OVERVIEW OF UTILITY ENGAGEMENT ISSUES

Kelly Crandall, Jayson Antonoff, and Alissa Burger
Institute for Market Transformation

July 2017

Table of Contents

Introduction

States and cities must work proactively with utilities to successfully implement effective benchmarking policies, as well as voluntary benchmarking programs such as the U.S. Department of Energy's Better Buildings Challenge. Successful benchmarking programs require that utilities provide whole-building energy use data to building owners in a streamlined and straightforward manner. In the absence of utility-provided energy data, complying with benchmarking policies can be arduous and time-consuming for building owners, and may fail to produce concrete benefits.

This paper outlines what an effective whole-building data access program looks like, and how to engage utilities on the key policy issues to create a system that benefits all parties. However, providing access to whole building data is just the beginning of the role that utilities can play in supporting, and benefiting from, benchmarking programs. Once appropriate data access provisions are in place to facilitate benchmarking, both utilities and local jurisdictions can take advantage of the information provided through the benchmarking policy or program to better target buildings and deploy energy efficiency investments. As city and state jurisdictions explore ways whole-building data can be analyzed, used, and applied, these programs are finding more and more opportunities to achieve even greater energy savings.

Access to Building Energy Consumption Data

Developing a comprehensive energy efficiency program means thinking about how buildings operate holistically. Most benchmarking policies and programs require whole-building data—the total energy consumption for an entire building, which may include the sum of multiple tenants' energy usage—to get a full understanding of building energy usage across a jurisdiction's portfolio.

Additionally, the vast majority of benchmarking policies leverage EPA ENERGY STAR's Portfolio Manager to track and store their data, which requires building owners to collect and input 12 months of historic energy consumption data for the entire building. Without a simple and convenient method for building owners to access whole-building data, benchmarking program participation rates suffer as the burden of gathering

individual tenant approvals and manually entering data makes participation both time-consuming and challenging.

Data Access Barriers

Although it seems logical for a building owner or manager to know how much energy is consumed in their building, this is often not the case. This information barrier is the result of several key factors, including:

- Separately metered tenants. Many building owners cannot easily retrieve energy information from their utilities for their entire building because each tenant has a separate meter to measure their individual unit's energy usage—a practice called "submetering." While there are many energy management and saving benefits with submetering, it creates a barrier to then aggregate all the information into a single snapshot for the entire building. Without an appropriate policy in place for providing whole-building data, a utility may require that the building owner collect signed consent forms from each individual tenant, which could amount to hundreds of forms for a multifamily building. This arduous process makes it less likely that a building owner will measure and track their building's total energy consumption, and limits their ability to evaluate energy efficiency opportunities which could benefit those tenants.
- Customer privacy and confidentiality. Utilities are typically cautious about providing customer data to third parties, meaning parties other than the customer paying the utility bill for that specific account. Utilities and regulators consider the owners of buildings to be third parties when their tenants pay directly for energy. This position may be derived from privacy regulations governing the utility or the utility's own interpretation of those regulations, as well as the fact that the utility has a business relationship with the customer, not the building owner. Without guidance from state legislation or a public utility commission, utilities may be uncomfortable (and thus unwilling) to provide energy data for fear of legal reprisal.

Solutions for Improved Data Access

Policymakers should work with utilities to achieve two primary goals that improve access to whole-building data for benchmarking policies and programs.

- First, provide whole-building data directly to the building owner if a building meets an aggregation threshold. Utilities have information for all of the energy meters within a property. Utilities can aggregate this data for the entire building, or for similar areas within the building—such as common space loads or tenant loads—and provide this information to a building owner or operator. When doing so, utilities who are providing whole-building data have generally adopted an "aggregation threshold"—the number of accounts that must be combined for them to provide data without the need for approval from individual tenants or bill payers. This preserves the confidentiality of individual tenants' information while providing the owner or operator with the energy data needed to benchmark using an industry-standard tool such as Portfolio Manager.
- Second, streamline the process for building owners to request and receive energy use data. Best practices include building an online portal where building owners can request whole-building data, as well as automatically uploading historic consumption data to Portfolio Manager. Utilities are increasingly adopting tools based on U.S. Environmental Protection Agency (EPA) Web Services to upload building energy consumption data directly into a user's Portfolio Manager account. This service reduces benchmarking costs for building owners, and minimizes the potential for manual data input errors. For utilities, this can be an opportunity to provide enhanced, ongoing customer support, as well as to streamline their internal processes.

