattle.

Get a leg up on the competition and benchmark your building today using the EPA's free benchmarking tool.

For more information on rebates and other financial assistance or energy upgrades to buildings, visit your local utility website:

- Seattle City Light: seattle.gov/light/conserve
- Seattle Steam: seattlesteam.com
- Puget Sound Energy: pse.com/savingsandenergycenter

Visit the City of Seattle website to learn more about the city's benchmarking policy and how to get started: seattle.gov/energybenchmarking

Questions? Email EnergyBenchmarking@seattle.gov or call (206) 727-8484



SEATTLE OFFICE OF
Sustainability & Environment



San Francisco Earth Hour 24x7 Energy Challenge

FOR COMMERCIAL BUILDINGS IN SAN FRANCISCO

Earth Hour is a call to action — to simultaneously switch off all non-essential lights in San Francisco for one hour. Together we will demonstrate our profound power to collaborate to save energy, save money, reduce greenhouse gas emissions, and even conserve wildlife. **Your partnership is critical.** Past participants have realized opportunities to engage employees, tenants, and building management, extending the impact beyond one hour of intense focus and saving energy and money during the remaining 8759 hours of the year.

TAKE ACTION - Earth Hour - March 28

Turn-off all non-essential interior and exterior lighting on Saturday, March 28, 2009 from 8:30-9:30 PM.

NEXT STEP - Take the 24x7 Energy Challenge

1. **Assess energy performance:** Enroll your property in ENERGY STAR® Portfolio Manager to calculate and track building energy use online. Get an unbiased benchmark of your energy performance compared to similar buildings in the area. www.energystar.gov/benchmark
2. **Automate energy tracking:** Enable Pacific Gas and Electric Company's (PG&E) no-cost Automated Benchmarking Service to keep your Portfolio Manager records updated. <http://www.pge.com/benchmarking/>
3. **Improve your Portfolio Manager energy benchmark** by March 2010 to receive prizes and recognition!

All participants will receive publicity for their efforts. The most energy efficient buildings in the city – as well as those that make the greatest gains in performance – will be awarded prizes and public recognition from Mayor Gavin Newsom.

Learn more – www.sfenvironment.org/247

Benefits

1. **Earn recognition!** Your participation will be advertised and promoted.
2. **Reduce energy costs!** Energy dollars go straight to the bottom line.
3. **Bonus – Early compliance!** By 2010, disclosure of benchmarks will be required in California real estate transactions.
4. **LEED EBOM!** – Benchmarking is a step toward LEED for Existing Buildings certification.

San Francisco Earth Hour 24x7 Energy Challenge is a Partnership of Mayor Gavin Newsom and



SF Environment
Our home. Our city. Our planet.
A Department of the City and County of San Francisco



Pacific Gas and Electric Company®



BUSINESS COUNCIL ON CLIMATE CHANGE



USGBC NORTHERN CALIFORNIA



Prize Categories

Prizes will be awarded in April 2010. Recognition and free advertising will be awarded to leaders among each category:

- Office
- Hotel
- Retail
- Hospital
- Medical office
- Supermarket
- School

The Kilowatt Cup

Jury-awarded trophy recognizing superior achievement in energy management, overcoming unique obstacles, and emphasizing energy savings through no- and low-cost practices.

Greatest Improvement

Awarded for the greatest percentage gain in Energy Performance Rating in one year.

Most Efficient

Awarded to buildings with the highest Portfolio Manager energy performance rating.

General Recognition

All participants will be awarded certificates of participation and receive promotion in San Francisco media.

Judging

Awards will be determined by data from the final Energy Performance Rating generated by Portfolio Manager. Applicants for the Kilowatt Cup must also submit a narrative explaining their achievement and obstacles overcome

Privacy

Building energy data are private between building owners, PG&E, and EPA's confidential Portfolio Manager. Eligibility for prizes requires confidentially sharing energy information with contest organizers for verification. Only winners, trends, and anonymous rankings will be shared publicly.

Note that a new state law requires disclosure of energy benchmark data in all commercial property transactions as of January 2010, including sale, building lease, and lending. (California Public Resources Code 25402.10 – enacted from Assembly Bill 1103.)

