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Conducting a compliance evaluation at a local or state level will result in: documentation of compliance rates, improved understanding of home design and construction practices, and an assessment of energy savings that results from better code compliance.

Local policymakers and code officials can use the results to reinforce the code and determine where more training and education is needed to further bolster the energy code.





Measuring Code Compliance

In order to receive American Recovery and Reinvestment Act funding, states had to guarantee that buildings would achieve 90 percent compliance with target energy codes by 2017. Subsequently, states have started to develop plans on how to measure and track code compliance.

Below is an outline of best practices for conducting a compliance evaluation:

STEPS

- 1. Make a list of data that needs to be collected.
- Generate the sample size and choose buildings.
 There are generally four groups of building populations: residential new construction, commercial new construction, residential renovations/additions, and commercial renovations/additions. Ideally, a compliance evaluation study should be done for each separate group.
- 3. Conduct the evaluation. The final evaluation should be done by a separate third-party company, but, before a third party reviews the enforcement program or if a third-party assessment is not feasible, internal self-assessments can be done.
- 4. Analyze data and use results to strengthen the energy code and improve training efforts.



Figure 1. Procedure for conducting a code compliance evaluation (http://www.energycodes.gov/arra/documents/Step_by_Step_Companion_Guide.pdf)

EXAMPLE Fort Collins, Colo., did a compliance evaluation in residential buildings in several steps. A sample of homes was randomly selected. First, 20 homes under construction were inspected. Market research interviews with 150 homeowners and 20 builders were performed and supplemented with energy inspections, energy modeling, and a utility bill analysis for 80 of those homeowners. Performance testing was conducted in 40 of those homes. The Colorado Governor's Office of Energy Management and Conservation, Fort Collins Utilities, and the Western Area Power Administration provided funding for the project. The main takeaway of the project was lessons on how to better design and implement the code.

ADDITIONAL RESOURCES The U.S. Department of Energy (DOE) and its Building Energy Codes Program (BECP) have created a number of resources, including checklists of data to acquire, a state sample size generator, training and education materials for evaluators, surveys, and tools for storage and analysis of data. They are available online at: http://www.energycodes.gov/arra/compliance_evaluation.stm

REFERENCES

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