Table 1 provides a list of utilities that offer whole-building benchmarking data, with information as to their aggregation thresholds and whether they provide automatic uploads to Portfolio Manager.[1]

[1] The first digit represents the minimum number of accounts, tenants, or meters in a building that must be aggregated. The second digit is the maximum percentage of whole-building energy usage that can be attributed to a single account, tenant, or meter (jurisdictions rarely require the latter). Statisticians call this an (n, k) standard.

Utility (State)	Aggregation Threshold	Automatic Upload
Atlantic City Energy (NJ)	5/--	Yes
Austin Energy (TX)	4/80	No
Avista (ID, OR, WA)		Yes
Baltimore Gas & Electric (MD)	5/--	Yes
California Investor-Owned Utilities	3/--	Yes
Clark Public Utilities (WA)	2/--	Yes
Commonwealth Edison (IL)	4/--	Yes
Consolidated Edison (NY)	2/--	No
Delmarva Power (DE, MD)	5/--	Yes
Enwave Seattle (WA)	2/--	Yes
Eversource (MA)	4/50	No
National Grid (MA, NY)	4/50	No
Pacific Power (CA, OR, WA)	5/--	Yes
PECO (PA)	5/--	Yes
Peoples Gas (IL)	5/--	No
Pepco (DC, MD)	5/--	Yes
PSEG Long Island (NY)	2/--	No
Puget Sound Energy (WA)	5/--	Yes
Rocky Mountain Power (ID, UT, WY)	5/--	Yes
Sacramento Municipal Utility District (CA)	2/--	Yes
Seattle City Light (WA)	5/--	Yes
Tacoma Public Utilities (WA)		Yes
Veolia Energy (PA)		Yes
Washington Gas (DC)	5/--	No
Xcel (CO, MI, MN, ND, NM, SD, TX, WI)	4/50	Yes

TABLE 1. Electric and gas utilities that provide services to building owners for aggregated data access and/or automated energy data upload into Portfolio Manager.

Additional Data Access Challenges

Even where utilities are excited about the opportunities to engage communities and customers by providing whole-building data, there are a number of additional challenges that they and building owners may face, including the following:

- Legal ambiguity on data privacy. The release of customer energy usage information by utilities is governed by state laws regarding personal information, regulatory rulings regarding data privacy and aggregation, and legal interpretations by individual utilities. State laws that cover personal information may be ambiguous as to whether they also cover energy usage data, and rules approved by state energy regulators may have been implemented to address individuals' energy usage as collected by advanced metering, a different use case[2] from that of whole-building data. Generally, policymakers and utilities may want to consider legal questions (whether state laws or regulations cover the type of data being requested) as well as practical ones (the actual risks associated with data disclosure and statistical tools available to mitigate those risks). The U.S. Department of Energy's (DOE) Better Buildings Solution Center website provides a Guide to Data Access and Utility Customer Confidentiality that can help parse these complex issues.
- Confusion about use cases. There is significant potential for confusion among utilities and regulators about the difference between providing whole-building data to building owners and efforts to compel utilities to release "smart meter" interval data from individual customers. Many states are considering or have implemented strong privacy protections against the release of interval data, which may be collected from individual meters on a near-real-time basis (such as every 15 minutes). Though these concerns about the potential transfer of personally identifiable information should not apply to whole-building data provided to a building owner on a monthly basis, out of an abundance of caution many utilities treat all use cases