Contest Rules

Any commercial building that commits to turning out the lights on March 28 and using the free online tools to track and manage energy use is welcome to partner. However, to be eligible for awards, properties must meet the following requirements:

- Located in San Francisco.
- Benchmark the building's energy use in Portfolio Manager, ENERGY STAR's free online tool: www.energystar.gov/benchmark.
- Participants must enter energy use data for 24 consecutive months, beginning with the March 2008 billing cycle and ending in February 2010. The easiest way is to enroll in PG&E's Automated Benchmarking Service. www.pge.com/benchmarking
- By 3/30/2010, participants will be required to submit Energy Performance ratings using the ENERGY STAR Portfolio Manager "Share" feature.
- All meters for a building must be entered into Portfolio Manager. Building owners and operators may enter multiple buildings, but each building must be entered as a separate facility within your Portfolio Manager account.
- Contest organizers will be allowed to verify submittal data and inspect properties to confirm results of winners.

Enroll Now:

Property Contact Name:	Title:
Email:	Phone:
Company:	Building Name or Address:
Building Address: <i>If enrolling a portfolio: Please complete this form only once for a representative facility, and attach contact info for a responsible manager or engineer for each facility so that we can coordinate turning off lights on March 28.</i>	
To enter: Fax (415)-554-6393 or email this form to Gabriella.Canez@sfgov.org	
Questions or Comments? The San Francisco Department of Environment, PG&E, BOMA and the EPA are available to help you become an Earth Hour 24 x 7 Partner. For specific questions on how to begin or any part of the process, call our Earth Hour 24/7 Energy Challenge hotline: Gabriella Canez (415) 355-3784.	



Smart Energy Awards

Frequently Asked Questions

Berkeley business owners: How does your building rate?

To learn more about how effectively their buildings use energy, owners and managers of commercial and public buildings throughout Berkeley are participating in the City's Smart Energy Awards. The awards program recognizes the environmental management leadership of those who take the first step to better energy efficiency by benchmarking their buildings. Top energy efficiency honors go to buildings with the best energy performance ratings. The awards support the City's Climate Action Plan, which has set bold goals for reducing energy waste and cutting greenhouse gas emissions.

Why is Berkeley holding the Smart Energy Awards?

The City of Berkeley spotlights building owners and operators who benchmark to **raise awareness about smart energy management and honor progress and excellence in energy efficiency**. In Berkeley, **optimizing energy efficiency of commercial buildings is essential** as the City strives to meet its Climate Action Goals, which call for significant reductions in greenhouse gas (GHG) emissions from energy use.

Buildings now account for about one-third of all GHG emissions in Berkeley. To make it easier to manage and reduce their energy use, the City's Office of Energy and Sustainable Development encourages Berkeley's business owners to benchmark their buildings with the ENERGY STAR® Portfolio Manager benchmarking tool. Top energy efficiency honors go to buildings that show the best energy performance ratings.

- **What is the Climate Action Plan?** The City of Berkeley's [Climate Action Plan](#) was set in motion by voters concerned about greenhouse gas levels in Berkeley. Per Measure G, the City is planning for an 80% reduction in GHG levels between the years 2000 and 2050. On the way to this goal, the City is committed to reducing GHG emissions 33% below 2000 levels by the year 2020, which equates to about a 2% reduction per year communitywide.
- **How does AB1103 fit in?** AB1103, the Nonresidential Building Energy Use Disclosure Program, requires the disclosure of energy use data and ENERGY STAR® Energy Performance Scores for nonresidential buildings in California on a staged compliance schedule that begins July 1, 2013. Benchmarking now with Portfolio Manager helps building professionals stay ahead of the curve. Visit the California Energy Commission at www.energy.ca.gov/ab1103/ for more details.



What is benchmarking, and why is it important?

Benchmarking is the first step to getting control of building energy use by letting owners and facilities managers know where they stand on energy performance compared to other buildings. Buildings that benchmark using the ENERGY STAR® Portfolio Manager online tool are rated on a 1-100 scale providing apples-to-apples comparisons with the energy performance of similar buildings in similar climates across the country. Whether you own, manage, or hold properties for investment, Portfolio Manager can help set investment priorities, identify under-performing buildings, verify efficiency improvements, and lead to EPA recognition for superior energy performance. Specifically, benchmarking lets owners and operators:

- Track how much energy a building uses and compare this rating with the ratings of similar buildings in similar climates
- Identify whether your building is high performing or could benefit from improvements
- Set energy/cost saving priorities and monitor progress.

