Using Building Level Utility Data to Deliver Equitable Energy Efficiency Programs in Multifamily Buildings

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ABSTRACT

Despite comprising over 30% of US housing stock, multifamily buildings are often unable to tap into energy efficiency programs or comply with building decarbonization policies like Building Energy Performance Standards (BEPS). Lack of access to building level energy data is one of the significant barriers for this market. When data access prevents multifamily buildings from participating in energy efficiency programs, their residents and building owners are at a comparative disadvantage. Ensuring access to utility-provided whole-building data and leveraging it across initiatives allows for better planning and implementation of energy efficiency programs and broader access to customers. This data is also vital to implementing other building decarbonization policies such as BEPS and clean heat standards (CHS).

Few states have been able to deliver on accessing and sharing the data necessary to implement these programs, and the Inflation Reduction Act (IRA)'s mandate means states must now work with utilities to collect and share the energy data necessary to make programs accessible and tailored to multifamily buildings.

This paper highlights how states and utilities can collaborate to deliver and leverage energy data for multifamily buildings, which will help implement equitable building decarbonization programs by connecting data from building-focused energy policies to energy efficiency program implementation. We provide examples, including a deep dive into how three states—Maryland, New Jersey, and Washington—are building on data gathered and analyzed by their benchmarking and BEPS programs to design and deploy more equitable energy programs, and lessons learned through their policy design processes.

Introduction

Despite comprising over 30% of US housing stock, multifamily buildings are often unable to participate in existing energy efficiency programs (ICAST 2024). Not only are there limited programs that can address the multifamily market because of the intersection of residential and commercial programs, but programs that do look to serve these buildings face many barriers in implementation, such as access to whole-building energy data, split incentives between the landlord and tenant, health and safety issues (e.g., asbestos, knob and tube wiring), higher costs per project, and challenges with addressing electrification at the building and unit-

level appliances. The result is that the multifamily affordable housing (MFAH) sector is grossly underserved (ICAST 2024).

Reliable access to accurate, building level data is an important first step in addressing these barriers and serving the MFAH market. Multifamily building data is needed to ensure that this sector can access the same benefits as single-family homeowners can. Multifamily building energy data is difficult to access. Unlike in single-family homes, where standard utility protocol is to match a building to a bill, multifamily buildings often have multiple bills that are paid by individual tenants (i.e. submetering). This means that aggregation of individual sub-metered bills and verification are required to create data for these buildings. A tenant-by-tenant approach to accessing data is time-consuming and does not effectively consider scenarios like tenant departures.

New policies for building decarbonization, such as building energy performance standards (BEPS) and benchmarking, have brought this issue to the forefront, as these policies require jurisdictions to collect and compare energy data. States have faced challenges in setting up the proper regulatory and reporting structure to gather and report the data to support these policies. Regulatory frameworks do not yet exist to mandate and standardize aggregated data disclosure. Additionally, logistical barriers like data collection can arise depending on the building's location and the status of utility solutions, making any large-scale data collection process difficult (ENERGY STAR 2023b).

Now is the time to consider changes to the methods for collecting and aggregating energy data to help the MFAH market access energy efficiency upgrades. Not only are states implementing policies that change how programs access and use this data, but IRA Home Energy Rebate guidelines require that at least 10% of state funds are to be spent on affordable multifamily upgrades (U.S. DOE SCEP 2023).[1] As states implement these programs, they can use this opportunity to change the current structure of gathering and using building energy data to enable more multifamily properties to participate in programs. Looking at how benchmarking and BEPS programs have enabled access to multifamily data, this paper reviews how states can create permanent structures to unlock multifamily data through strategies including utility investment, utility commission or other agency action, creating long term feedback with data, and stakeholder engagement.

To Serve Affordable Multifamily Residents, Data is Crucial

Addressing access to energy data in the MFAH sector is immensely important. Today, residents and building owners of multifamily buildings are at a comparative economic disadvantage, as they are often unable to participate in energy efficiency programs, including statewide programs such as BEPS and benchmarking (Wu 2024). This section illustrates the urgency of engaging this sector from an equity perspective, explains some of the unique barriers present in current policies and programs, and discusses the role of data in informed program design and grid planning for utilities.