[2] Use cases are meant to describe the different ways utility customer data can be accessed and by whom. In addition to the whole-building data access use case, there is a geographically-defined use case, research access, energy service provider access, and monthly consumption data for solar company inquires. Increasingly, utilities are also considering use cases related to "grid" data, such as the benefits of adding distributed energy resources to different geographic areas of the distribution grid.

in a similar way, and do not allow the release of data derived from customer information to any party without signed consent from the bill payer. Policymakers should anticipate that utilities and regulators may not understand the difference between these distinct use cases. This issue may become even more complicated as utilities are called on to release distribution grid data or conduct big data analytics.[3]

- Technical infrastructure. Unfortunately, many utilities are still working with out-of-date IT infrastructure, including older customer information systems (CISs) and incomplete geospatial mapping. Similarly, utilities may not have taken steps to integrate their CIS for billing with any customer relationship management (CRM) systems they use to provide energy efficiency services. Providing whole-building data and automated uploads often requires modifications to these systems, as they are not typically set up to efficiently aggregate meters—in other words, the utility may not know, or have any means of tracking, which meters or customer accounts correspond to which physical buildings. A guide produced by DOE's Energy Data Accelerator describes the ways that utilities have approached meter-mapping.

  The state of existing infrastructure at each utility plays a large role in determining implementation costs for a data access program. However, the IT upgrades necessary to use smart metering and other grid modernization tools that utilities are considering may provide opportunities to build in meter aggregation and automated data transfer.

- Cost recovery. Utilities will incur costs to develop and deploy data access services. This can include staff time to engage with regulators, implement IT upgrades (which may be conducted in-house or through consultants), develop and train internal staff on protocols, and create resources for building owners and other users. While such costs may be relatively small for a large utility spanning multiple states, the utility may have trouble justifying the prudence

[3] For example, utilities in New York and California are considering options to provide publicly available data on the condition of their distribution infrastructure and its ability to incorporate customer-sited renewables. Additionally, numerous utilities are working with third parties to disaggregate smart meter data to analyze customer usage patterns more precisely.

of those costs in rate case proceedings.[4] Furthermore, difficulties can arise when local laws require energy benchmarking, as investor-owned utilities may not be able to claim credit for energy savings due to measures that are required by law. Regulators may be tempted to increase utilities' energy efficiency goals or reduce funding that they might have otherwise provided for rebates. This reduces the costs that utilities can recover and disincentivizes them from supporting local benchmarking policies. Policymakers may need to engage with utilities, regulators, and consumer advocates to support appropriate cost recovery.

- Lack of an internal "champion." While investments to allow a utility to efficiently provide whole building energy use data should benefit the utility's conservation efforts, associated costs are sometimes attributed to customer billing service departments, further complicating efforts to gain internal utility buy-in. Developing a strong data access program requires at least one advocate at the utility who recognizes its value and can connect customer support, energy efficiency, and IT services, while ensuring that the data access program is conducted within state law and regulatory requirements. Otherwise, utilities may face multiple competing priorities that place whole-building data at the bottom of the list. Local governments may experience challenges in finding this internal advocate, and their key accounts managers may not know who to approach either. State and federal agencies may be able to recommend contacts at the utility who could carry this banner.
- Scope of proceedings. Data access issues may arise in multiple regulatory proceedings. For example, benchmarking programs may be discussed as part of a utility's energy efficiency program; IT costs may come up in a general rate case where a utility seeks to recover costs; and customer data privacy may arise as part of an individual's utility's advanced metering application, or a rulemaking that covers multiple utilities. Policymakers should work with utilities to ensure that benchmarking data is addressed in the right time and place.

[4] To the extent that utilities utilize cloud services to offer benchmarking data transfer, the National Association of Regulatory Utility Commissioners (NARUC) recently passed a resolution recommending that commissions authorize more favorable cost recovery for these systems.

- User experience. The complexity of the process that building owners must go through when requesting whole building data from utilities can have an enormous impact on their willingness and ability to get this data. Utilities can make this process less onerous for building owners by establishing simple requirements for the documentiton that an individual must submit to authenticate that they are authorized to request data for a building, and by streamlining the process whereby building owners and utilities work together to develop and verify the complete listing of meters feeding a building. Since many building owners may have geographically dispersed properties served by a number of different utilities, maximizing consistency across utilities for the forms that must be submitted, and the process that building owners must follow to request whole building data, can also facilitate the process.

