

Energy Code Compliance with Scenario Modeling



PEG x Ekotrope

For 23 years, PEG has specialized in building energy performance, green building program compliance, building diagnostics, environmental and code compliance, thermal performance, HVAC design and operation, and construction defect. PEG is an industry leader in the verification of effective planning as well as the real-world application of all aspects of sustainable construction.

As one of the largest rating providers in the industry, PEG performs what-if analyses for a variety of clients - including some of the biggest builders in the country.

Challenges

PEG aids their builder clients in making better building decisions, ensuring their projects pass critical thresholds, helping them achieve tax rebates like 45L, and enhancing their understanding of the impact of code and standards updates.

However, even with their impressive level of experience, they face challenges familiar to many rating organizations. Their clients need a comprehensive analysis of all house plans and various design changes to determine the best method to pass energy code and earn rebates and incentives. And they expect this analysis to be returned to them as soon as possible.

Up until now, PEG was only able to provide general recommendations for how a handful of representative energy models could meet the builder's goals - time limitations prevented them from providing the comprehensive and precise analysis their builders desired. They found that because of the volume of energy models in each builder's portfolio, they were forced to run individual design changes on just a handful of representative energy models in their portfolios.

This analysis exposed PEG to a risky situation - what happens if the representative analysis doesn't ensure all homes pass the energy code? This was an uncomfortable position for both PEG and their builder clients.

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JOSH SPENCE
Vice President



Solution and Results

PEG has been using Ekotrope's Scenario Modeling tool for 6 months. Scenario Modeling enables their team to easily and quickly evaluate design changes on all energy models in a builder's portfolio.

PEG was previously constrained in the level of analysis they could provide; but now, Scenario Modeling has enabled them to run hundreds of scenarios on up to 1,000 energy models at once. The biggest difference is that they can now use an entire portfolio of floor plans, not just worst-case representative energy models.

Providing precise expert recommendations on how to meet energy code and rebates has never been faster and easier to communicate to their clients. Using Scenario Modeling PEG is able to evaluate all design change options to help a builder pass an important performance energy code - like IECC 2021. Scenario Modeling provides a detailed report showing the best user-defined pathways for compliance.

Josh Spence, Vice President, says that, "One major benefit is the way Scenario Modeling presents the information. It's extremely easy to review and digest. A U-factor 0.02 means next to nothing to a builder. They want the bottom line. Scenario Modeling reports give them just that."

Scenario Modeling enables PEG to do what wasn't possible before, all while having higher confidence in the analysis that they provide to their builders. They've passed on unprecedented value to their clients by enabling them to make better decisions that achieve their goals in a cost-effective way.