Does benchmarking really save energy costs?

Yes! According to the U.S. Environmental Protection Agency (EPA), buildings that track and manage their energy use consistently with Portfolio Manager have achieved **average energy savings of 2.4% per year, and energy savings lead directly to lower utility bills**. A 500,000-square-foot office building that reduces energy use 2.4% for three consecutive years can save \$120,000 in cumulative energy costs and see an increase in asset value of over \$1 million.

More fast facts from the EPA about energy savings:

- Portion of energy in buildings used inefficiently or unnecessarily: **30%**
- Amount of money that would be saved if the energy efficiency of commercial and industrial

buildings improved by 10%: **\$20 billion**

- Amount of greenhouse gas emissions that would be reduced if the energy efficiency of commercial and industrial buildings improved by 10 %: **equal to the GHG emissions produced each year by every vehicle registered in the state of California** (about 30 million vehicles)

Who is eligible to participate in the Smart Energy Awards program?

All commercial and public buildings in the City of Berkeley are eligible to participate in the Smart Energy Awards program.

Why should I sign up for the Smart Energy Awards competition?

The Smart Energy Awards program lets you know where you stand on energy performance and can help you:

- Save energy and money on utility bills
- Improve a building's energy efficiency and benefits to tenants and employees
- Lower greenhouse gas emissions within the City of Berkeley.

All participating buildings and owners will be publicly recognized, and the highest achieving buildings will be honored with energy excellence awards and receive:

- Public recognition by industry peers and state and local officials at a party and ceremony in the fall
- An Award Window Decal announcing the building's achievement to tenants and customers
- Special Notice on www.LocateInBerkeley.com, Berkeley's premier commercial listing service

How can I sign up for the Smart Energy Awards competition?

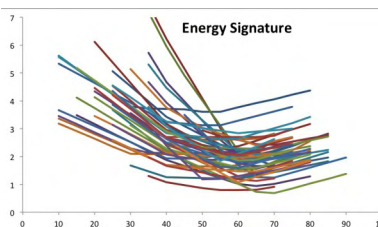
To get started, **you must benchmark your building with ENERGY STAR® Portfolio Manager**,

an online tool. Here's how to ensure your eligibility:

1. Register your building with Portfolio Manager at www.energystar.gov
2. Sign up with PG&E's Automated Benchmarking Service (ABS) at www.pge.com/benchmarking/
3. Enter your building's information into Portfolio Manager and generate a "Statement of Energy Performance" report
4. Fill out and sign the City's simple application www.cityofberkeley.info/benchmarking_buildings/
5. Submit the application and "Statement of Energy Performance" report to greenbuilding@cityofberkeley.info by **DATE**



provides the next step to energy efficiency by diagnosing specific areas for improvement. The FirstView software tool, developed by the nonprofit New Buildings Institute, analyzes monthly utility bills, automates system-level diagnostics and allows for peer-building comparisons. FirstView uses billing



data and basic building characteristics to generate an energy signature and segment a building's energy use to determine when

equipment and systems may not be operating optimally. The FirstView report goes beyond benchmarking ratings by providing recommendations managers can use to target investigations and fix problems.

Can Smart Energy Awards participants get additional actionable feedback with FirstView?

Yes. Because benchmarking is only the first step, participants in this year's Smart Energy Awards program will receive a free FirstView software analysis of their building's energy performance. After a building has been benchmarked, FirstView



Testing of FirstView was funded in part by the California Public Interest Energy Research (PIER) Program through the California Energy Commission. The City of Berkeley will work with StopWaste to conduct the FirstView analysis for Smart Energy Awards program participants.

Who were last year's award winners?

In November 2012, these **26 energy efficiency leaders** were recognized for their dedication to environmental stewardship:

Alta Bates Summit Medical Center	Berkwood Hedge School	Netivot Shalom
Ashby Stage	Civic Center, City of Berkeley	Safeway
Bancroft Hotel	David Brower Center	Trumer Brauerei
Bayer Healthcare	Design Community & Environment	University California at Berkeley
Berkeley Chamber of Commerce	Ed Roberts Campus	Wareham Development
Berkeley City College	LJ Kruse Plumbing	2150 Shattuck
Berkeley Food and Housing Project	Lawrence Berkeley Labs	2530 San Pablo Avenue
Berkeley Unified School District	Metro Lighting	
Berkeley Repertory Theater	Meyer Sound	

Learn More: For more information and links to resources, please see Smart Energy Awards program at www.cityofberkeley.info/benchmarking_buildings/ or contact Billi Romain, Sustainability Coordinator at bromain@cityofberkeley.info.