  Utilities are increasingly moving toward web-based tools to allow building owners to make data requests and automatically upload data to Portfolio Manager. However, user experience may not be a primary concern in developing these tools—which may require building owners to set up new accounts, click through multiple pages or even go to third-party sites to complete their request. States such as California are just beginning to explore how utility website design can discourage customers from taking actions they would otherwise have chosen (such as signing up for demand response programs).
- Limitations on use. Where utilities do establish practices that allow for building owners to request aggregated whole-building data, some utilities have implemented terms and conditions that require the building owner to commit not to use the data in certain ways in the future. Particularly where a utility adopts a higher aggregation threshold (such as 4/50), it may not be necessary to also include restrictive terms and conditions.

Engaging Utilities and Regulators

Policymakers must engage with utilities on data access and other building performance issues early on in the development of any kind of benchmarking program. Strategies for interacting with utilities will vary, depending on the type of

utility (investor-owned utility or municipal utility), existing utility energy efficiency programs, and utility and public utility commission attitudes toward creating data access programs. In some cases, utilities have agreed to voluntarily provide aggregated data access or automated benchmarking information uploading (such as in Boston, the District of Columbia, and Austin, Texas), while in other cases, regulators or state officials helped influence the outcomes (such as in New York City, Atlanta, Minneapolis, and the state of California). DOE's Energy Data Accelerator produced a guide to stakeholder engagement that provides examples of successful data access work between cities and utilities.

Policymakers should consider the following strategies before initiating engagement with utilities:

- Develop a clear "ask." Clearly communicate the benefits of a benchmarking policy or program to customers, the utility's role in that policy or program, and the legal and practical steps that may be required to make that happen.
- Secure whole-building data access first, then automated upload. The primary ask from policymakers to utilities should be the creation of a whole-building data access service that does not require building owners to seek consent from each tenant. After that, or in tandem with that ask, policymakers should pursue automated uploading of data. The ideal solution includes a combination of both services together, however, the most important element is for utilities to provide aggregated data.
- Review the community's franchise agreement. Where a community is served by an investor-owned utility, there may be provisions in the electric franchise agreement regarding a utility's obligation to provide data or support local programs. These provisions are rare, but it is useful to be informed as to the city's rights prior to engaging with the utility.
- Create a stakeholder coalition. Cities and states can create or support coalitions that represent diverse stakeholders with an interest in data access programs (i.e., commercial real estate, large customers with multiple properties, regional energy efficiency organizations, consumer advocates, multifamily housing stakeholders, affordable housing representatives, and energy service providers). Policymakers do not need to lead these

coalitions, but could work closely with NGO partners instead.

- Leverage other utility leaders in discussions. Utilities may respond better to data access issues if they are engaged by their peers at other utilities that have established aggregated access or automated data uploading. Connecting utilities also enhances the likelihood that they will adopt consistent aggregation standards, which provide benefits for data quality. The DOE Energy Data Accelerator Toolkit provides several case studies reflecting ways that communities and utilities have collaborated to offer building benchmarking data.
- Consider the role of regulators. Policymakers and advocates may need to engage with state utility regulators to ensure data access. Because regulators have traditionally been concerned with safety, reliability, and cost, significant education may be required to communicate the benefits of data and the role of local governments in providing energy-related programs. The National Association of Regulatory Utility Commissioners (NARUC) adopted a 2011 resolution that affirmed the need for better access to whole-building energy consumption data to enable energy-efficient operations and encouraged state public utility commissions to support benchmarking and data access programs. In 2013, the National Association of State Utility Consumer Advocates (NASUCA) passed a similar resolution in the context of the multifamily sector.

