



Western HVAC Performance Alliance

Onboard/In-Field Fault Detection and Diagnostics (FDD) Committee FDD Technology Master List

A WHPA Work Product as of January 18, 2017

Prepared by:

Onboard/In-Field Fault Detection and Diagnostics (FDD) Committee

Working Group Co-Chairs:

Sean Gouw (Engineer, Technology Test Centers, Southern California Edison)
Joe Schmutzler (Director, Global Utility Relations, Transformative Wave)

FDD Technology Master List Work Product Summary



DATE: January 4, 2017

INITIATING BODY: Onboard/In-Field Fault Detection and Diagnostics (FDD) Committee

WORK PRODUCT NAME: FDD Technology Master List

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

The initiating body requests that the WHPA Executive Committee adopt the referenced FDD Technology Master List as a WHPA Work Product to be posted and marked in accordance with previously established policy.

APPROVAL HISTORY

COMMITTEE: Onboard/In-Field Fault Detection and Diagnostics (FDD) Committee

BY CONSENSUS **BY VOTE**

TALLY: Of 21 voting members, 15 voted AYE, 1 voted NAY, 1 abstained, and 4 did not submit a vote. The motion to approve the FDD Technology Master List passed.

AYE votes: ACCA (Glenn Hourahan); ClimaCheck (Klas Berglof); Daikin Applied (Skip Ernst); Emerson Climate Technologies (Hung Pham); Ezenics (Benjamin Kelderman); FDSI (Dale Rossi); Goodman Manufacturing (Aniruddh Roy); JCI (Wayne Guelfo); Proctor Engineering (Abram Conant); Purdue University (Andrew Hjortland); SCE (Sean Gouw); Transformative Wave (Joe Schmutzler); TRC (Farhad Farhamad); Verified (Robert Mowris); Weiland Consulting-Training (Bart Weiland).

NAY votes: Rheem (Karen Meyers).

Abstain votes: BELIMO Aircontrols (Darryl DeAngelis).

Votes not cast: Carrier Corporation (Dick Lord); NBI (Alexi Miller); Trane-Ingersoll Rand (Caleb Joiner); XCSpec (Janet Peterson/Jeff Aalfs).

DATE: January 3, 2017

WORK PRODUCT OBJECTIVES: One of the most important first steps to improve a process or program is to develop a good understanding of the ground level details of what you hope to improve. In that vein, the FDD Committee developed a FDD Technology Master List of the different FDD offerings “that assist in identification of performance, maintenance, or repair needs using measurements and software intelligence in an in-field or onboard fashion.” We also developed well defined criteria for inclusion in the different categories to simplify the process and be able to better compare technologies. This list will provide both a historical document to capture FDD capabilities for future reference but also to bring in new technologies as they are developed. It will also be useful for QM program managers as a reference tool to see what technologies are available and the variety of methods for achieving a quality FDD experience.

FDD Technical Master List Work Product Summary



CA ENERGY EFFICIENCY PLAN STRATEGIC GOAL ALIGNMENT:

GOAL 1 GOAL 2 GOAL 3 GOAL 4

CEESP HVAC GOAL STRATEGIES: Develop a Technical List of FDD Equipment that might be used in the IOU Commercial HVAC QM Programs.

BENEFITS: It is important in any market to have good information to be able to make an informed choice to maximize benefits. A quality list of technologies broken down by type will allow program managers, mechanical contractors, and manufacturers to more easily make quality decisions in regards to technologies that are promoted and included in FDD programs and offerings to customers.

OUTSTANDING ISSUES / DEBATES / MINORITY VIEWS: The next steps are to share the FDD technology list (see document attached separately) with California CQM IOU program staff and solicit feedback; discuss feedback with WHPA FDD Committee and revisit the recommendations/considerations summary document as per 2017 discussions; revise accordingly; and more coordination with the WHPA CQM Committee should be established.

POTENTIAL AUDIENCE: Utility Quality Maintenance program implementers and managers, FDD technology manufacturers, and QM program maintenance contractors.

EXECUTIVE COMMITTEE: On January 18, 2017, at the Executive Committee Meeting, motion was made to approve this as a WHPA Work Product.

VOTE TALLY: Motion was made by ASHRAE (Ron Jarnagin) and seconded by IHACI (Bob Wiseman). Additional AYE votes were cast by ACCA (Don Langston), AHRI (Garrett McGuire), ASHRAE (Ron Jarnagin), HARDI (Talbot Gee), NCI (Dominick Guarino), PG&E (Jeanne Duvall), SCE (Scott Higa), SDG&E (Jeremy Reefe), SoCalGas (Harvey Bringas), and UA (Don Tanaka).
There were no NAY votes.
There were two ABSTENTIONS by CEC (Lea Haro) and CPUC (Carmen Best).

FURTHER ACTIONS REQUIRED: WHPA Staff will ensure the combined “Tech Master List” Excel spreadsheet and this Work Product Summary is properly posted and distributed in accordance with established marketing protocol for approved WHPA Work Products.

NEXT STEPS:

1. This Work Product to be posted on Performance Alliance website and made available to IOU Quality Maintenance program implementers and managers, FDD technology manufacturers, and QM program maintenance contractors.
2. This Work Product will be announced, promoted, and summarized in WHPA’s Q1 2017 Newsletter.