



WHPA Work Product Summary

DATE: October 7, 2013

INITIATING BODY: Goal 2.3 & 2.4 WHPA Workforce Education and Training Committee – Sales Force & Service Working Group

WORK PRODUCT NAME: Proposed WHPA Goal 2.3&2.4 Sales Force & Service Working Group Gaps Report dated December 31, 2012

TYPE OF ACTION REQUESTED: **VOTE** **GUIDANCE** **OTHER:**

APPROVAL HISTORY

WORKING GROUP: Goal 2.3&2.4 Codes & Standards

BY CONSENSUS **BY VOTE**

TALLY: Unanimous "Aye", no "Nay" or "Abstain" to escalate to the WHPA WE&T Committee.

DATE: December 31, 2012

COMMITTEE: Goal 2.3&2.4 Workforce Education and Training

BY CONSENSUS **BY VOTE**

TALLY: 7 "Aye", 4 "Nay", 1 "Abstain" to escalate to the WHPA Executive Committee with consensus recommendation to add mandatory compliance over all gaps.

DATE: September 10, 2013

WORK PRODUCT OBJECTIVES: The Goal 2.3 & 2.4 Sales Force and Service Working Group’s assigned objective was "identify gaps between the codes and standards related training needs of the HVAC workforce and the industry's current education and training practices." The driving questions focused on "what or where the gaps are between where we are today and where we need to be by 2020" and on how the gaps can be filled. The Working Group identified key gaps and made recommendations to close them in the Western HVAC Performance Alliance Goal 2.3 - 2.4 Working Group Gaps Report, that this Action Request summarizes. Briefly, the gaps identified are:

- Gap 1: Lack of Awareness for Potential Energy Savings
- Gap 2: Contractor Sales Training
- Gap 3: Utility Program Manager Training
- Gap 4: Energy Savings Estimation Tools
- Gap 5: Compliance Enforcement and the Sales Process.

CA ENERGY EFFICIENCY PLAN STRATEGIC GOAL ALIGNMENT:

GOAL 1 GOAL 2 GOAL 3 GOAL 4

CEESP HVAC GOAL STRATEGIES: CEESP Goal 2: Quality HVAC installation and maintenance becomes the norm. The marketplace understands and values the performance benefits of quality installation and maintenance.

- Strategy 2.3: Develop and provide expanded Quality Installation/Quality Maintenance Training for contractors, technicians, and sales agents. Conduct comprehensive training needs assessments to identify industry skill gaps between expanded training programs.
- Strategy 2.4: Develop and implement comprehensive contractor accreditation programs. (Requested to be assigned to another group on 5/17/11, no further action taken)

BENEFITS: This is the first work product developed by WHPA addressing WE&T “sales.” It will help inform the HVAC Sector Strategy project. The recommendations would promote energy efficiency education in both the residential and small commercial end-user arenas, and improve contractor training, utility program manager training, and compliance enforcement as they relate to the sales process, ultimately leading to increased energy savings.

OUTSTANDING ISSUES / DEBATES / MINORITY VIEWS: The vote at the WE&T Committee level to escalate the Sales Force and Service Gaps Report to the WHPA Executive Committee included a consensus recommendation to add mandatory compliance over all the gaps. The detailed roll call tally for the vote on that motion was:

AYE (x7 Supermajority): BPI, Honeywell ECC, HVAC Excellence, IAPMO, PIPE Trust Fund, SMW#104, UA

NAY (x4): AHRI, IHACI, NCI, NEMI

POTENTIAL AUDIENCE: WHPA Goal 2.3&2.3 Workforce Education & Training (WE&T) Committee, WHPA Executive Committee, Statewide IOU WE&T Team, HVAC Sector Strategy Steering Working Group (not yet formed), WHPA member distributors and manufacturers.

VOTING DECISION: WHPA Executive Committee

Motion presented by Erik Emblem (JCEEP) to “accept” the Sales Force & Service Working Group Report.

WE&TSalesSvcReport.docx

VOTE TALLY: During the WHPA Executive Committee Vote on December 11, 2013, ACCA, ASHRAE, IHACI, JCEEP, RSES, SCE, SoCalGas, UA voted aye. There were no opposed. CPUC, SDG&E, and PG&E abstained. The motion carried.