[1] The IRA's HER and HEAR programs both apply to multifamily buildings. HER provides a performance-based retrofit; HEAR provides point-of-sale rebates.

Serving the affordable multifamily sector is key to equitable program implementation as a majority of multifamily residents are also low- or moderate-income (LMI). Across the nation, 85% of multifamily households are considered LMI (ICAST 2024), and 39% of renters live in multifamily buildings (Statista Research Department 2024). Low-income renters, particularly those living in small multifamily properties, tend to live in the least energy-efficient buildings (Martín et al. 2023). They also have higher relative energy burdens and are less likely to have the funds for energy retrofits (Martín 2022). Therefore, this sector would benefit the most from access to these programs and funding streams.

The affordable multifamily sector is characterized by nuances that programs implemented in the single-family sector do not face. Below are five key barriers that exist in the multifamily sector:

- **Data:** Current data collection process methods do address the nuances of aggregating multifamily buildings. First, multifamily building data is not accounted for in surveys like the Residential Energy Consumption Survey (RECS) and Commercial Buildings Energy Consumption Survey (CBECS)[2] (EIA 2022). Second, unlike single family homes where utilities can easily match a building to a bill, multifamily buildings often have multiple bills that flow to the property, and these bills can change as residents move (ENERGY STAR 2023a). This creates an extra step to aggregate and verify the data. Third, for program implementers, energy assessments for multifamily buildings may differ from those for single-family buildings; as they too can require tenant consent or additional steps, this can deter implementers from running successful MF programs (ICAST 2024).
- **Contractors:** Typically, different contractors serve single and multifamily residences as the projects require different technical expertise. Additionally, multifamily projects tend to be larger, and not all contractors may be able to scale up operations to take on such large jobs. Single-family projects typically involve one easily accessible building owner who can have the "kitchen-table conversation" with a contractor. Multifamily buildings are more complex. In addition to the building owner, contractors will also need to inform multiple tenants of the building upgrade and discuss the process. Finally, if properties are owned or managed by a firm, it can be difficult to locate the appropriate staff member with decision-making authority.
- **Timing:** Timing is drastically different in single family versus multifamily projects. Single family owners can choose to do building upgrades at any time of the year. Multifamily owners and managers, on the other hand, often work in cycles of improvement. Owners of larger buildings may not be willing to incorporate large projects in preplanned improvement cycles if these larger projects are difficult to coordinate or disrupt preplanned work.
- **Financing:** Due to the need to focus on long-term infrastructure at multifamily properties, financing in the multifamily sector differs from funding approaches in the single-family sector. Larger buildings require significantly larger investments in structural upgrades and

[2] To see more information about these resources, see RECS: https://www.eia.gov/consumption/residential/; CBECS: https://www.eia.gov/consumption/commercial/

additional funding for planning and design. Programs set up to fund smaller buildings may not have equivalently-sized options available for large infrastructure investments.

- **Split Incentive:** In multifamily buildings, tenants, not building owners, are often responsible for paying energy bills generated by HVAC equipment, while building owners pay for the installation of such equipment. This disconnect is often referred to as a "split incentive." The result is that landlords have no incentive to invest in energy efficiency programs because doing so will cost them additional money and lead to lower costs only for the tenants. Even though tenants may want new equipment that can reduce their energy bills, uptake is limited by this financial disconnect between equipment purchases and accrued savings over time (ICAST 2024).

One example highlighting the importance of ensuring strong data access policies that overcome these barriers comes out of the Inflation Reduction Act (IRA). The IRA Home Energy Rebate guidance recognizes that multifamily homes face structural barriers in current programs and mandates that states allocate at least 10% to serving low-income multifamily program (U.S. DOE SCEP 2023). For many states, the IRA Home Energy Rebates program will offer a first opportunity to address the MFAH sector. Without more intentional policy design, MFAH owners and residents will be left with programs that do not adequately address the needs of these markets (Chi 2022; Moon 2023). Data can help identify the proper metrics to measure the achievement of the goals of the IRA and state-level programs.