  If state regulators favor data access, they may be able to help influence the position of utilities in informal ways. (Legal advice is recommended to determine whether meetings with regulators may invoke ex parte concerns about communicating with decision makers when proceedings are open or imminent.) Data access can also be brought as a formal matter in front of regulatory commissions. Some utilities may ask for regulator involvement to provide guidance on data privacy issues or ensure they can recover costs; policymakers should support the notion that utilities be reasonably compensated in order to remove this potential barrier. However, the state regulatory process is typically slow and deliberative, and may not be the best vehicle to advance data access issues. It may also prove to be a challenging venue to conduct detailed discussions about data needs and IT requirements. If engaging in regulatory proceedings, outreach to other stakeholders—including consumer

advocates, low-income advocates, energy efficiency organizations, and large customers—is critical.

- Seek assistance from other agencies that grapple with privacy issues. Utilities are not the only entities that deal with customer privacy and confidentiality—so do state and local departments of health, revenue, and education. These agencies may have statisticians who could advise utilities or regulators on data practices, if needed.
- Evaluate the potential for state legislation. To avoid any ambiguity that can lead to lengthy regulatory proceedings, state policymakers can enact legislation that explicitly defines the requirements and processes for utilities to share whole-building data with building owners. In 2014, the District of Columbia was the first jurisdiction to legislate a whole-building aggregation threshold for utility and that utilities offer automatic upload to Portfolio Manager.[5] The State of California's Assembly Bill No. 802 (AB 802), enacted in 2015, provides another example of legislation that lays out each utility's responsibilities, including the acceptable aggregation thresholds. An advantage of a legislative approach is that it can set common standards for multiple utilities to ensure that data is being provided consistently.

Messaging the Benefits of Data Access to Utilities

Utilities can use the information gained by setting up whole-building data access programs to bring a more informed perspective to the markets they serve. Unfortunately, many utilities remain unaware of the ways that benchmarking can support their operations. They may benefit from education provided by communities implementing benchmarking, as well as stakeholders who use it, like building owners.

Utilities can obtain the following benefits from supporting benchmarking policies and programs through whole-building data access:

- Providing whole-building data enhances existing utility energy efficiency programs. Benchmarking helps building owners understand how their building consumes energy, and identify opportunities for improvement. Using benchmarking as a means to raise awareness of energy savings opportunities, and then

5 Sustainable DC Omnibus Amendment Act of 2014.

directing building owners to the local utility incentive programs that can help them take the steps to realize those savings, can be one of the most effective ways to drive energy efficiency improvements. A 2012 report commissioned by the California Public Utilities Commission found that benchmarking was highly correlated with building energy improvements and customer participation in utility incentive programs.

In cities such as Seattle, utilities have provided funding support to staff the city's benchmarking help center. In return, the help center serves as an important lead generator for utility energy efficiency programs. Increasing customer enrollment in these programs helps utilities meet and exceed annual energy savings goals established by regulators.

- Benchmarking information helps in developing new energy efficiency programs. Because meters and accounts are not typically mapped to buildings' physical addresses, utilities often do not have visibility into overall building loads and the efficiency of the buildings they serve. By supporting benchmarking, utilities gain a building-centric view of their loads. This allows them to explore new types of energy efficiency programs that focus on whole-building efforts, instead of one-off measures. Additionally, enhancing their geographic awareness of their customer base creates the opportunity for entirely new demand-side management and demand response programs that target services to neighborhoods or regions. Utilities may be able to defer capital investments, or reduce operations and maintenance costs, by promoting energy efficiency in areas of their distribution grids that would uniquely benefit.
- Benchmarking helps utilities validate savings from their energy efficiency programs. Since utility demand-side management measures are more often implemented at the building level rather than at the meter level, program outcomes are better represented in the data for whole buildings. Organizing that data by building will allow utilities to more accurately assess the effectiveness of their programs over time, particularly in states like California which are beginning to migrate from "deemed" savings to "actual" savings to validate energy efficiency programs.

