Utility Benchmarking in Multifamily Housing 101: Kilowatt Count Your Way to a Trimmer Bottom Line

Tuesday
11:15-12:30pm
Panelists

- **Speakers**
  - Terrance Brady, Tampa Housing Authority
  - Scott Ledford, ICF
  - Dan Teague, WegoWise

- **Moderators**
  - David Ruggiero, ICF
Utility Benchmarking in Multifamily Housing 101: Kilowatt Count Your Way to a Trimmer Bottom Line

May 16, 2017
Learning Objectives

• In this session, you will:
  • Learn about the benefits of utility benchmarking, including various drivers for performing utility benchmarking at multifamily properties
  • Understand how your organization can get started with utility benchmarking, including with the help of new HUD resources
  • Hear from a multifamily housing provider that has undertaken utility benchmarking
  • Hear from someone who advises multifamily housing providers on utility benchmarking
Utility Benchmarking Overview
What is Utility Benchmarking?

- The act of tracking, analyzing, and reporting energy and water consumption and costs for a property or portfolio of properties, so that properties can be compared against themselves over time, and/or against others
- Considered a fundamental asset management practice
  
  “You can’t manage what you don’t measure!”

- An activity that brings benefits to owners, tenants, funding providers, governing agencies, and the general public
What Can You Do With Utility Benchmarking Results?

- Understand how property/portfolio energy and water performance changes over time
- Identify top performing properties in a portfolio, as well as underperformers
- Compare property/portfolio performance against others
- Prioritize energy and water improvement efforts and investments to maximize impact
- Assess the effectiveness of investments made to improve energy and water performance
What are the Benefits of Utility Benchmarking? (Little Picture)

- Reduce operating costs for owners, tenants
- Equip property owners with information needed to make strategic decisions regarding capital investments, operations and maintenance, and future budgets
- Stabilize assets
- Maximize return on investments
- Improve services to tenants
What are the Benefits of Utility Benchmarking? (Big Picture)

• Reduce waste of money and natural resources
  Did You Know?
  • Energy waste by U.S. households and businesses is valued at $130 Billion per year.
  • As a rule of thumb, building energy use can be cut by at least 20% through cost-effective improvements.

• Increase energy independence and combat climate change
• Preserve affordable housing and save taxpayer dollars
• Support government research and development of better policies, programs, and incentives
• Support academic research
What is Driving Utility Benchmarking Across the Country?

- Widespread recognition of benchmarking as a best practice and a way to eliminate operational waste (money, natural resources)
- Growing number of state and local jurisdictions requiring benchmarking and disclosure of energy and water performance
- Some utilities requiring benchmarking as part of participation in incentive programs
What is Driving Utility Benchmarking Across the Country? (cont’d.)

• HUD voluntary initiatives
  • Better Buildings Challenge (BBC)
  • Green Mortgage Insurance Premium (MIP) Reduction
• Existing and proposed HUD requirements

Regardless of program involvement, HUD strongly encourages all housing providers to practice utility benchmarking as part of their basic asset management activities.
How Can My Organization Get Started With Utility Benchmarking?
Understand the Utility Benchmarking Process at a High Level

• Develop a sense of the major steps in the utility benchmarking process
  • Prepare Your Approach
  • Collect Utility Data
  • Use Benchmarking Software
  • Enter the Data
  • Share the Results
  • Make Informed Decisions

• Begin assessing the resources that you prefer to use for each of these steps
  • In-house staff
  • Summer interns
  • Third-party consultants or service providers
Begin to Catalog Your Portfolio

• Start to record your portfolio’s characteristics:
  • Number of properties
  • Number of buildings per property
  • Number and type of utility meters at each property
• Locate resources already complete, such as HUD-52722 submissions and Utility Allowance Schedules
Introduce Yourself to Portfolio Manager®

- **ENERGY STAR® Portfolio Manager®** is a free, web-based software tool for utility benchmarking.
- Currently used to benchmark more than 450,000 properties across the U.S.
- All properties can use Portfolio Manager to measure and track energy and water use intensity (consumption per sq. ft.), greenhouse gas emissions, and a range of calculated performance metrics.
• Portfolio Manager offers advanced reporting functionality to help track and assess performance of properties and portfolios

• The ENERGY STAR 1-100 score is available for multifamily properties of 20 units or more
  • Allows properties to be compared to each other
  • Properties scoring 75 or above eligible for ENERGY STAR Certification