Smart Energy Awards

Messaging Platform

OVERVIEW

This Messaging Platform has been prepared to provide guidance on outreach efforts in support of the city of Berkeley's Smart Energy Awards program. **The city is seeking 100 building owners and managers to participate in this year's awards competition.** To achieve this goal, awareness of the Smart Energy Awards program must be raised throughout the city and in other targeted Alameda County communities.

BACKGROUND

In 2013, the city of Berkeley will hold its Second Annual Smart Energy Awards to recognize owners and operators of commercial and public buildings for their energy management leadership. This past November (2012), 26 energy efficiency leaders were honored by industry peers and state and local officials for taking a first step toward energy efficiency by benchmarking the energy used by their buildings with the ENERGY STAR® Portfolio Manager rating tool.



This free, online tool, developed by the U.S. Environmental Protection Agency (EPA), tracks and assesses a building's energy consumption. Benchmarking enables building owners and managers to determine the energy efficiency of their operations and make informed management and investment decisions. Buildings that track and manage their energy use consistently in Portfolio Manager have achieved average energy savings of 2.4% per year, according to the EPA, and energy savings lead directly to lower utility bills.

This year, in addition to benchmarking with Portfolio Manager, each building entered in the Smart Energy Awards program will receive a diagnostic analysis from New Buildings Institute (NBI) using the FirstView software tool. FirstView serves as the next step toward energy efficiency by providing building owners and managers with actionable feedback. FirstView quickly generates information about whether a building's energy performance is on track or needs improvement. Tested on thousands of

David Brower



Rosa Parks Elementary



Berkeley Civic Center



AUDIENCE ASSESSMENT

buildings on behalf of the U.S. Green Building Council (USGBC) and others, FirstView uses monthly billing data and basic building characteristics to generate meaningful and actionable feedback about system level energy performance, and diagnoses opportunities for improvement.

Outreach in support of the Smart Energy Awards program is primarily directed toward building owners and managers. This audience is in the best position to 1) determine why and how to participate in the benchmarking program; and 2) take energy-saving actions in response to benchmarking and FirstView feedback. In order to reach these primary decision-makers, the outreach effort is also directed toward policymakers, business leaders and trade associations, energy/environment-focused NGOs and the general media. These secondary targets are in a position to share information with and/or influence building owners and managers.

A trade media contacts list has been developed for the target audiences described below.

Building Owners and Facilities and Property Managers

All commercial and public buildings in the city of Berkeley are eligible to participate in the benchmarking program. Building owners, property managers and facilities staff are the primary target audience for information about the city's benchmarking program and Smart Energy Awards. Facilities professionals and property managers are in a position to make changes to the ways in which buildings use energy, and are the people most likely to benchmark a building, review actionable feedback and implement energy-saving changes. Communications should emphasize the ratings competition (e.g., "How does your building rate?"), potential energy-cost savings and the opportunity to receive recognition through the Smart Energy Awards program.

Policymakers and Community Leaders

Local government representatives have an opportunity to share information with community leaders and constituents about the city's efforts to increase attention to energy efficiency in commercial buildings through benchmarking and feedback. Policymakers, especially those involved with energy management and climate change issues, may be in a good position to encourage participation in this process. By introducing the Smart Energy Awards program to the larger community, policymakers and community leaders can also increase interest in and

Building owners, property managers and facilities staff are the primary target audience for information about the city's benchmarking program and Smart Energy Awards.

Local, nonprofit entities focused on energy efficiency and environmental issues ... could support the city's efforts to promote benchmarking and honor benchmarked buildings by raising awareness of the Smart Energy Awards program with their memberships and the community as a whole.

support for the competition citywide. Communications should emphasize benefits to the city and the business community as a whole, potential energy cost savings and the opportunity to receive recognition through the Smart Energy Awards program.