- Benchmarking can improve customer service. By providing improved data access programs, utilities can help customers save time and money, improve their customer service rates, and better engage their customers. Utilities can also become trusted advisors, by providing staffing and resources to deliver benchmarking training to building owners. When a building owner is contacting a help line or attending a training session to find out more about how to benchmark their building and how to interpret results, utilities can encourage them to consider the next steps in improving the energy performance of their buildings. These opportunities can be used to educate building owners about complementary utility incentive programs.

  In Salt Lake City, the Building Owners and Managers Association (BOMA), CBRE, and other major real estate stakeholders advocated for benchmarking, voicing their economic interest in understanding the energy usage of their buildings. In response, Rocky Mountain Power created a data access portal for its customers in 2016, and Questar is working toward a data access solution that will be operational by 2017.

Alignment with Other Utility Programs

Utilities can play other roles in supporting local energy efficiency initiatives beyond providing access to data. Policymakers may want to frame the ask for whole-building data as part of a broader conversation about how cities and utilities can collaborate to provide benefits to all parties.

Utilities and policymakers may want to consider the following opportunities:

- Leverage local relationships to enhance utility programs. Local governments may have direct lines to the community stakeholders who use—or choose not to use—utilities' energy efficiency programs, and may have information about how to improve uptake by reducing unexpected or unusual barriers, or promoting participation.
- Align utility energy efficiency programs and city-led energy initiatives. Utilities can act as an important source of incentives to amplify city-led energy efficiency programs. A 2014 U.S. Energy Information

Administration report found that utilities spend more than $350 million per year on energy efficiency programs, far more than the resources that cities are able to provide. Some cities are exploring requirements beyond benchmarking and transparency, such as energy audits, retrocommissioning, and even mandatory energy performance upgrades. To establish a tighter connection between utility and city-led efforts, policymakers may want to encourage utilities to require that building owners submit benchmarking results as a prerequisite when requesting utility incentives, to verify that building owners have already taken the necessary initial steps to understand how their building is actually performing.

Several cities have enacted audit requirements for buildings specifically because the local utility already had an existing voluntary program to provide these to building owners upon request. For example, the City of Atlanta's requirements for energy audits include the provision that "no-cost/reduced cost energy audits provided for commercial customers [of the utility] that approximate the standard required under this definition of an energy audit shall qualify for compliance…." This provision was included after extensive discussions with the local utility to confirm that it would have the capacity to complete enough free audits to meet the anticipated annual demand generated by the city's ordinance. Municipally owned utilities, in particular, have the ability to align customer rebates and incentives with such measures, furthering the city's policy goals.

- Work with state and local governments by providing support for energy code compliance initiatives. In California, San Diego Gas and Electric uses ratepayer funds through its local government partnership program to provide an Energy Code Coach to the cities of Chula Vista and San Diego. This funding allows an energy code expert to work out of each jurisdiction's building department one to two days per week to provide assistance to permit applicants in meeting California's energy code requirements. Additionally, National Grid, one of the largest investor-owned utility companies in the world, funds energy code training and technical assistance to code officials, contractors, design professionals, and other building

professionals on both commercial and residential energy code requirements in Rhode Island. The utility has even funded a statewide energy code compliance study.

- Identify regulatory challenges early and act cooperatively to support customers. As was mentioned earlier, regulated utilities may be challenged to provide incentives for particular energy efficiency measures if they are already required by state or local law. However, utilities, states, and cities can work together to ensure that building owners still receive capital for energy efficiency projects, even where the regulatory environment changes. By collaborating early with Consolidated Edison, the New York State Energy Research and Development Authority (NYSERDA) developed a "retrocommissioning-plus" program for New York City building owners, who were no longer eligible to receive utility incentives to participate in standard retrocommissioning programs.

Conclusion

Although an increasing number of utilities are offering whole-building data for building owners, some utilities are still wary of adopting these business practices. While concerns about data privacy and implementation costs are legitimate, jurisdictions from around the country have found solutions that work for regulators, building owners, tenants, and state and local jurisdictions. Movement on this issue in recent years has made it abundantly clear that building owners and local jurisdictions across the nation value, and in many cases require, better access to the data, in order to be able to effectively achieve and track progress toward attaining their building operation and energy efficiency goals. Given the increasing awareness of the value of this utility data, and the rapidly expanding footprint of benchmarking policies and programs, this is the opportune time to ensure that appropriate guidelines, standards, and processes for access to utility data are being established.