• Many third-party providers are sending data through to Portfolio Manager on behalf of property owners – offering another pathway to facilitate benchmarking

• Extensive training resources are available at https://www.energystar.gov/buildings/training
Review Available HUD Resources

- Start at the Utility Benchmarking page on the HUD Exchange
- Review the HUD Multifamily Utility Benchmarking Toolkit
- Check out Events and Training, as well as News and Announcement
  - Recordings, transcripts, and slides from the recent webinar series are available now
- Bookmark this website, and check back regularly for updates
HUD’s New Multifamily Utility Benchmarking Toolkit
Utility Benchmarking

Utility benchmarking is a fundamental asset management practice, consisting of tracking, analyzing, and reporting the utility consumption and costs associated with a property or portfolio of properties. It allows multifamily property owners, as well as associated funding providers and governing agencies, to gain insight into the energy and water performance of properties, the potential for improvement in those properties, changes in performance over time, and the effectiveness of investments made to improve performance.

HUD strongly encourages the practice of utility benchmarking by the companies, organizations, and agencies that own and manage the nation's housing stock. Please visit this site regularly to find news and announcements, events and training, resources and tools, and policies and incentives to support your efforts.

Now Available: HUD's Multifamily Utility Benchmarking Toolkit

This comprehensive guide to utility benchmarking for the multifamily sector is organized into three sections:

- **Benchmarking 101**
- **Utility Benchmarking Step-by-Step**
- **Policies and Programs**

It includes links to key resources and requirements, tools and reports, case studies, and FAQs.
What is utility benchmarking?

Utility benchmarking is a fundamental asset management practice, consisting of tracking, analyzing, and reporting the consumption and costs associated with a property or portfolio of properties. It allows multifamily property owners, as well as associated funding providers and governing agencies, to gain insight into the energy and water performance of properties, the potential for improvement in those properties, changes in performance over time, and the effectiveness of investments made to improve performance.

Armed with this knowledge, property owners, funding providers, and governing agencies can make better decisions about the management of our nation's building stock, reduce operating costs, increase energy independence, and combat climate change. For federally-supported housing, utility benchmarking serves to preserve affordable housing, protect tenant welfare, target investments, and meet environmental goals.

How can my organization get started?

Although housing providers are free to approach utility benchmarking as they choose, the step-by-step process outlined in this online toolkit was developed to demystify the process and promote best practices. It's important for your organization to understand from the beginning that utility benchmarking of multifamily properties involves:

1. Establishing a baseline for energy and water consumption
2. Setting performance goals
3. Monitoring and reporting on performance
4. Analyzing performance data
5. Identifying opportunities for improvement
6. Implementing energy and water conservation measures
In order to benchmark the energy and water performance of your organization's properties for the first time, your organization will need to do some preparation, including cataloging its portfolio of properties, determining how best to collect and input utility data, and making decisions about whether to meet minimum standards or seek deeper insight into the portfolio. Housing providers have found it beneficial to document this information centrally, update it regularly, and refer back to it frequently. By keeping information organized, the initial and successive years of utility benchmarking will be as easy as following a recipe.

HUD's Multifamily Utility Benchmarking Plan Template is a spreadsheet-based tool designed to help your organization gather necessary information and document decisions. HUD does not require that your organization use this template, but keep in mind that any utility benchmarking plan should give your organization a single document to refer back to in the future, ensure consistency and continuity, and help build capacity in your organization for the future.

Additional guidance on developing a utility benchmarking plan can be found in Designing a Benchmarking Plan from the U.S. Department of Energy (DOE), though this resource is geared towards the commercial buildings sector. Whether your organization chooses to use these existing resources or develop a utility benchmarking plan from scratch, the following items should be considered and addressed.
Policies and Programs

www.hudexchange.info/programs/utility-benchmarking/toolkit/policies-and-programs/

HUD Exchange / Multifamily Utility Benchmarking Toolkit

Housing and Urban Development

HUD strongly encourages utility benchmarking and requires it in some programs

HUD recognizes that utility benchmarking is important for all housing providers because it allows them to:

- Track properties' energy and water performance;
- Detect malfunctioning equipment and billing errors;
- Prioritize operational and capital improvements;
- Verify the return on those investments; and
- Plan for future budget needs.

