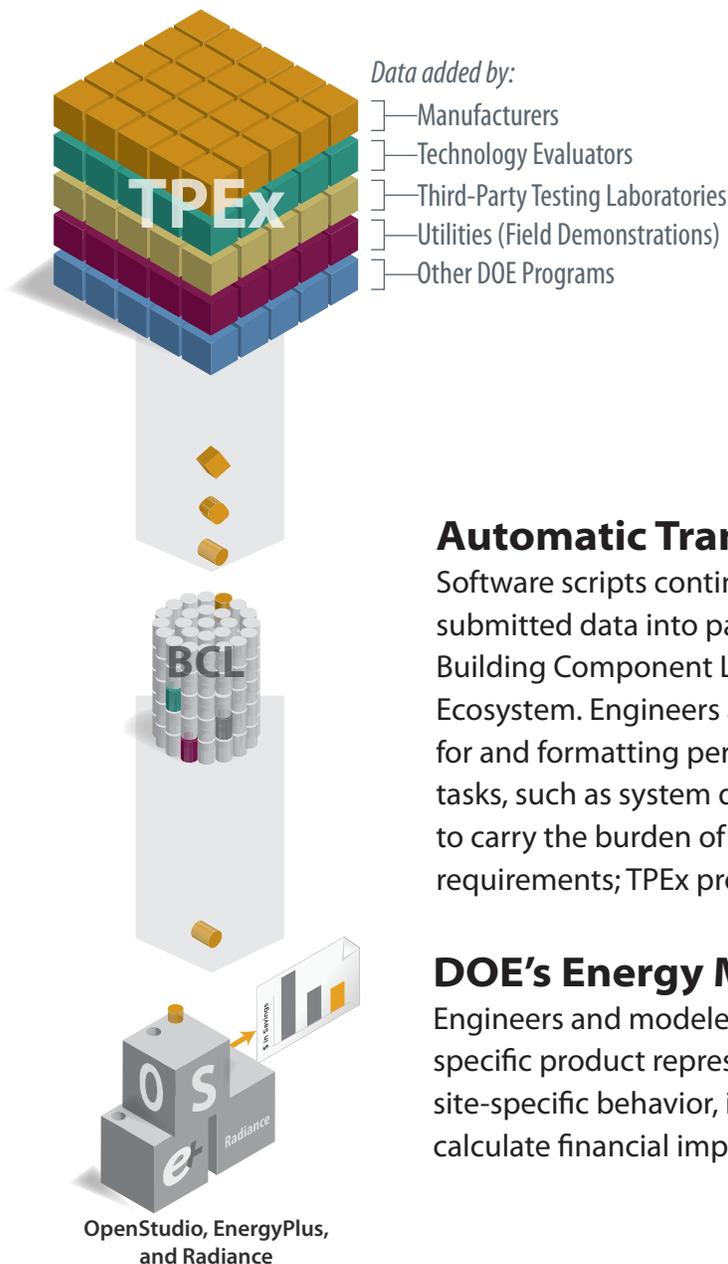


To address the need for accessible, high-quality building technology performance data, the U.S. Department of Energy (DOE) has developed the Technology Performance Exchange (TPEX), accessible at TPEX.org. TPEX enables technology suppliers, third-party testing laboratories, and other entities to share product performance data.

These data are automatically transformed into a format that technology evaluators can easily use in their energy modeling assessments to inform procurement decisions.

Process Benefits

- Reduce the time required to evaluate product performance.
- Improve assessment quality.
- Easily share and leverage data.
- Improve collaborations.
- Create additional market channels; >30,000 active OpenStudio users.



TPEX (TPEX.org) allows users to easily view, compare, and download product-specific energy performance data. Those who wish to download multiple product data sets can do so easily using the site's application programming interface (API). Users who would like to share data can do so using convenient, online forms. Alternatively, individuals and organizations who wish to contribute large datasets can take advantage of the API to automate the upload process.

Automatic Translation

Software scripts continuously monitor TPEX and automatically transform submitted data into packaged information that can be downloaded from the Building Component Library (BCL) and used in DOE's OpenStudio® Analysis Ecosystem. Engineers are thus able to reduce the time they spend searching for and formatting performance data and instead use that time for other tasks, such as system design and analysis. Similarly, manufacturers don't need to carry the burden of making their data compatible with the latest software requirements; TPEX provides that service automatically.