Business and Trade Associations

In order to raise awareness about benchmarking, outreach efforts should target business leaders to engage those who serve as models for others within the community. To get the word out about benchmarking and the Smart Energy Awards program, it will be necessary to connect with chambers of commerce, improvement districts, and business and trade associations; these groups can share information about the program with their memberships. Communications should emphasize potential energy cost savings, the opportunity to receive recognition through the Smart Energy Awards program and the upcoming benchmarking requirements of AB1103.

NGOs

Berkeley and the East Bay are home to a number of local, nonprofit entities focused on energy and environmental issues such as the East Bay Environmental Network, sponsors of last year's awards program. These NGOs could support the city's efforts to promote benchmarking and honor benchmarked buildings by raising awareness of the Smart Energy Awards program with their memberships and the community as a whole. Communications should emphasize the potential reductions in citywide greenhouse gas emissions that can result from increased participation in the program, and the upcoming benchmarking requirements of AB1103.

Community Media

While the Smart Energy Awards program is primarily directed toward building owners and managers, an interested community potentially could help drive interest among local businesses. Media coverage adds clout and credibility to the awards. Communications should emphasize the ratings competition and the potential reductions in citywide greenhouse gas emissions that could result from increased participation in the program.

KEY MESSAGES

1) Benchmarking is the first step to getting control of building energy use

Benchmarking helps building owners, managers, facility staff and tenants better understand how to manage energy use and save money

Benchmarking helps building owners, managers, facility staff and tenants better understand how to manage energy use and save money on monthly utility bills.

on monthly utility bills. According to the EPA, buildings that track and manage their energy use consistently in Portfolio Manager have achieved average energy savings of 2.4% each year. Savings of 2.4% for three consecutive years is equivalent to cumulative energy cost savings of \$120,000 for a 500,000-square-foot office building, and an increase in asset value of over \$1 million.

Benchmarking also helps building professionals stay ahead of the curve as they prepare to comply with the upcoming energy benchmarking requirements of **California Assembly Bill 1103**, which will soon require certain building owners to disclose building energy performance.

Benchmarking enables owners and managers to:

- Track how much energy buildings use and compare these findings with similar buildings
- Identify whether your building is high performing or could benefit from improvements
- Set energy/cost saving priorities and monitor progress

Sample Talking Points:

1. How does your building rate? If you don't already know how effectively your building is using energy, benchmarking is the first step to finding out where you stand. The city of Berkeley's Smart Energy Awards program gives you access to tools that can help—for free! Participants can benchmark (rate) their building's energy performance with an online tool called Portfolio Manager. FirstView analysis which diagnoses opportunities for improving your energy performance will also be provided for all buildings entered.
2. Buildings owners can improve energy efficiency and lower carbon emissions by paying attention to operations and looking for opportunities to lower energy consumption. Benchmarking makes this easier.
3. Small reductions in energy use can add up to big cost savings over time. Buildings that benchmark their energy performance achieve 2.4% energy savings each year, on average. For a 500,000-square-foot office building, 2.4% savings for three consecutive years is equivalent to cumulative energy cost savings of \$120,000 (source: U.S. EPA).
4. Tenants and employees also benefit from improved energy efficiency in buildings. Tenants spend less on monthly energy bills and employees who enjoy more comfortable workplaces are more likely to stay put.

-
5. California law soon will require the owners of certain buildings to disclose building energy performance. Benchmarking puts owners ahead of the curve in meeting the requirements of this new law.

2) Berkeley works with local businesses to encourage benchmarking of properties and recognizes leaders through the annual Smart Energy Awards program

In Berkeley, optimizing energy efficiency in buildings is critically important as the city strives to meet its Climate Action Goals, which call for significant reductions in greenhouse gas emissions by 2020. Commercial buildings now account for about one-third of all such emissions in the city. To make it easier for buildings to manage and reduce their energy use, the city's Office of Energy and Sustainable Development encourages Berkeley's business owners to benchmark their buildings using the EPA's Portfolio Manager benchmarking tool. Portfolio Manager allows building owners and managers to track and assess energy consumption in a secure online environment. Portfolio Manager can help set investment priorities, identify under-performing buildings and verify efficiency improvements.

In order to encourage more benchmarking and raise the profile of smart energy management, local agencies like the city of Berkeley are awarding annual energy leadership awards to building owners and operators.

