

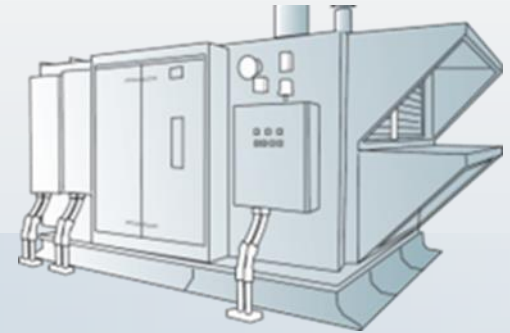
Taking AB 802 Into the Field

Rob Falke, CQI Committee Chair

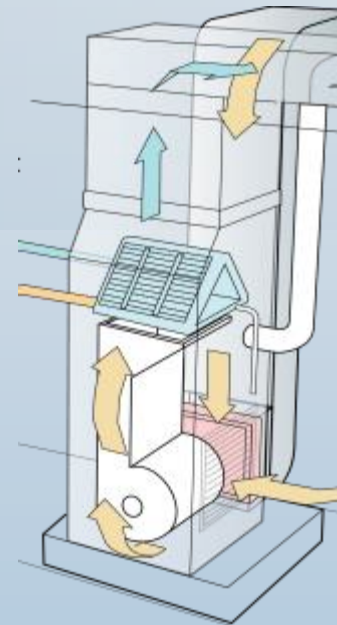
Final Work Product Review

Commercial Quality
Installation Committee

11-15-17



Commercial HVAC Systems



Residential HVAC Systems

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Overview of Taking AB 802 Into the Field

2017 Goal Three, CQI Committee

- The CQI Committee saw a **gap** in discussions surrounding the implementation of AB 802 in California.
- The Committee believes the changes 802 will make at the street level **will inflict significant changes in the transactions between the contractor and the consumer** that must be provided for.
- **Three Task Groups** were formed to address this issue:
 - Contractor Implementation
 - Education and Training
 - Utility Program Design and Savings Estimates

This Committee's work **on HVAC System Performance and ASHRAE 221 Principles** created a unique perspective to these issues.

Work Paper Summary and Format

- Introduction – **The real work of an energy savings program happens over a table.** This is where the contractor and customer make the decisions that launch a project.
- AB 802 introduces many elements that **will significantly change this transaction when** compared to past energy saving programs. **“Nothing Happens ‘til Somebody Buys Something.”**
- The format of this paper presents the **newly created Issues and Proposed Solutions** that will need to be addressed.
- Our hope is that this Work Paper will bring **awareness to regulators, utilities, implementers, aggregators, and the HVAC practitioners** of the issues that must be addressed in order for the intent of the assembly bill to succeed.

Issues and Solutions

Issue – Qualified leads are a primary motivation for contractors to participate in utility programs.

Proposed Solution – Analyzing smart meter, weather data, and excessive consumption by the HVAC system will produce qualified leads encouraging contractor participation. This may offset the negative effects of AB 1414.

Issue – AB 802 creates a demand for a custom set of improvements as opposed to a predetermined set of measures.

Proposed Solution – Only through inspection, testing, and a diagnostics process can the most valuable upgrades be identified and their future impact on the meter be assessed.

Issues and Solutions

Issue – With AB 802, now more than ever **buyers need specific information related to their HVAC and building systems** before they can make an informed buying decision.

Proposed Solution – **Trust is built through a testing-and-diagnostic-process** where the customer is enabled to make an educated buying decision.

Issue – Energy upgrades are typically a bundled group of improvements. **A custom scope of work** will be required for each project.

Proposed Solution – **Testing and diagnosing contained in ASHRAE 221P** offers a field evaluation and satisfactory test method to enable a customized scope of work.

Issues and Solutions

Issue – A new breed of WE&T and utility program training will be needed to “marry” the technical knowledge with increased skills to communicate with and to educate consumers.

Proposed Solution – Needed custom upgrades can only be identified by measuring the performance of each system and **educating consumers** while **evaluating the data** and **prescribing custom upgrades**.

Issue – A consumer must have an estimate of energy savings and incentive amounts before a buying decision will be made.

Proposed Solution – The principles of ASHRAE 221 are an estimate of energy savings that can be offered so the improvement in the performance of the system can be documented.

Issues and Solutions

Issue – Approaches used to evaluate energy savings at the meter are typically different from approaches used to estimate savings prior to and at the time of installation. This will likely result in forecasting savings not matching actual savings.

Proposed Solution – AB 802 will magnify the need to *calibrate contractor field measurements and EM&V measurements.*

Issue – AB 802 is written in a way that implies that programs with utility meter impacts should be authorized, but **many measures produce savings that are undetectable at the building meter.**

Proposed Solution – Low-cost submetering approaches that use data from smart thermostats and building management systems should be explored.

Issues and Solutions

Issue – Contractors require some incentive be paid when they deliver the work. Results from metered savings programs are not available until a year after the project has been completed.

Proposed Solution – A contractor’s incentive-based live-system testing and forecasted savings is partially paid up front. Final incentive amounts are adjusted based on evaluated meter-based savings.

Issue – AB 802 calls for energy savings at the meter and without any modeling or submetering. It is not possible to disaggregate savings from individual measures. This poses a problem for utility programs since measures must still abide by the DEER EULs when savings are claimed.

Proposed Solution – After energy savings at the meter is calculated, use existing work papers to disaggregate energy savings.