Appendix A: External Efforts

Policymakers should be aware of the following efforts to advance data access services that can potentially support or augment local efforts:

- U.S. Department of Energy Data Accelerator. The U.S. Department of Energy's Better Building Energy Data Accelerator (BBEDA) was a two-year program that established partnerships between cities and utilities to improve energy efficiency by making energy data more accessible to building owners. The Energy Data Accelerator Toolkit, a collection of resources drawn from BBEDA partners, enables communities to benefit from the work that has been done and fosters the replication of these best practices throughout the country.
- Data and Transparency Alliance is a collaborative effort led by the commercial real estate industry and green building organizations to provide building operators with energy consumption data to advance energy-efficiency and energy cost savings in buildings. DATA is organized by the Institute for Market Transformation, the Building Owners and Managers Association (BOMA) International, the Real Estate Roundtable, and the U.S. Green Building Council.
- ACEEE Best Practices for Working with Utilities to Improve Access to Energy Usage Data. This toolkit provides best practices and highlights case studies for how utilities, policymakers, building managers, and community stakeholders can improve access to energy usage data while working towards the goal of improving efficiency in their communities.
- HUD Exchange. Benchmarking energy consumption can be particularly challenging for owners of multifamily buildings with utility accounts paid for by tenants, in part because utility providers each require owners to follow a different procedure to access tenant utility consumption data. This database from the U.S. Departmetn of Housing and Urban Development (HUD) is meant to help solve for that challenge by creating a single repository of the requirements of benchmarking programs and the procedures utility providers require owners to follow to access the utility data of their tenants.

Appendix B: Additional Resources

The following resources are also available for policymakers:

- Benchmarking Fact Sheet. This fact sheet summarizes benefits of benchmarking for utilities and provides an overview of relevant studies and examples.
- Utilities' Guide to Data Access for Building Benchmarking. This report provides an introduction to data accessibility issues and an assessment of the challenges and opportunities for utilities, regulators, and real estate practitioners in implementing data accessibility practices. It also presents case studies of utilities that have implemented such practices.
- Guide to Data Access and Utility Customer Confidentiality. This guide describes the factors that differentiate whole-building energy usage data requests from other types of data requests, and highlights best practices for utilities to provide energy consumption information to building owners while respecting the confidentiality of utility customers.
- How Utilities Can Give Building Owners the Information Needed for Energy Efficiency while Protecting Customer Privacy. Many utilities maintain unnecessarily restrictive policies for building owners to get basic energy usage information needed to operate their buildings efficiently. This article provides utilities, utility regulators, and boards of publicly owned utilities suggestions on how to implement reasonable policies to protect customer privacy while delivering aggregated building usage information to the majority of building owners who need it.
- Best Practices for Providing Whole-Building Energy Data: A Guide for Utilities. This guide summarizes the key components of developing a whole-building data access solution and provides recommendations to identify and overcome process-oriented barriers.
- Commercial Building Tenant Energy Usage Data Aggregation and Privacy. This study establishes a quantitative approach for providing practitioners, such as utilities, public utility commissions, and other policy-makers with a defensible aggregation threshold selection method, which will protect tenant privacy

while ensuring that data on the greatest number of buildings can be reported.