Data Can Unlock Opportunities for MFAH, but There Are Barriers to Accessing It

Leveraging building level data, program implementers can identify customers, design programs targeted to them, and evaluate success with real energy savings numbers. The right data can provide insights into building performance, enable interventions to lower energy usage, and inform long-term grid planning with demand response and other flexible resources. Data also enables multifamily property owners to track energy and water performance, detect malfunctioning equipment and building errors, prioritize operational and capital improvements, verify returns on energy investments, and plan for future budget needs.

In states where programs require the sharing of energy data, it is common practice for building owners to obtain consent from tenants, then upload the energy data to an online portal. This can be challenging for multifamily property owners because utility providers require different procedures for owners to gather data (HUD 2017). States that require utilities to aggregate and share data often allow utilities to determine the procedures for doing so. The result is varying solutions for delivering building level data, some of which reduce the burden for the building owner more than others.

Data aggregation at the building level requires additional steps compared to historical utility practices. Utilities organize their systems, data, and programming around customers, splitting them into residential and commercial categories. For building level data purposes, multifamily buildings do not easily translate to any of these customer-based practices (ENERGY STAR 2023a). Bringing together data from multiple customers and meter types into a single, aggregated dataset for each building requires identifying, mapping, and combining data.

Providing ongoing access to the resulting data also requires continued maintenance of this mapping. A further complication for the multifamily sector is that utilities can misunderstand or overlook the importance of residential customer data for what they might perceive as a commercial customer program. This stems from utilities' data systems' separation of residential and commercial customer types.

Utilities can collect building level data through manual, semi-automated, or fully automated processes. It is common for a utility to first do this work manually, then switch to an automated process when they realize costs that can be saved (Chartwell Inc. 2014). Frequently, utilities only provide access to building level data when regulators compel them to do so. To help in this process, state governments can provide explicit guidance to utilities and look for ways to streamline data collection on a statewide basis for program design, targeting, and evaluation. The more explicit states are in their requirements, the more consistent and reliable solutions will be.[3]

Policies that Have Attempted to Access Data Still Hit Barriers

While data access is largely determined on a state-by-state or utility by utility basis, on the national level, HUD and EPA have both launched initiatives to help building owners access building energy data, with an additional focus on the MFAH sector. HUD's Multifamily Utility Collection Database seeks to help with reporting for benchmarking and other purposes by providing the procedures to access data in each utility territory. EPA's ENERGY STAR Portfolio Manager® seeks to help with reporting through providing a tool that can aggregate data for building owners, utilities, and regulators.

HUD's Multifamily Utility Collection Database

HUD's Multifamily Utility Collection Database contains a list of the procedures required for requesting building level data from utilities to report it for benchmarking and other purposes and ranks them based on user-friendliness. HUD assembled the database to help building owners navigate the nuances and processes for gathering energy data from their utility. The process for each utility ranges from requesting data on an individual, tenant-by-tenant basis to an automatic data transfer. Among the utilities listed in the database, the majority (77%) provide data to building owners in a way that requires additional work for the building owner, such as providing individual tenant release forms and sifting through the data in various formats, from spreadsheets to PDFs. Only 14% of the utilities in the HUD database provide data in a more streamlined manner (i.e. without requiring individual release forms from all tenants), and even these programs do not go far enough to overcome barriers for building owners (HUD 2017). The most common challenges to gather data noted in the database are:

- **Tenant Authorizations**: Tenant authorization remains the most consistent and troublesome barrier. Most utilities require individual tenant release forms from all tenants to access

[3] See the discussion of New Jersey's process on page 9.

aggregated data. However, in some cases, tenant authorizations can be waived if the number of tenants in the building exceeds a set threshold or no single tenant exceeds a given percentage of total usage.

- **Single Use Authorization**: Another nuance with tenant release forms is whether they are one-time use or can enable access to data for a set period of time. Some utilities only allow tenant authorization to release data once. If there is a need to retrieve the data again, then another signature is required. This makes any long-term data access endeavor difficult.
- **Inconsistencies**: Utilities in different jurisdictions frequently deliver data in non-standardized formats, and often in a PDF or paper document. The resulting data is challenging to collect and analyze at scale (HUD 2017).

