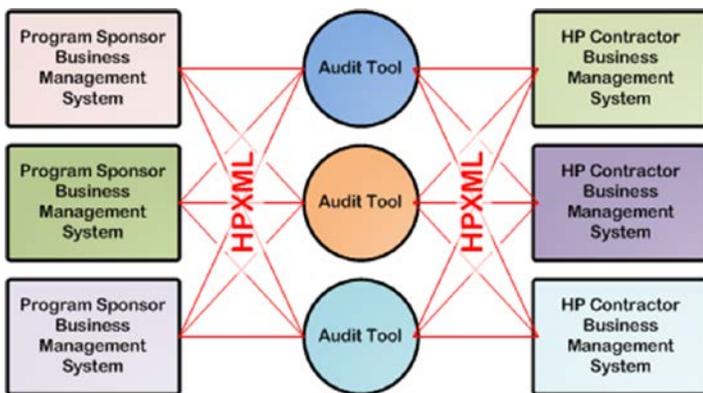


NREL Enables Efficient Data Exchange for Home Performance Companies

Highlights in
Research & Development

NREL supports standard data transfer protocol to streamline communication of home performance tracking systems and upgrade analysis software.

In the world of home energy analysis, a variety of software tools are available for compiling and evaluating home energy audit data, requiring home performance companies to be fluent in several reporting platforms that span multiple utility companies and regions. A new data transfer standard, supported by researchers at the National Renewable Energy Laboratory (NREL), simplifies the exchange of information between home performance program tracking systems and energy upgrade analysis software. This new standard could dramatically reduce the cost, time, and effort required to transfer information.



The standard provides requirements for an XML data transfer protocol that can seamlessly transfer home performance data between the many actors involved in a home performance program. Image by Dave Roberts, NREL

tors, energy assessors and modelers, efficiency program administrators, utility companies, and policymakers. In support of the standard, NREL provided technical guidance, documentation, development, and critical review of the schema. NREL also hosts an online public schema repository and an improvement request tracking system to encourage key stakeholders to use HPXML.

The HPXML standard will ensure that cost-effective and quality data are available in a usable format at the local, regional, and national levels to validate savings and demonstrate the market value of home energy upgrades. The standard has been widely received, and several state home energy programs have already committed to using HPXML to transfer information from contractors to the program administrator. NREL estimates that widespread use of the software standard could reduce the overhead cost for businesses to participate in high-performance home programs by up to 20%, and is applicable to about 125 million existing U.S. homes.

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References: BPI. (2013). *Standard for Home Performance Data Transfer, BPI-2100-S-2013*. Malta, NY: Building Performance Institute, Inc. http://www.bpi.org/Web_Download/BPI_Standards/BPI-2100-S-2013_Standard_for_Home_Performance-Related_Data_Transfer_2013-06-18.pdf.

Neymark, J.; Roberts, D. (2013). *Deep in Data: Empirical Data Based Software Accuracy Testing Using the Building America Field Data Repository*. NREL/CP-5500-58893. Golden, CO: National Renewable Energy Laboratory, 10 pp. <http://www.nrel.gov/docs/fy13osti/58893.pdf>.

Key Research Results

Achievement

NREL provided key support to the HPXML standard, including development, documentation, and critical review of the schema. NREL also hosts a public schema repository and improvement request tracking system.

Key Result

The HPXML software standard facilitates the exchange of data between all actors in the home performance industry by providing a standard vocabulary for describing terms related to buildings, energy consumption, and energy conservation.

Potential Impact

Use of the software standard could reduce the overhead cost for businesses to participate in high-performance home programs by up to 20%. This innovation is applicable to about 125 million existing U.S. homes.

NREL is a national laboratory of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, operated by the Alliance for Sustainable Energy, LLC.

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