In 2013, the city will hold its Second Annual Smart Energy Awards ceremony to raise the profile of building energy performance and recognize progress and excellence in energy efficiency among Berkeley's benchmarked buildings. In 2012, a diverse set of 26 buildings and their nonprofit and commercial owners were recognized for their energy management leadership. Honorees included the Wareham Development, The Ashby Stage and the Berkeley Unified School District.

Smart Energy Awards program participants receive ratings on their buildings through Portfolio Manager's 1-100 rating scale, which provides apples-to-apples comparisons with the energy performance of similar buildings in similar climates across the country. Information on a building's actual energy use can be automatically uploaded to the secure Portfolio Manager website by linking with Pacific Gas & Electric's (PG&E) [Automated Benchmarking Service \(ABS\)](#) (PDF, 186 KB). For buildings served by PG&E, the ABS provides Portfolio Manager with

historical energy usage data and updates it monthly, so data does not need to be entered manually.

Sample Talking Points:

1. The city of Berkeley's Climate Action Plan mandates big reductions in greenhouse gas emissions in the city.
2. Commercial buildings now account for about one-third of all carbon emissions in the city. These emissions cause pollution, impact health and contribute to climate change. Commercial buildings that improve their energy efficiency can play a big role in making the city more livable.
3. While all buildings use energy, not all buildings perform equally. Are you spending more on energy than your peers? Energy Star's Portfolio Manager offers a benchmarking score of 1-100 providing apples-to apples comparisons with the energy performance of similar buildings in similar climates across the country.
4. The city of Berkeley actively encourages benchmarking as a first step to getting control of building energy use. Through its Smart Energy Awards program, the city spotlights building owners and operators who benchmark to raise awareness about smart energy management and honors progress and excellence in energy efficiency. All commercial and public buildings in the city of Berkeley are encouraged to participate in this year's Smart Energy Awards program.

Commercial buildings now account for about one-third of all carbon emissions in the city...

Commercial buildings that improve their energy efficiency can play a big role in making the city more livable.

3) Building owners and managers who participate in the Smart Energy Awards program will receive actionable feedback on how to lower building energy use through a free FirstView software analysis

Benchmarking is only the first step. Next, building owners and managers must seek actionable feedback on how to improve a building's energy performance. Energy assessments, which have been used in the past to evaluate buildings and identify energy efficiency measures, can cost thousands of dollars and take weeks to complete. New tools such as FirstView can assess energy performance in a matter of hours using monthly billing data and building characteristics.

This year, participants in the Smart Energy Awards program will receive a free FirstView analysis of their building's energy performance. After a building has been benchmarked, FirstView provides the next step to energy efficiency, comparing system-level performance to peer

buildings, and diagnosing specific areas for improvement. The city of Berkeley will work with StopWaste to conduct the FirstView analysis for program participants.

FirstView was developed by NBI, a nonprofit organization, and tested on thousands of buildings for the USGBC, the Energy Commission and others. The FirstView tool uses monthly billing data and basic building characteristics to generate an energy signature and segment a building's energy use into heating, cooling, domestic hot water, lighting and plug loads. By comparing these loads to other similar buildings, FirstView can determine when equipment and systems may not be operating as they should.

The FirstView report goes beyond benchmarking ratings by providing recommendations managers can use to target investigations and fix problems. Testing of FirstView was funded in part by the California Public Interest Energy Research (PIER) Program through the Energy Commission.

Sample Talking Points:

1. After a building has been benchmarked, owners and managers need to take the next step with additional feedback about the specific actions they can take to improve energy performance.
2. For this year's Smart Energy Awards, the city of Berkeley has teamed up with StopWaste and New Buildings Institute to provide free FirstView diagnostic reports to all building owner and manager participants.
3. FirstView uses monthly billing data and simple building characteristics to create an energy signature and compare system-level performance to similar buildings. The feedback provides recommendations on actions that could lead to energy performance improvements. It's the next step beyond benchmarking.
4. FirstView was developed by NBI, a nonprofit organization working for better energy performance in commercial buildings, and was tested in California with support from the state's PIER program and the Energy Commission.

This year, participants in the Smart Energy Awards program will receive a free FirstView analysis of their building's energy performance.