EPA's ENERGY STAR Portfolio Manager®

EPA's ENERGY STAR Portfolio Manager® is a tool created by EPA to facilitate data collection for benchmarking and BEPS programs. It is meant to automate and streamline the process for data collection for the building owner, utility, and regulators in the state (ENERGY STAR 2023a). Unlike the HUD Database, which outlines the process to access data, Portfolio Manager® allows for utilities and third-party implementers to upload monthly energy data to a central platform via the application programming interface (API). However, there are limits on what Portfolio Manager® can do with the data. While it can provide comprehensive access to a building's energy usage, it cannot create custom reports and dashboards or provide information that can be used to identify savings opportunities (Gilless, Ip, and Robinweiler 2022).

Benchmarking and BEPS (Start to) Unlock Data Access

Policies such as benchmarking and building energy performance standards (BEPS) are strategies that seek to drive building owners to reduce emissions or energy usage because they rely on measuring and mandating the reduction of the energy use of a building. Benchmarking requires building owners to report energy usage and can sometimes result in public rating systems. BEPS require that existing buildings achieve a defined level of energy or emissions performance and can result in penalties for noncompliance (NEEP 2024). Because policies rely on data for implementation, states must also consider how to create processes and procedures for access to energy data in their enactment. As a result, the complexities around access to multifamily building data have come to the forefront of discussions in most of these states. However, states have taken different paths to create standard processes for data access (ENERGY STAR 2023b).

This section outlines three examples of states that have had to tackle this issue. The information has been informed by interviews with state energy offices when available and stakeholders that were a part of the proceedings. One key unifying aspect of these programs is that all the qualifying utilities, some of which did not provide access to aggregated whole-building data or access to data through Portfolio Manager before the programs' inceptions, are now mandated to do so (HUD 2017). Table 1 first provides a summary of each state's policy, covered buildings, and data processes.

Table 1. Comparison of state benchmarking/BEPS policies

	Maryland	New Jersey	Washington
Type of Policy	Benchmarking starting 2025; Building Energy Performance Standards starting 2030	Benchmarking	Building Energy Performance Standards
Standard or Requirement	20% reduction in GHG emissions by 2030 and net-zero GHG emissions by 2040 (MDE 2023a)	Annually "[...] report energy and water use using the ENERGY STAR Portfolio Manager tool" (NJ BPU 2023)	Energy use intensity (EUI) targets adjusted every five years after 2029, using ANSI/ASHRAE/IES standard 100-2018 as an initial model
Building types	Commercial and multifamily residential buildings over 35,000 sq. ft.	Commercial and multifamily residential buildings over 25,000 sq. ft.	Commercial and multifamily buildings starting at 220,000+ sq. ft. and decreasing over time
How is MFAH addressed?	Included as part of the definition of covered buildings in the enacting legislation	Included as part of the regulatory order establishing the program.	After implementation began, legislature modified original legislation to include multifamily buildings in the standard
Data processes	Energy Star Portfolio Manager for utilities serving more than 40,000 customers; spreadsheet delivery to building owners for smaller utilities (MDE 2023b)	Energy Star Portfolio Manager for utilities serving more than 50,000 customers; spreadsheet delivery to building owners for smaller utilities	Energy Star Portfolio Manager for utilities serving more than 25,000 customers; spreadsheet delivery to building owners for smaller utilities (Washington State Legislature 2023)

Maryland's BEPS Process: Lessons Learned

Maryland provides an example of a state in the midst of designing its BEPS policy and considering best practices for implementation. Benchmarking requirements for building owners start in 2025, and BEPS start in 2030.

While Maryland's draft BEPS regulations mandate that utilities share energy data with building owners, some utilities in the state already have these processes in place. Following in the footsteps of local ordinances and neighboring Washington, DC's BEPS, utilities in Maryland have provided access to building level energy data with varying approaches (HUD 2017; Z. Berzolla, Building Decarbonization Section Head, MDE, pers. comm., February 20, 2024). The implementation of BEPS will require large utilities in the state to significantly scale up this effort and provide data access using the ENERGY STAR Portfolio Manager tool, streamlining their

approach. Additionally, utilities will have to make sure data collection methods meet other requirements of the law, such as explicit requirements for certain energy uses to be disaggregated and not included in reporting, such as electric vehicle charging and other energy uses excluded from the BEPS policy (MDE 2023b).