- Public Sector Building Energy Benchmarking: Utility Data Access Options and Opportunities. This report surveys the current landscape of public sector building energy benchmarking policies in the Northeast and Mid-Atlantic region. It examines the tools used to access utility data and how municipalities across the region are using them to track usage as part of building energy benchmarking mandates.
- Stakeholder Engagement Strategy Guide. This guide is intended to help utilities and local governments design a productive stakeholder engagement process when developing approaches to improve energy data access.
- HUD Letter of Support. This open letter to utility companies was issued in November 2014 by U.S. Department of Housing and Urban Development Secretary Julián Castro, and encouraged them to work with building owners to facilitate access to whole-building utility usage data.
- NARUC Resolution on Access to Whole-Building Energy Data and Automated Benchmarking. This July 2011 resolution by the National Association of Regulatory Utility Commissioners (NARUC) encourages State public utility commissions seeking to capture cost-effective energy savings from commercial buildings to consider a comprehensive benchmarking policy that takes all reasonable measures to facilitate convenient, electronic access to utility energy usage data for building owners.
- NASUCA Resolution Supporting Automated Benchmarking of Multifamily Buildings for Energy Efficiency Purposes. In 2013 the National Association of State Utility Consumer Advocates (NASUCA) adopted this resolution supporting access by building owners and managers to whole-building energy consumption data to support energy-efficient building operations.
- Scale, Speed, and Persistence in an Analytics Age of Efficiency: How Deep Data Meets Big Savings to Deliver Comprehensive Efficiency. This article in the Electricity Journal describes how data analytics are playing an increasingly strategic and essential role in

how we save energy—ushering in “The Analytics Age of Efficiency.”

Appendix C: Definitions

Benchmarking: In the context of buildings, benchmarking is the act of measuring the energy performance (or water consumption) of a building so that its energy performance can be compared over time, to a norm, or to a group of peers.

ENERGY STAR Portfolio Manager: Interactive energy management tool that allows a user to track energy and water consumption for a building. After entering a building's total energy usage for 12 consecutive months, the tool generates the building's energy intensity. Many types of facilities can also receive a score on a scale of 1 to 100 that rates the energy performance of the building compared to similar buildings nationwide.

Portfolio Manager Data Exchange: A free web service designed so third-party energy service companies, such as utilities, can securely provide energy and building data from their systems to Portfolio Manager. Portfolio Manager Data Exchange was previously known as Automated Benchmarking System (ABS).

Whole-building data: Total energy consumption data for an entire building obtained by summing up the energy usage data measured by tenant meters.

Acknowledgements

This report was prepared for the Pacific Coast Collaborative by Kelly Crandall, Jayson Antonoff, and Alissa Burger of the Institute for Market Transformation.

The information, data, or work presented herein was funded in part by the Office of Energy Efficiency and Renewable Energy (EERE), U.S. Department of Energy, under Award Number DE-EE0006890.

About the Institute for Market Transformation (IMT)

The Institute for Market Transformation (IMT) is a national nonprofit organization laser focused on increasing energy efficiency in buildings to save money, drive economic growth, reduce harmful pollution, and tackle climate change. IMT provides hands-on expertise to building owners, tenants, governments, and other stakeholders to ignite greater investment energy-efficiency buildings. Its work includes technical and market research, policy and program development and deployment, and promotion of best practices and knowledge exchange. IMT's efforts lead to important new policy outcomes, widespread changes in practice, and ultimately, lasting market shifts toward greater energy efficiency, with substantial benefits for the economy and the environment. For more information, visit imt.org and follow us on Twitter at @IMT_speaks.

About the Pacific Coast Collaborative

The Pacific Coast Collaborative (PCC) was launched in 2008 to set a cooperative direction in key policy areas of mutual interest among North America's West Coast jurisdictions. In 2013, the Governors of California, Oregon, and Washington and the Premier of British Columbia announced the Pacific Coast Action Plan on Climate and Energy as an initiative of the PCC, outlining a set of shared goals for reducing carbon emissions and building a clean energy economy on the West Coast. With a population of 54 million people and an economy that is the 5th largest in the world, the West Coast jurisdictions that compose the PCC are demonstrating that transitioning to a low-carbon economy can create jobs and support robust economic growth. For more information, visit www.pacificcoastcollaborative.org.

Disclaimer

The information, data, or work presented herein was produced in collaboration with the Pacific Coast Collaborative. The views and opinions of authors expressed herein do not necessarily state or reflect the Pacific Coast Collaborative's endorsement of specific policy and programs.

The information, data, or work presented herein was funded in part by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.