FURTHER ACTIONS REQUIRED: WHPA Staff to post the accepted Codes & Standards Gap Report on the WHPA home page under "WHPA Work Products" and on the WE&T Committee Page under "Working Group Reports".

NEXT STEPS: All five WE&T Working Group Gap Reports were forwarded to the statewide WE&T team prior to the January 15, 2014 WHPA Executive Committee meeting. WHPA Staff to monitor all of the WE&T reports that are "accepted".



Sales Force and Service Working Group Gaps Report

Goal 2.3-2.4 Workforce Education & Training Committee

A WHPA Report dated December 11, 2013

Background:

The Western HVAC Performance Alliance (WHPA) is a collaboration of professionals representing the heating, ventilation and air conditioning (HVAC), energy efficiency, facility management, utility industries and government formed in the state of California to support the goals of the California Long Term Energy Efficiency Strategic Plan (CLTEESP).

The CLTEESP sets four goals for the HVAC sector. They are:

- **Goal 1:** Consistent and effective compliance, enforcement, and verification of applicable building and appliance standards.
- **Goal 2:** Quality HVAC installation and maintenance becomes the norm. The marketplace understands and values the performance benefits of quality installation and maintenance.
- **Goal 3:** Building industry design and construction practices that fully integrate building performance to reduce cooling and heating loads.
- **Goal 4:** Develop new hot/dry climate HVAC technologies (equipment and controls, including system diagnostics) and greatly accelerate their marketplace penetration.

Sales Force and Service Working Group:

Much of the significant and detailed work of the Performance Alliance is accomplished through its subject matter-focused Committees as well as functional Working Groups aligned with the CLTEESP. The Workforce Education & Training Committee (WE&T)¹ is responsible for addressing two supporting goals:

- **Strategy 2.3:** Develop and provide expanded Quality Installation/Quality Maintenance Training for contractors, technicians, and sales agents. Conduct comprehensive training needs assessments to identify industry skill gaps between expanded training programs.
- **Strategy 2.4:** Develop and implement comprehensive contractor accreditation programs. (Requested to be assigned to another group on 5/17/11, no further action taken.)

To help address these two goals, the Sales Force and Service Working Group was launched in April 2012. The group had 17 meetings between April and December 2012 to focus on identifying gaps between the sales-related training needs of the HVAC workforce and the industry's current education and training practices. The Working Group also worked to identify actionable recommendations to address those gaps. This report summarizes the Sales Force and Service Working Group findings and is organized into five sections, each addressing an identified gap in sales-related training:

- **Gap 1:** Lack of Awareness for Potential Energy Savings
- **Gap 2:** Contractor Sales Training
- **Gap 3:** Utility Program Manager Training
- **Gap 4:** Energy Savings Estimation Tools
- **Gap 5:** Compliance Enforcement and the Sales Process

Workforce Education and Training Committee Chair:

- Erik Emblem, JCEEP/SMWIA

¹ All subcommittees were renamed committees in the April 2013 updated WHPA Charter.

Sales Force and Service Working Group Chair:

- Daniel Jones, Chair, Honeywell

Sales Force and Service Working Group Members:

- Bob Baker, ASHRAE
- Bob Sundberg, BNB Consulting
- Chris Compton, HVACRedu.net
- Erik Emblem, JCEEP/SMWIA
- Glenn Hourahan, ACCA
- Mark Jewell, EEFG
- Pepper Hunziker, Tre'Laine Associates
- Rachel Christenson, EEFG
- Tony Shaker, ENfinity Partners

Driving Question:

What or where are the gaps between where we are today and where we need to be by 2020 and how can we fill those gaps?

Gap 1: Lack of Awareness for Potential Energy Savings

- Gap exists in both residential and small commercial end-user arenas.
- There is insufficient usable and vetted research data or studies, which document and support that significant energy and HVAC system operation savings result from quality installation and quality maintenance (QI/QM) practices.
- End users are generally unaware of the magnitude of the savings available from the selection of both energy efficient HVAC systems and quality maintenance of their systems.