Like most recent examples of state or local building performance standards, Maryland's legislation specifies that utilities will need to provide building level data, yet Maryland's program is not implemented by the utility regulator. Instead, the BEPS program is implemented by the Maryland Department of Environment (MDE), an agency that oversees environmental regulation in the state, rather than the Maryland Energy Administration, which oversees energy efficiency programs, or the Public Service Commission (PSC), which regulates utilities. MDE is collaborating with the PSC to implement the program, as they recognize that substantial coordination is required to ensure that utilities are given the proper tools and mandates to succeed in delivering data (Z. Berzolla, Building Decarbonization Section Head, MDE, pers. comm., February 20, 2024). Utilities may be able to recover investments in data aggregation infrastructure, but without explicit language from MEA or the PSC on the topic, details on such cost recovery and how the investment and reporting structures program will be added to current utility portfolios is unknown.

New Jersey's Benchmarking Ordinance: Lessons Learned

New Jersey has gone through a cycle of implementing a benchmarking policy. The 2018 Clean Energy Act mandated the NJ Board of Public Utilities (NJ BPU) to develop energy and water benchmarking programs for all commercial buildings over 25,000 sq. ft. (NJ General Assembly 2018). The first round of benchmarking data was due in August 2023. While the original legislation in New Jersey did not lay out specific provisions for the multifamily sector, NJ BPU enumerated multifamily buildings as a covered building class in the order implementing the program. Specifically, NJ BPU noted that including multifamily was important to ensure the state achieved both energy savings and equity goals, as many disadvantaged communities in the state live primarily in multifamily housing (NJ BPU 2022).

Unlike Maryland, New Jersey's benchmarking enabling legislation placed the program under the utility regulatory agency, the NJ BPU. This enabled the state to coordinate with utilities from the start of implementation and empowered the agency to direct utility investment and time in establishing data aggregation processes. NJ BPU included guidance on related cost recovery of investments and flexibility in how each utility could design and implement solutions, as long as a few specific criteria were met. NJ BPU has also linked the policy to energy efficiency programs by mandating that a building owner participate in the benchmarking program to be eligible for any of the statewide energy efficiency programs.

During the first round of submissions under the benchmarking ordinance, the NJ BPU learned of many details that benchmarking programs must address to succeed at scale (P. Chao, Senior Program Manager, NJ BPU, pers. comm., February 9, 2024). One such lesson was the importance of including the local utility regulatory authority when designing a benchmarking program. This enabled NJ BPU to allow utilities to invest in data sharing infrastructure as part of their program. This enables utilities to set up more automated workflows to gather and aggregate the data. Knowing this long-term funding is available better informs the utilities' business

investment strategy and could encourage these companies to better align data gathering with state needs.

NJ BPU did grant utilities in New Jersey flexibility in setting up the aggregation and delivery infrastructure. While this provided flexibility across utility territories, it meant additional work for NJ BPU in sorting through the data. As a result, the utilities in New Jersey took various approaches, including selecting a SaaS software provider, building a solution internally, having a vendor build custom software, and deferring implementation to meet the need as part of a larger system upgrade. The ability for each utility to pick its own process also meant that some utilities were unable to complete data sharing by the deadline due to issues streamlining data gathering processes and a general underestimation of the amount of work necessary to deliver all the data.

Washington's BEPS Regulation: Lessons Learned

Washington provides an example of a state further along in the implementation of its BEPS and benchmarking policies. The state has taken a phased approach and has implemented specific initiatives for data and incentivizing utility coordination. Washington was the first state to pass building performance standards statewide in 2019 as part of the Clean Buildings Act. In 2022, the state legislature passed additional legislation that modified the original program to reduce the building minimum size threshold and expanded buildings covered by the program to include multifamily buildings (Nadel and Hinge 2023).