HUD has issued Notices of Proposed Information Collection that, if enacted, would require the collection of utility benchmarking information from housing providers supported by the Office of Multifamily Housing Programs.

Related Resource
Former OMB Director and HUD Secretary, Shaun Donovan, Announces HUD's Utility Benchmarking Initiatives

At Greenbuild 2016, Director Donovan highlighted the Administration's efforts to make the places we live and work for all Americans. Through HUD's focus on high-performance buildings, including our utility benchmarking initiatives, homes across the country are becoming more efficient, healthy, and cost-effective.
What are the benefits of utility benchmarking?

Just the act of utility benchmarking itself creates a variety of benefits to property owners, tenants, and the public. Property owners who integrate utility benchmarking into their asset management approach often see significant improvements in property performance. Utility data tracking can help property owners discover billing errors and malfunctioning equipment, which, once corrected, can result in immediate financial savings. Knowledge gained from utility benchmarking can inform retrofit planning and help verify savings in individual buildings, multi-building properties, and portfolios of properties.

Utility benchmarking can also lead to improvements in property operations and operating costs, which can help protect tenants’ comfort and finances as well. The energy and water performance metrics reported through utility benchmarking programs also help funding providers and governing agencies create better incentives for energy- and water-efficiency improvements, target investments more strategically, and track progress towards mission-related goals. When made available to the public, anonymized data from utility benchmarking programs also supports academic research and enhances public awareness.

Does HUD require utility benchmarking?

HUD has issued Notices of Proposed Information Collection that, if enacted, would require the collection of utility benchmarking information from housing providers supported by the Office of Multifamily Housing’s assisted and insured housing programs and the Office of Public Housing’s public housing program, with certain exceptions.

HUD also hosts certain voluntary initiatives, like the Better Buildings Challenge (BBC) or the Green Mortgage Insurance Premium (MIP) Reduction, which require participants to conduct utility benchmarking and share the results.

Regardless of program involvement, HUD strongly encourages all housing providers to practice utility benchmarking as part of their basic asset management activities.

Related Resources

- BuildingRating.org, an online information exchange on building rating policies and programs
- U.S. Environmental Protection Agency’s report, Benchmarking and Energy Savings
- Institute for Market Transformation’s report, The Benefits of Benchmarking Building Performance
Variety of Embedded Tools and Resources

Multifamily Utility Data Collection Database

Utility benchmarking can be challenging in multifamily properties with tenant-paid utility accounts, because each utility provider requires property owners to follow a different procedure for requesting tenant-paid utility data. To make things easier, HUD is incrementally cataloging utility providers' procedures for requesting tenant-paid utility data, whole property data, and automatic data transfer. It contains the following information:

- Database: Documents the process for requesting utility data from many providers share data
- Rubric: Shows a scoring rubric used to develop a user-friendly site
- Regional Benchmarking Mandates: Outlines many of the local utility

Download the Multifamily Utility Data Collection Database (XLSX)

Utility Profiles
Select the state where a utility operates to view a profile describing the utility:

- Alabama
- Alaska (N/A)
- American Samoa (N/A)
- Arizona
- Arkansas
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas

Multifamily Utility Benchmarking Plan (beta version 1.0)

NOTE: This tool is currently in a beta version, meaning it may be improved over time. Be sure to carefully follow all instructions and thoroughly check your data; your data is your responsibility. Please refer to the Multifamily Utility Benchmarking portion of the HUD Exchange website if you would like to provide feedback about this tool.

Organization Name

How to Use This Tool
This planning template is designed to help your organization catalog basic information about its portfolio of multifamily properties and document its preferred approach to utility benchmarking for easy reference. It can also help set up your organization's ENERGY STAR Portfolio Manager account. Use of this tool is optional, but keeping information organized is the key to successful utility benchmarking. To get started, complete the information below to help plan your organization's preferred approach. Then, enter data about your properties and utilities on the following worksheets.

Tool tips are provided for many fields on the following worksheets - simply click on the header cell of a column to see any additional information about what should be included for that field. Note that if you move a tool tip around the screen, tool tips for other fields will then also appear in that location on the screen. In order for tool tips to start showing up next to their associated column again, you will need to close and reopen the tool (be sure to save any new work before closing the file!)

