

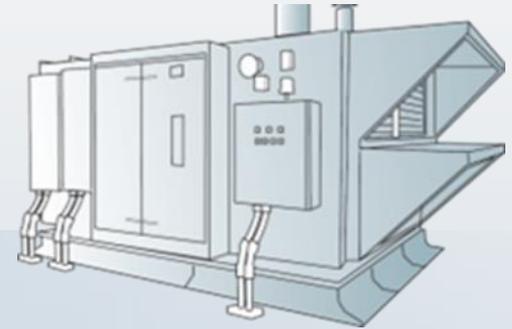
# Taking AB 802 Into the Field

Rob Falke, CQI Committee Chair

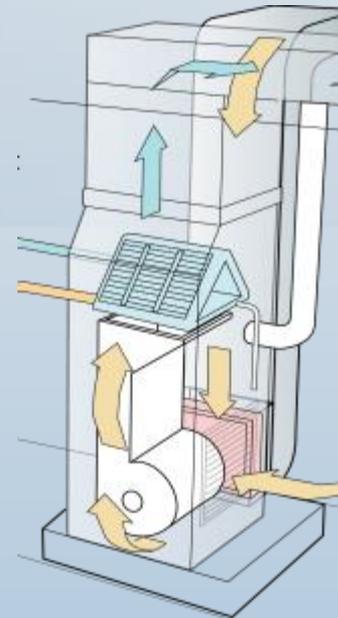
Final Work Product Review

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.**