Washington state has a relatively long history of benchmarking and strategic energy management programs due to the work of individual utilities. There are a few key takeaways to glean from Washington's programs. First, it is important to include multifamily in legislation and regulations early on. Washington did not initially include these buildings, but then went back and added them later. As a result, these buildings, and the process for collecting their energy data, now lag other building types in the program. Currently, at least one utility is still establishing procedures to collect multifamily data.

The BEPS regulation was promulgated through the state Commerce Agency, but there has been considerable coordination between the Commerce Agency and utilities in the implementation of the program (Eagles 2023). Utility staff participated in the rulemaking process and continued to meet with the Commerce department monthly. Utilities also played a role in connecting with building owners, occupants, and property managers to increase awareness and engagement. Future programs in other jurisdictions should follow Washington's lead to promote close coordination between utilities and the agencies that regulate them to ensure that they can leverage their existing working relationships and make clear at the outset the utilities' expected role and responsibilities through the policy design and implementation process.

Finally, Washington demonstrates a successful method to encourage participation and long-term investment. The law pursued a new approach in establishing incentives for early adopters. There is a per square foot ($0.85) incentive (initially capped at $75 million, then increased to $150 million in 2022) for early BEPS compliance. Unlike the operators of traditional energy efficiency rebate programs, utilities pay the incentives to building owners and,

in return, receive an offsetting credit for their state utility tax (Washington State Legislature 2023). This is a unique way to legislate a new rebate that is not under the purview of the utility regulators. However, building owners are still required to provide funding upfront because they only receive the rebates after demonstrating compliance with the standard, which creates a barrier in the program. As of the end of 2022, only 35 applications had been initiated and only 4 submitted (Nadel and Hinge 2023).

Additionally, Washington's BEPS is the only program that created long-term initiatives that introduce strategic energy management (SEM) programs into commercial buildings participating in the program. This is significant because SEM moves one stop beyond BEPS by leveraging buildings as a resource for the grid. The law also called for the creation and maintenance of an energy management plan (EMP) and operations and maintenance program. While incentive rates are small, customers value the continued relationships with utilities that the SEM program has established (Gilless, Ip and Robinweiler 2022).

Takeaways from Benchmarking and BEPS Accessing Data

Even with state level programs designed to gather and deliver energy data, gathering and aggregating utility data for multifamily buildings is a complicated and difficult process to establish. The state examples present common themes of coordination and clarity in program design and communication across implementing entities. Designing and creating entirely new data collection and aggregation infrastructure is a large undertaking for utilities. It can be approached in numerous ways, and jurisdictions should lay out required program design elements and deliverables beforehand. Either way, utility coordination with regulators is valuable in ensuring smooth communication of these required program elements. It will also help ensure that the scope of this large undertaking is not underestimated, and that utilities will prepare sufficiently to collect and deliver this data. Finally, coordination with regulators around utility cost recovery of this infrastructure investment, as discussed in the New Jersey example, is a crucial step to allow utilities to include continued data investment into their long-term planning. The continued difficulty in data gathering, aggregation, and delivery highlights the need for improved procedures and coordination around such data policies.

Steps to Unlock Energy Data for Multifamily Programs

The above state examples demonstrate that there is not an easy way to tackle the issues with accessing and aggregating data for multifamily properties. Even with policies designed to aggregate the data, barriers in processes and implementation appear, in addition to the standard barriers outlined in pages 3-4 of this paper. Data access is not a per-project issue, but part of a larger energy strategy. Data informs current programs, helps administrators design programs to address relevant needs, and facilitates future grid planning efforts. As outlined in a letter from DOE, HUD, and EPA to utilities and state utility commissions, getting this data is possible, and accessing it is vital to help multifamily owners participate in energy efficiency programs (DOE, EPA, HUD 2024). The examples above have highlighted several opportunities to streamline

procedures and invest more in data gathering. Below are key strategies that can be used by policymakers, regulators, utilities, and other stakeholders to enable the access and aggregation of multi-family data.

