

Efficiency First Policy Statement

National Quality Assurance

Efficiency First (EF) is a nonprofit trade association that unites Home Performance contractors, residential energy consultants, building product manufacturers and other key members of America's growing green-collar workforce in the escalating fight against global warming.

Quality Assurance and quality control (QA/QC) of Home Performance work is critical to assuring that promised benefits are delivered to the household receiving the services and the public interest associated with the work. As important, is the role that a well-conceived QA/QC infrastructure will play assuring a level playing field for contractors in this emerging residential market place. To a large extent, the elements of a national quality assurance (QA) infrastructure is already in place, consisting of Home Performance programs, BPI affiliates, QA Providers, and Home Energy Raters operating in all 50 states.

Efficiency First endorses a National QA/QC infrastructure to support public or rate payer subsidies of Home Performance work which comprises of three major elements and will build on existing resources and capacities as defined below.

Assuring Competency through Setting National Industry Standards: Any comprehensive Quality Assurance strategy begins with a set of standards and work specifications essential to the conduct of high quality work to meet a desired outcome. The software to be used to codify levels of energy savings related to the installation of energy efficiency measures should be qualified against a DOE-prescribed process (BestTest EX). Performance incentives based on savings predictions require robust software tools, trained software users, review of proposed savings, and verification of results.

Quality Implementation through a State-based Infrastructure: Requirements for a State Quality Assurance infrastructure should be established as a national template. Ideally, QA activities will be overseen by the State, and implemented by a third party QA implementer, including a BPI QA provider or Affiliate, a RESNET Rater Provider with a BPI QA qualification, or State Energy Office designated QA provider.

Quality Assurance through Third party review of work and compliance: In accordance with a State's QA Plan, the contractor should have a relationship with one or more Qualified QA providers to whom they will submit job data, including work scopes, energy predictions, and test-in / test-out audit data to a program administrator that complies with Quality Assurance Program Standards as determined by the Secretary of Energy.

This Quality Assurance construct will be able to impose a set of national standards regarding the competency of workers (through certification), the qualification of contractors (through accreditation),

the quality of work and program compliance (through third party review). All of which is built from existing national capacities, quickly creating private jobs to support the QA of Home Performance work.

Efficiency First recognizes that the Building Performance Institute, Inc. (BPI), established in 1993, is a recognized global leader, supporting the development of a highly professional building performance industry through individual and organizational credentialing and a rigorous quality assurance program. BPI offers the following:

- open, transparent, consensus-developed national **standards** for the tasks associated with a variety of job titles based on sound building science which have been donated to USDOE as a basis for a comprehensive set of SWS's.
- accreditation of contractors committed to using a quality management system and meeting a set of responsible contractor standards
- quality assurance standards to verify conformance and provide feedback
- affiliation of organizations capable of providing localized delivery of BPI services

BPI, in cooperation with the building performance industry stakeholders, sets a professional performance bar at an appropriate level that ensures the consistent delivery of exceptional building performance service to those entrusting the BPI brand.

National Standards and Requirements Setting: Any comprehensive Quality Assurance strategy begins with a set of standards and work specifications essential to the conduct of high quality work to meet a desired outcome. These requirements fall into several basic categories which address the competency of the workforce to perform the work and to validate the quality and scope of work meant to produce a predicted benefit. Efficiency First supports US DOE action to accelerate a common framework for standard and requirement setting. The components of that framework are:

Standard Work Specifications (SWS): The product of a structure process and template which incrementalizes the scope and outcomes of individual tasks associated with evaluation, mechanical, envelope and multi-family designations within the Home Performance set of work tasks. These then set the foundation for the certification schema of individuals in each of the appropriate related job areas.

Work Best Practices through Job Instruction Breakdown (JIB): US DOE should support the development of **Job Instruction Breakdown** Sheets, representing the best practices in attaining the **Standard Work Specifications**, and sponsor a repository for their organization and updating on behalf of the industry at large.

Modeling Software Standards: The software to be used to codify levels of energy savings related to the installation of energy efficiency measures must be qualified against a DOE-prescribed process (BestTest EX). Performance incentives based on savings predictions require robust software tools, trained software users, review of proposed savings, and verification of results.

1. Modeling tool performance standards will support innovation and optimization of the savings prediction process and the adaption of that process to a wide range of business models.
2. Software user certification is a necessary part of improving the quality of data input quality and reducing costs for quality control. This skill certification can be combined with building analyst training and certification.
3. Quality control systems that bound energy model baselines (usage before retrofit) with actual energy usage provide an excellent check against fraud and also reduce the documented tendency of energy rating models to overestimate performance for poor performing buildings before retrofit. Data analysis of information (billing data and energy model data) submitted provides a second level of quality control.
4. Quality assurance can be based on the comparison of predicted to actual performance. Field visit quality assurance can be directed using savings performance information targeting poor savings performers for higher rates of review and site visits.

Accredited contractor observation and documentation (contractor)

The BPI Accredited Contractor model includes a mentoring aspect, in addition to proctored testing and field practicum, which tracks the competency of a series of skills that a certified individual must exhibit over a period of time. This process requires a structured documentation of an observed competency and a follow up BPI QA process review of the accredited contractor.

Accredited Contractor compliance reviews (State and BPI)

Finally, qualified accredited contractors will be sampled against other Home Star requirements and goals, such as legal compliance, proper classification of employees, use of a well-trained workforce which are embodied in the law and rule.