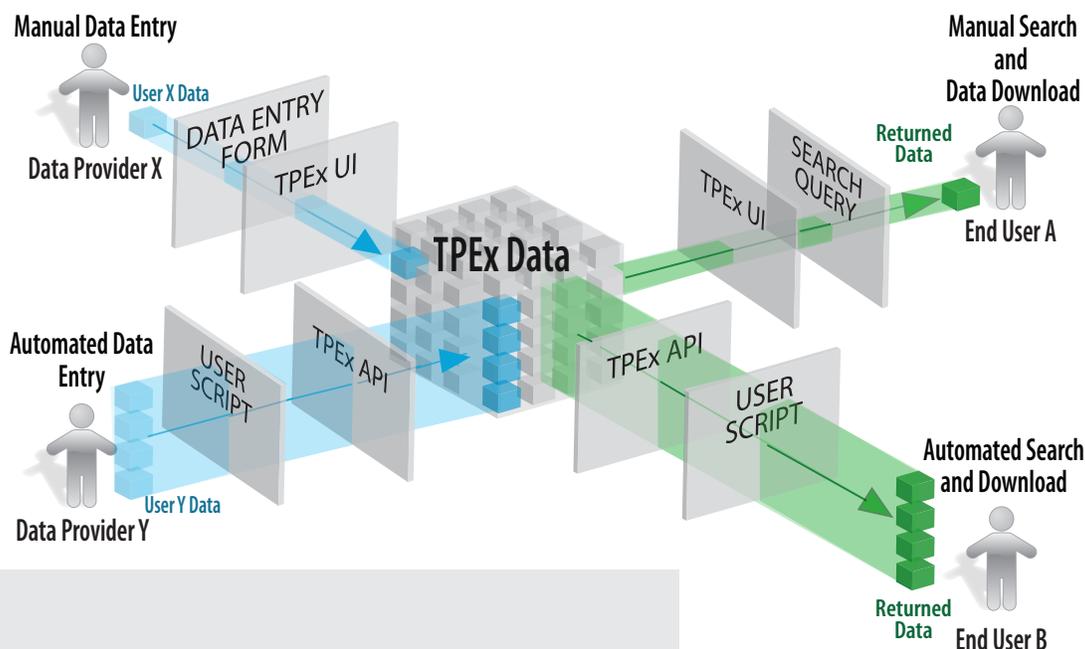
DOE's Energy Modeling Platform (OpenStudio.net)

Engineers and modelers can leverage TPEX data by dragging and dropping specific product representations into their OpenStudio models to evaluate site-specific behavior, improve the performance of their design, and calculate financial impacts.

The Technology Performance Exchange empowers technology evaluators to better assess product performance, conduct financial analyses with greater confidence, and compete more effectively for limited organizational capital resources than is possible using traditional data sources.

Adding Product Data

The diagram to the right shows how users can leverage the TPEX user interface (UI) and API to contribute and access performance data. API documentation can be found at TPEX.org/developers.



TPEX Registration

Only authenticated users can contribute and view TPEX performance data.

There are four user types:

Basic Users		Can view but cannot contribute performance data.
Manufacturers/Brand Owners		Can add their own products but cannot add performance data to other manufacturers' products.
Contributing Evaluators		Can add performance data to any existing product.
Third-Party Test Laboratories		Can add performance data to any existing product.

Data Provenance

TPEX uses a combination of restricted workflows and metadata to assure TPEX users that the data are of high quality.

▼ Rated Cooling Air Flow Rate 0.85 m³/s (1 report)

Source	Posted on	Derivation	Data
LG Electronics USA	12/18/2015	Self-Measured, Laboratory	0.85 
Contributor	Date	Derivation Method	User Type

Adding New Technology Categories

The core TPEX infrastructure was built to accept the overlay of any number of technology categories. This enables TPEX to function as an expandable data clearinghouse. Nineteen technology categories have been developed to date. Please contact the TPEX development team at TPEX@nrel.gov to suggest or contribute to additional technology categories.

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