This planning template is pre-populated with some example data, which may be deleted if you prefer. If you prefer to keep the example data for reference, just be sure not to include these example properties or masters in any of the Portfolio Manager spreadsheet uploads you may generate on the last worksheet. Otherwise, the sample properties will then appear in your organization’s Portfolio Manager account.

Avoid copying and pasting whenever possible in this planning template, as many cells contain data validation that will be overwritten if data is pasted into the cell. Also avoid changing the formatting of cells, as this may affect the functionality of any Portfolio Manager uploads.

Utility Benchmarking Goals
Describe the goals associated with your organization's utility benchmarking efforts. They may include one or more of the following:
- Create an energy and water management plan, identify quick fixes, and implement them
- Report property performance information and track utility costs for federal government programs (HUD, USDA, etc.)
- Set utility usage thresholds for energy and water
- Benchmark service providers' performance
- Track and report utility performance
- Use benchmarking results to make investment decisions
- Use benchmarking results to make operational decisions
- Use benchmarking results to make marketing decisions
- Use benchmarking results to make public relations decisions
- Use benchmarking results to make government relations decisions
- Use benchmarking results to make social services decisions
- Use benchmarking results to make strategic planning decisions
- Use benchmarking results to make capital improvements decisions
- Use benchmarking results to make project management decisions
- Use benchmarking results to make facility management decisions
- Use benchmarking results to make procurement decisions
- Use benchmarking results to make policy decisions
- Use benchmarking results to make quality improvement decisions
- Use benchmarking results to make safety decisions
- Use benchmarking results to make schedule management decisions
- Use benchmarking results to make sustainability decisions
- Use benchmarking results to make team building decisions
- Use benchmarking results to make training decisions
- Use benchmarking results to make vendor management decisions
- Use benchmarking results to make waste management decisions
- Use benchmarking results to make work management decisions

Benchmarking Plan
Property Information
Utility Providers
Utility Meters
Portfolio Manager Meters
Upload to Portfolio Manager
Information on Financial and Technical Assistance

The Better Buildings Challenge (BBC):
A voluntary incentive program that offers both financial and technical assistance for utility benchmarking and more

What is it?
The Better Buildings Challenge is a voluntary leadership initiative that asks property owners and managers to make a public commitment to energy and/or water efficiency. All BBC Partners are eligible to receive on-site or off-site technical assistance with utility benchmarking. BBC Partners that own or manage assisted housing are also eligible for a Management Add-On Fee incentive.

What is the financial/technical assistance?
BBC Partners may request technical assistance from their BBC Account Managers to gain support in overcoming obstacles towards their energy and/or water efficiency pledges, including utility benchmarking. HUD establishes a scope of work for the direct technical assistance project in cooperation with the BBC Partner and then hires contractors to provide on-site or off-site support.

Further, owners/managers of assisted housing that are members of the BBC may request up to $4 per unit per month in the form of a Management Add-On Fee to support the work associated with participating in the Better Buildings Challenge. This includes the practice of utility benchmarking.

To access this financial assistance, BBC Partners should request the Management Add-On Fee incentive from their local HUD Field Office. The Management Add-On Fee is paid to the owner/manager through the property’s operating account. The cumulative amount received may not exceed $5,000 per year per property.

More Information
- Better Buildings Challenge program flyer (coming soon)
- Management Add-On Fee incentive flyer (coming soon)
- Better Buildings Challenge Multifamily Sector program website

Mortgage Insurance Premium (MIP) Reduction:
A voluntary incentive program that can pay for utility benchmarking and more

What is it?
Mortgage insurance encourages lenders to make loans to private sponsors or owners of rental housing by insuring the lender against losses incurred when borrowers default on their mortgages. If a housing provider owns and/or operates HUD-insured affordable multifamily rental property, the owner must pay a mortgage insurance premium, at a rate of 0.45% to 0.70% of the unpaid balance of the mortgage loan amount, along with the property's mortgage.

What is the financial/technical assistance?
In early 2016, HUD allowed for a lower multifamily insurance rate for green and energy-efficient housing to encourage owners to adopt higher standards for construction, rehabilitation, repairs, maintenance, and property operations. The lower rate incentivizes owners to implement measures that result in housing with greater energy and water performance, reduced operating costs, and improved indoor air quality and resident comfort.

