BETTER BUILDINGS
U.S. DEPARTMENT OF ENERGY

Better Buildings Neighborhood Program Data and Evaluation Peer Exchange Call: *Strategies for Collecting Household Energy Data*

July 19, 2012

Call Slides and Discussion Summary

Agenda

- ## Call Logistics and Attendance
  - Is your program getting household energy data? How?

- ## Program Experience and Lessons:
  - Janelle Beverly and Jeff Hughes, University of North Carolina Environmental Finance Center (http://www.efc.unc.edu/index.html)

- ## Discussion:
  - What are successful strategies for obtaining household energy data?
  - What are remaining challenges?
  - How are programs analyzing and using data once they get it? (e.g., normalization, etc.)

Participating Programs

- Bainbridge Island, WA

- Boulder, CO

- Centennial, CO

- Charlottesville, VA

- Chicago, IL

- Davis, CA

- Durham, NC

- Eagle County, CO

- Missouri

- New York

- Philadelphia, PA

- Portland, OR

- San Diego, CA

- Southeast Energy Alliance

Environmental Finance Center at the University of North Carolina

School of Government, Knapp-Sanders Building
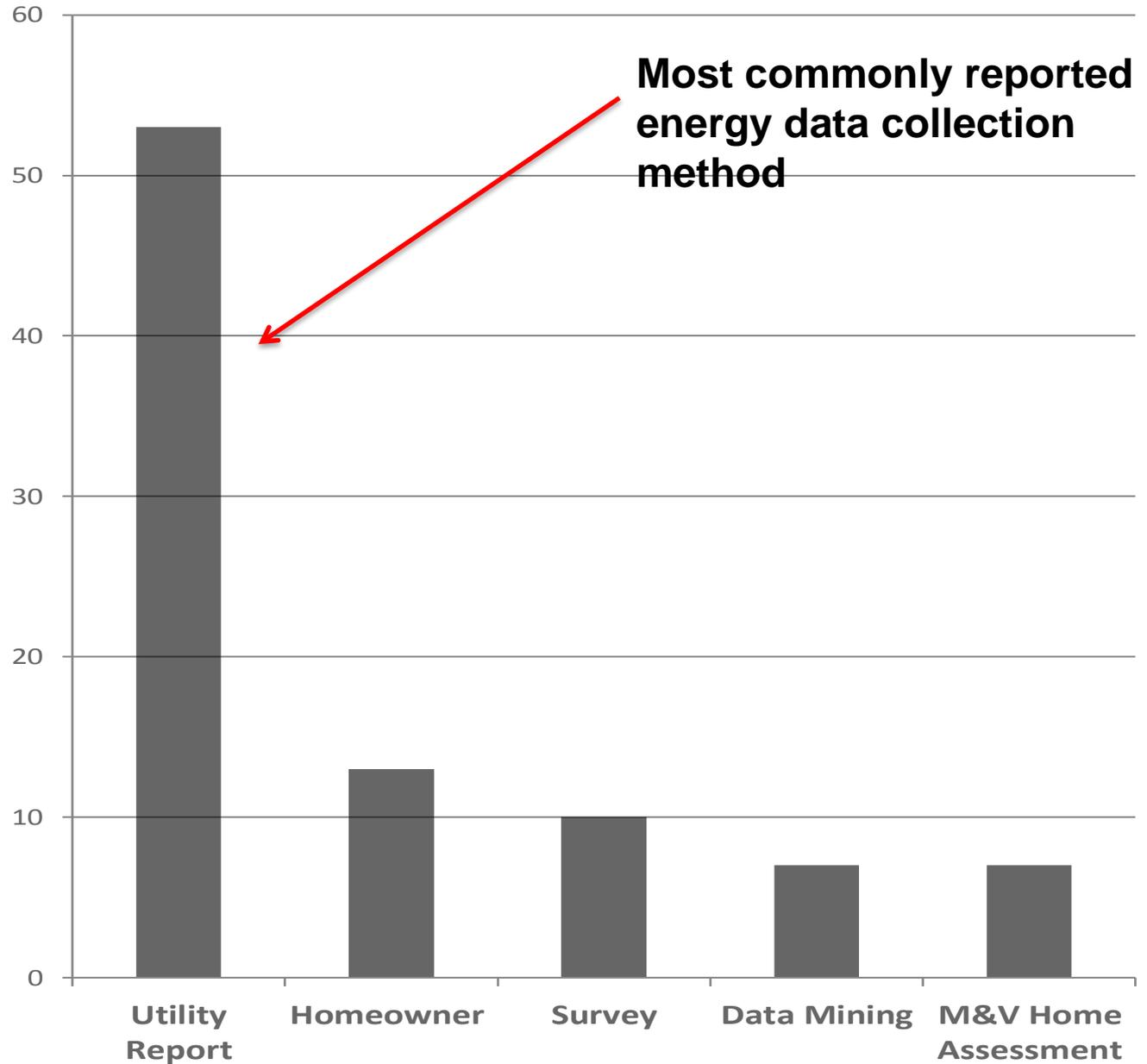
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Energy Data Collection Methods