Recommendations

- **Promote the use of energy savings literature, software, and appropriate case studies** in energy efficiency programs; make those materials available for use by HVAC contractors and end users.
- **Increase advertising and outreach to end users** drawing attention to the full complement of benefits that accrue as the result of systems installed and serviced pursuant to accredited standards. For non-residential customers, focus on communications through their associations.
- **Locate and disseminate currently available vetted energy and operational savings research.**
- **Support the funding of research** to determine the range of energy and operational savings through the implementation of QI/QM practices.
- **Encourage participation of WHPA member firms** in the design and implementation of QI/QM research.

Gap 2: Contractor Sales Training

- Contractor Sales Training does not currently focus on the contractor's role as an energy efficiency consultant or on the development of the value proposition for energy efficiency improvements.

Recommendations

- **Establish customer role and responsibility** for their building(s) energy efficiency.
- **Recognize energy conservation opportunities.** Training time should be spent in the understanding, developing, and delivering of the cost and benefits of energy efficiency improvements in order to capture a larger public mind share around energy conservation opportunities.

- **Develop a compelling value proposition.** Introduce new and extensive sales training around defining, developing, and presenting HVAC value propositions for energy efficiency and operational improvements.
- **Emphasize life-cycle benefits over-and-above training on utility program parameters, incentive levels, and first costs.** Increase training about financial selling terminology such as “life-cycle costs,” “net present value,” and “return on shareholder investment,” and how energy efficiency, comfort, reliability, good indoor air quality, and prolonged equipment life can be explained in these terms. Through these means, the value proposition surrounding high- performance HVAC will be better understood.

Gap 3: Energy Savings Estimation Tools

- There is a lack of awareness of existing energy efficiency tools in the marketplace and how to use them effectively in the customer dialogue.

Recommendations

- **Establish and widely publicize a statewide clearinghouse** for new and existing cost-effective and reliable software tools, which enable contractors and end users to calculate and project HVAC energy and operational potential savings. This will include but not be limited to:
 - Software for whole building energy use modeling.
 - Building HVAC system modeling.
 - Specific subsystem/component energy impact modeling which industry has developed for:
 - Packaged equipment selection,
 - Energy Recovery Ventilator (ERV) impact and climatic-appropriate use,
 - Ventilation and economizer strategy energy impact,
 - Variable frequency drive pump and fan energy reduction projection,
 - HVAC damper options and impact, and
 - De-humidification technologies.
- **Make participating contractors and end users aware** of all known and available energy efficiency programs and all reliable energy efficiency tools. Some are available at no cost.
- **Suggest that HVAC energy efficiency programs include** identification of, access to, and training on the use of savings tools.

Gap 4: Utility Program Manager Training

- Few utility program managers have had sales training or sales experience and most do not include or value inclusion of a sales component in their program.

Recommendations

- **Establish appropriate sales training** for utility energy efficiency program managers.
- **Include a sales training component** in all energy efficiency programs.
- **Involve key HVAC stakeholders in utility program design.** The committee highly recommends involving all utility program development and implementation staff, including construction and service contractors as well as facility managers.
- **Ensure that program implementers have established goals** to continuously improve their program processes and methods. Begin the improvement process in early program "pilot" phases.

Gap 5: Compliance Enforcement and the Sales Process

- Both residential and commercial consumers are not aware of the value of code compliance or the cost of non-compliance.
- Having little existing effective compliance enforcement structure or operational regulations for HVAC

new construction or major retrofits greatly affects the competitive sales process and makes the sales side of the energy efficiency dialogue more difficult.

- To our knowledge, there are no California regulations (codes) that require energy efficient operation for existing home or building.
- Many compliance enforcement personnel lack the capability and training to properly evaluate advanced HVAC devices, components, or system operation.

Recommendations

- **Include emphasis on applicable building codes** in sales training. Assemble industry sales and marketing professionals to develop talking points for sales people about the importance of code compliance. Explore creative means to educate consumers regarding the benefits of code compliance.
- **Create and implement energy efficiency codes for new and existing homes and buildings** made enforceable through a sampling of inspections.
- **Increase funding to support an adequate number of trained and qualified inspectors** for all energy efficiency related programs.
- **Improve enforcement inspector training** to include energy efficient building performance. Provide means for inspectors to accurately measure HVAC system performance.