

# WHPA FDD Committee 04-24-2017 Mtg

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- California Long-Term Energy Efficiency Strategic Plan (CLTEESP)
- Onboard and In-Field Fault Detection and Diagnostics—Industry Roadmap
  - Approved July, 10 2013
- May be out of date
- Research and Technology Action Plan
  - Research costs and benefits of metering, fault detection and diagnostic (FDD) systems and tenant sub-metering for lighting, HVAC and plug loads (develop case studies to substantiate costs and savings)



- Industry Partners
  - OEMs
  - Third Party Developers
  - Other Industry Stakeholders
- Researchers
- Users
- Government
- Utilities & Partner Organizations



- CLTEESP Strategies and Goals
  - (HVAC) industry...maintenance (is) of the highest quality to promote energy efficiency and peak load reduction
  - Develop nationwide standards and/or guidelines for onboard diagnostic functionality and specification for designated sensor mount locations.
  - Prioritize in-field diagnostic and maintenance approaches



- Lack of Standards testing and terminology
  - Title 24 standards
  - ASHRAE Standards Committee
  - Coordination with other groups
  - Consortium for Energy Efficiency, Energy Star



- Lack of Customer Pull
  - Maintenance Behavior Research Contractor and Customer
  - Research into Fault Incidence
  - Market Acceptability Research
  - Pilot program and FDD rebate program



- Lack of Validated Protocols
  - Diagnostic Protocol Evaluator Project
  - Collect and Disseminate Field Data
  - Benchmark and Assess Existing Protocols
  - Create Gap Analysis of Existing Protocols



- Lack of Integration with Existing Systems
  - Diagnostic Protocol Evaluator Project
  - Work with Manufacturers to Enhance Maintainability
  - Institute Voluntary Industry Agreement to Deliver Changes
  - In-Field FDD and Maintenance Study
  - Work with OEMs to Develop Products



# Thank You

QUESTIONS?