Email Solicitation

Email requests sent to participants to download and forward online billing statements

Mail Solicitation

Mail requests sent to participants to copy billing statements and mail

Direct Access to Utility Database

Utility granted Durham third-party access to database of utility records

Utility Report

Utility provided Durham with periodic batch reports of utility records

Data Collection Method	Completeness	Privacy	Turnaround
Email Solicitation			
Mail Solicitation			
Utility Database			
Utility Report: Piedmont EMC			

A utility report offers the most complete and potential timely access to pre- and post-retrofit energy information.

(%) of Managers that report use of energy data collection methods

Most commonly reported energy data collection method

| | Utility Report | Homeowner | Survey | Data Mining | M&V Home Assessment |

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UNC Environmental Finance Center: Key Points

- Email requests to homeowners (i.e., asking them to send an electronic billing statement) had a 16% response rate.

- Hard copy mail solicitation generated only emailed responses.

- Direct access to utility systems took a lot of time (e.g., to search individual customer records) and only 50% of customers provided an account number that could be searched.

- Utility "batch" reports were the most complete and potentially timely strategy, but it can be difficult to work out agreements with utilities.

- In addition to obtaining data, challenges can include the time and cost of getting data into usable formats (e.g., from hard copies to electronic).

Data from Utilities: Challenges

- Receiving incomplete data (e.g., no addresses)

- Receiving data in difficult formats (e.g., paper-based) that take time to process

- Data aggregated over different time periods, which complicates comparisons, normalization for weather, etc.

- Difficulty getting customers to sign release forms or to fill them out completely (e.g., provide account number)

- Multiple release form requirements (and potentially multiple forms) for multiple utilities

- Developing capacity to share data can be costly for utilities, and some charge for it

- Public utility commission rules on data sharing (e.g., new PUC rules in Colorado)

- Obtaining data about households that aren't in the program (e.g., for comparison)

Data from Utilities: Strategies

- Use direct access agreements to access utility data
- Leverage Smart Meters to get hourly data (vs. data aggregated over a time period)
- Build partnerships with utilities over several years to get the right data in a useful format
- Have homeowners sign release forms at time of:
  - Invoicing for audits
  - At test-out when the auditor can explain the form in real time
- Integrate release data requirements from multiple utilities into one form or have homeowners sign multiple forms at one time
- For missing utility data, go directly to homeowners to fill data gaps
- Programs suggested that it may be easier to get data from smaller, municipal utilities and more difficult to get data from co-ops and others that are highly regulated

Data from Homeowners: Challenges

- Getting post-upgrade data can be very difficult (e.g., data for one year after work is done)

- It is difficult to enforce program rules requiring homeowners to submit data

- Some homeowners have trouble with the mechanics of submission (e.g., how to email an attachment, etc.)

Data from Homeowners: Strategies

- Use IT system to automatically send requests to homeowners
  - For example, Durham uses a Longjump database that emails homeowners right after work is done and then at six month intervals to remind them to send in energy bills.

- Require pre-upgrade data (up to 12 months):
  - Before the audit can begin
  - At the time of signing upgrade contracts
  - Before rebates are issued
  - Note that incentives don't always work—for example, one program did not get increased data submission when it offered a $10 coffee card

- Have homeowners provide phone authorization (i.e., a "verbal release") to utilities to send data to the program

3ʳᵈ Party Systems: Key Points

- Some programs are integrating SnuggHomes and SalesForce

- Repower Bainbridge is using MyEnergy

- Utilities may feel more comfortable with a data agreement that they've negotiated with a third party data provider than with an EE program

Potential Future Call Topics

- Planned Program Evaluations (August 2)

- Using Home Energy Scoring Systems

- Experience with Software/CRM Options

- How programs are tracking customer data in a way that can be accessed by contractors for leads on new jobs and data about completed jobs