

Industry Host: Bright Power

Title: Fragmented silos of building energy usage & modeling data means good projects don't happen

Challenge:

Devise a method to share data and insights across programs in order to improve the adoption of energy efficiency programs.

Background:

In the last several years, there has been a proliferation of energy analysis, evaluation and tracking tools for buildings, funded by both the public and private sectors, many of them open source, all of which solve an important piece of the puzzle but none of which is a complete solution on its own. This diversity of incomplete solutions in use by energy programs, energy consultants, and building owners make it difficult to share data, grow industry knowledge, and build confidence in results. While thousands of energy projects have taken place in recent years, and thousands of buildings are now required to benchmark by local and state laws, it remains very difficult to access information on the results of those projects, or answer basic questions about energy in buildings. For instance what is typical energy and water consumption and spending for buildings of different types? What are typical costs and savings for different measures? What are typical rates of success for energy projects? How long do savings persist?

While different programs, building types and regions do call for different approaches, many aspects of energy projects are constant. For instance, all energy projects could benefit from:

- Analysis of utility data before and after implementation
- Some form of audit, survey and analysis to collect property information, identify savings opportunities and project the savings from various measures
- Collecting information on recommended and implemented measures, including costs
- Some form of commissioning or verification after measures have been implemented
- Being able to use the body of information on other buildings and past energy projects to inform the improvements they choose to pursue

Boundaries and Considerations:

- 1) Different tools or efforts currently exist for different steps in the process (e.g. benchmarking tools such as Energy Star Portfolio Manager, EnergyScoreCards, Wegowise; energy modeling tools such as TREAT, Energy Pro, eQuest and myriad spreadsheet calculators for specific measures in use by programs, from EPA; energy data standards and platforms such as DOE's SEED, BEDES and Building Sync efforts; ASHRAE standards for energy audits and utility analysis).
- 2) Much of the underlying data (utility data, building information) is private, and authorization from account holders building owners (and potentially tenants) could be required for some types of data sharing.
- 3) Long-term maintenance and promotion of a platform or standard is often a challenge.
- 4) This is a complex problem in a space that is already crowded with fragmented efforts from utility programs, local and state governments, federal agencies like DOE, EPA, HUD, state housing agencies, real estate companies, consultants, banks and software companies.