Statewide Legislation on Access to Energy Data

Implementing statewide legislation that looks to gather or use data in implementation can set standards and procedures for agencies, utilities, and other stakeholders that might be a part of the process to access and use multifamily data. States can pass legislation on benchmarking and BEPS programs, such as the examples above, or a general data access law that looks to provide information's to residents in the state. The IMT Model Data Access Law is an example of general legislation states can use (Majersik et al. 2023). To overcome barriers in access to multifamily highlighted in this report, legislation can look to explicitly include and define the MFAH sector as a priority. As the examples above show, unless states explicitly include multifamily, they should not assume that multifamily buildings will be included in data collection efforts.

Regulatory Orders on Utility Aggregation and Investment in Data

In addition to or as an alternative to legislation, utility regulators can also act to set up processes to access and aggregate data. Using their existing authority, regulators can require utilities to set up processes to aggregate data and make it available to customers or third-party implementers. Regulatory orders and mandates that recognize the value of long-term investment in utilities creating and maintaining building level data can also enable utilities to invest in data infrastructure for near-term and future grid-planning needs. Establishing data access procedures can help utilities maximize the value of their energy efficiency portfolio by engaging customers, directing them to energy efficiency programs, and enabling targeting of low-performing buildings. Additionally, establishing regulatory processes where data gathering is considered an infrastructure investment can enable utilities to make these long-term investments. Regulators have many tools they can use to encourage this investment with or without legislation enacting programs (Hall et al. 2022).

Streamlining Utility Processes for Data Collection

To leverage utility data most effectively states can look to promote or mandate commonality in how utilities in the state aggregate, deliver, and analyze data. While flexibility in data gathering and delivery can be beneficial, allowing for individual utility processes can cause administrative issues. As in the New Jersey example, some of the utilities in the state missed program deadlines because they were unable to set up proper processes and procedures in time (i.e. provision of aggregated data). Using one tool of collection such as the ENERGY STAR Portfolio Manager can provide a template for all parties to work from, but ensuring data quality may require more explicit requirements for utilities upstream. States can consider a single

aggregator that works across the state with each utility. Additionally, regional approaches to data access, such as those proposed in applications for DOE's GRIP program, highlight another potential way to establish common standards for data aggregation and delivery across an even broader area (Ropeik 2024). Finally, if a state plans to allow utilities to implement their own data gathering processes, it may be more helpful to create a list of business requirements and deliverables for these services to ensure selection of implementers that can accomplish the necessary tasks.

Stakeholder Engagement and Data Feedback

States should create resources to alleviate burdens and provide technical assistance for MFAH property owners and residents. Building owners should not be the main parties responsible for coordinating the delivery of energy usage data. Increasing the administrative burden on many building owners would make it far more difficult to accomplish benchmarking goals than designating the utility as the responsible party (Majersik et al. 2023). Engaging multifamily stakeholders can inform states on how programs can best invest in multifamily communities. As a next step, states can consider various ways to provide technical assistance to multifamily residents to navigate newly available programs. A technical assistance hub or "one-stop-shop" that offers services to help building owners understand energy data and navigate available programs to help lower energy usage is one helpful example of this. The array of rebates, tax credits, and other incentives that a building or project may be eligible for can be intimidating; a technical assistance hub can help customers braid resources from various funding sources to enable more projects.

Leverage for Program Design

Improved access to MFAH data can also allow utilities to better serve these customers with future programs. Using accurate multifamily data, utilities can redesign commercial programs to provide energy efficiency program resources to multifamily residents. Data can also strengthen current utility offerings by segmenting customers and targeting them for relevant program marketing and unlocking more accurate demand response programs (Hall et al. 2022). States can leverage data to implement programs like Seattle's strategic energy management program. This integrates benchmarking and BEPS with demand response and long-term grid planning.

Conclusion

Access to aggregated whole building energy data is a barrier to serving multifamily programs and without action will continue to be elusive. Key policies like benchmarking and BEPS address some of the common challenges presented in accessing and aggregating multifamily data, such as processes and standardization of data gathering. By working to enable access to these programs through state legislation, regulatory action or other policy means,

jurisdictions will be better equipped to analyze the energy use habits of their multifamily constituents and better serve them, thereby ensuring a more equitable clean energy transition.

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