Through this voluntary program, multifamily property owners may receive a 0.25% reduction in the MIP for properties that are committed to industry-recognized green building standards and achieve and maintain an Energy Star score of 75 or higher as evidenced by a report from Portfolio Manager. A housing provider may use the savings generated to cover costs associated with achieving these energy-efficiency targets, which can include the utility benchmarking efforts necessary to obtain an EUI, WUI, and ENERGY STAR score from Portfolio Manager.

More Information
- One page summary of MIP reduction program
- Final Notice, “Changes in Certain Multifamily Mortgage Insurance Premiums and Regulatory Waiver for the 542 (c) Risk-Sharing Program”
Example Release Forms

The following are examples of release forms that have been used to facilitate the collection of tenant-paid utility data in certain areas. Note that the specific language of any release form your organization may develop should be reviewed and approved by the relevant utility provider before your organization begins the process of collecting tenant information and signatures.

Energy Impact Illinois Multifamily Building Owner Utility Bill Release - If tenant units are separately metered, each tenant (or the building owner for vacant units) must complete the multi-family building tenant release form.

SCE Customer Information Standardized Request Form - Customers of this western utility provider can use this form to give authorization to a designated entity to receive service account information or act on their behalf to perform a variety of specific acts and functions, including "EPA benchmarking" and "requesting and receiving billing records, billing history, and all meter usage data used for bill calculations for [their] service account(s)."

Centerpoint / EnergyScoreCards Minnesota Tenant Utility Information Authorization Form - Authorizes the property owner and partner organizations to collect historical and current utility consumption and spending information for tenant-paid utility accounts.

HUD Secretary Open Letter to Utility Providers and Sample Release of Tenant Utility Information Form – An open letter asking utility providers to support and participate in efforts to facilitate access to utility usage data for owners of multifamily residential buildings in HUD's portfolio, with a form designed as a standardized format to document a tenant's consent for the utility provider to release information to the housing provider and HUD.

Sampling Protocols for Tenant-Paid Utility Data (Method D)
The first step in sampling tenant-paid utility data is to identify how many units are necessary to sample in order to appropriately estimate utility consumption and cost for all of the units in the property. For use in its programs, HUD references two sampling protocols, summarized in the table below. Housing providers should refer to the program requirements applicable to their specific properties to determine which protocol is most appropriate.

Related Resources
Most housing providers supported by HUD's affordable housing programs already collect some individual tenant-paid utility data for the purpose of calculating utility allowances.
FAQs

Frequently Asked Questions

What should I do if I have a utility meter that serves multiple properties?

What should I do if I have a utility meter that serves multiple buildings within a property?

What should I do if my property uses utilities that are not metered or that are not paid for on a consumption basis?

What should I do if I use on-site or community-based renewable energy technology?

What should I do if I purchase off-site renewable energy technology?
Case Studies

The energy- and water-efficiency solutions featured below demonstrate how leading multifamily housing providers have successfully used utility benchmarking to implement a wide range of projects, realizing deep savings in individual properties and across broad portfolios. These and other case studies and resources are available on the U.S. Department of Energy’s (DOE’s) Better Buildings Solution Center.

Showcase Projects Featuring Utility Benchmarking

Property owners share details on their energy- and water-efficiency projects, which apply cutting-edge measures to individual properties taking a multi-measure, whole-property approach to achieve performance improvements and cost savings. Showcase Projects are available for a variety of property types and sizes, and typically show savings of 20% or more.

- City Gardens Apartments (LINC Housing)
- Colony Plaza Apartments (POAH)
- Boundary Village (Mercy)
Experiences in Multifamily Utility Benchmarking
Today’s Themes

1. What is the Value of Benchmarking

2. Data Access & Reporting - How they Effect Benchmarking

3. The Mechanics of Benchmarking

4. Emerging Trends
Questions?
Related Resources

- HUD Multifamily Utility Benchmarking Toolkit
- U.S. EPA Report: Benchmarking and Energy Savings
- Portfolio Manager Overview
- ENERGY STAR Training Resources
- ENERGY STAR FAQs
Contact Information

David Ruggiero  
(David.Ruggiero@icf.com)

Terrance Brady  
(terrance.brady@thafl.com)

Scott Ledford  
(Scott.Ledford@icf.com)

Dan Teague  
(dteague@wegowise.com)
Thank You

Provide feedback on this session in the new Summit App!

Download the app to your mobile device or go to bbsummit.pathable.com