

CMLS Green Sheet: Automated Efficiency Models

With the rise of home energy efficiency awareness and the increased accessibility of public data, several companies are playing an active role in publishing energy efficient home comparisons that are based on proprietary algorithms. The most recent data trend identified by partners to the U.S. Department of Energy Better Buildings (USDOE Better Buildings) Home Energy Information Accelerator are Automated Efficiency Models (**AEMs**).

AEMs are categorized as any algorithm or scoring model that estimates the energy usage of a home without an on-site inspection. They are similar to Automated Valuation Models (AVMs), but are more reliant on public data such as square footage, heating and cooling systems, and estimated energy usage.

Given that these models are only as good as their methodology and the public data they draw upon, Multiple Listing Services (MLSs) and other stakeholders in the real estate industry need to be proactive in ensuring AEMs are a benefit to the marketplace. This Green Sheet, published by the CMLS Green MLS Section Council, serves as a primer to educate the real estate industry on AEMs.



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As with any new data source that may potentially impact the marketplace, shape public perception, or influence a real estate transaction, there are always many questions. CMLS Green MLS Section Council has answered some of these questions in order to provide the MLS industry with a foundation of information regarding AEMs.

How might AEMs influence transactions?

Most AEMs provide for a direct comparison of properties based on the model's algorithm, data estimates, and self-selected comparison parameters. These comparisons are likely to influence energy-conscious consumers.

However, much like AVMs, publishers use their own discretion in determining how much information they share about their methodology. On-site inspections by qualified professionals remain the only method to predict reasonably accurate energy usage.

What are some current characteristics of AEMs?

While AEMs are as different as their algorithms, most estimates seem to be based on the structure of the home, any attached systems in the home, and estimated energy usage of those systems. Most scores use ranking systems, which means homes are compared by high and low scores. AEMs do not include any quality assurance, on-site inspection, or external review.

What are some of the advantages of AEMs?

AEMs provide consumers with a quick comparison of all properties across a specified market. Since most focus on the attached systems and structure, they are only meant to reflect the efficiency of the real property.

What are some of the disadvantages of AEMs?

AEMs are dependent on data used, the assumptions made, and the model methodology. Since models and methodologies differ and no on-site inspections are performed, accuracy may vary among scoring systems.

How does the RESO Data Dictionary define AEMs?

The RESO Data Dictionary does not include any fields for AEMs.

AEMs are gaining visibility in the market.

Currently, there are a number of AEMs in different stages of development. Along with these sites, several public-facing property search portals are expected to release their own scoring systems alongside listing data.

The CMLS Green MLS Section Council in cooperation with the USDOE Better Buildings Home Energy Information Accelerator has identified the following:

AEMs with websites that are in operation.

[ClearlyEnergy](#)

[EnerScore](#)

[MyUtilityScore](#)

[Savenia Home](#)

[TLC Engine](#)

AEMs that are in early development.

[DwellAware](#)

[Tendril](#)

What role will CMLS play in shaping AEMs?

CMLS remains committed to exploring innovations that provide for the most cohesive, consistent, and efficient marketplace possible. As AEMs are an emerging technology made up of multiple startups, different approaches, and new initiatives being considered by major public-facing portals, CMLS will continue to determine how AEMs can improve our ability to build a better marketplace.

The CMLS Green MLS Section Council is currently seeking input from CMLS members on what would be an appropriate IDX strategy for this information, whether there is a mechanism for syndication, and how the accuracy of such scoring systems might be improved.

CMLS members may send opinions to the attention of the Green MLS Section Council at info@councilofmls.org.

