CREATING A DATA PLATFORM FOR ENERGY EFFICIENCY

WHAT IS SEED?

The Standard Energy Efficiency Data (SEED) Platform™, produced by the U.S. Department of Energy (DOE) in partnership with Lawrence Berkeley National Laboratory (LBNL), is an open-source, web-based platform that allows users to import building energy data from multiple sources into one central repository and track compliance with building energy initiatives.

SEED BENEFITS

- Serves as a repository for disparate sources of buildng energy data

- Can create charts to compare building performance metrics

- Screens data upon import for outliers and potential errors

- Able to connect to other federal and proprietary tools, and share data with the public

- Serves as the national brand and standard for building energy data storage

- Includes built-in privacy protections to manage user permissions and data sharing

For cities that have benchmarking and transparency policies, data collection and management represents one of the most critical components of a successful program. Under these initiatives, city officials have to annually collect building energy data from building owners and in many cases disclose that information to the public, in an efficient manner that preserves data quality. To accomplish this, cities have developed their own internal solutions for data management through tools such as Microsoft Access and Excel. However, these options are time-consuming and have the potential for introducing human error.

Platform Tools

SEED is designed to be flexible and allow for cities to tailor their data solutions to fit their programs. SEED is web-based to facilitate potential connections to other tools such as Portfolio Manager to preserve data quality, save staff time, and increase the opportunity for add-on development. Developers can use the Application Programming Interface (API) to create additional functionality for the platform, as requested by their users. Also, data can be shared out of SEED to other federal tools such as the Buildings Performance Database, or with the public, through the API. Building performance data stored within the platform is translated to the Building Energy Data Exchange Specification, or BEDES, which is a building energy data dictionary developed by DOE to allow for easier transfer and comparison of building energy metrics across platforms.

Users can create projects within SEED from their building lists to track compliance with an ordinance or focus on small groups of buildings within a larger portfolio. Platform managers can also set permissions for individual users of SEED and create "sub-organizations" to maintain privacy protections around sensitive data and allow for the sharing of data across different organizations. There is also the ability within the Platform to create graphs based on certain metrics so users can quickly compare data.

An Open Source Solution

With the SEED Platform, the DOE is seeking to create a standard code base that would allow local jurisdictions to utilize inter-operable software systems and data that can be shared and updated within the SEED community as the market and technology advances. The SEED source code is currently hosted on Github, a public hosting service. In 2015 DOE launched the SEED Platform Collaborative, which is a community of the organizations and public entities who use, support, and help improve the SEED Platform. There are several avenues to join the Collaborative, both for interested potential users and companies who would like to contribute to the code or become certified hosting providers. For more information, please visit the DOE website.

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For more information, contact SEEDplatform@ee.doe.gov or use the SEED Interest Form