

FAULT-INDUCED DELAYED VOLTAGE RECOVERY CONFERENCE II (FIDVR)

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AHRI Position on FIDVR

- AHRI members understand the need to improve the reliability of the power grid. It is a very complex system that needs to be better understood before any solution is adopted.
- AHRI wants to be a part of the solution which includes determining what the right solution(s) is, the right timing for implementation, and it must be something that does not create an unfair advantage among participants in our industry.
- AHRI is willing to cooperate with utilities to develop the necessary technology to address the issue.
- A solution to FIDVR will benefit everyone, so the cost of developing a solution should be shared. Unquestionably, the cost impact of applying a solution to new HVAC equipment will be shared by all purchasing consumers of HVAC products.

Technology to Address FIDVR

- Technology to adequately address FIDVR at the AC unit level is not currently available in the marketplace.
- Compressor contactors and anti-short-cycle controls that are used today to control and protect compressors are too slow to react.
- The AHRI members envision an anti-short cycle control that reacts quickly to voltage interruptions and provides random reset times. It will very likely add significant cost to HVAC new equipment.

Technology to Address FIDVR

- AHRI was approached in 2008 about cooperating with the utilities to develop the technology to address the FIDVR issue.
- A request for funding an AHRI/ASHRAE research project (RTAR) was drafted and submitted to the AHRI Research & Technology (R&T) Committee.
- The proposed research project would set the stage for developing technology that would be a major contributor in solving the FIDVR issue, but it may not be the entire solution.

Technology to Address FIDVR

- Proposed AHRI R&T Project Description (taken from RTAR)
 - This project supports research to explore, understand and develop requirements for solutions to air conditioner stalling that result from transient voltage events at a residential, single-phase air conditioning system level. The project will determine the viability and applied costs of factory as well as retrofit solutions. The grid modeling will identify the response time required for the solutions. When voltage transient is resolved, the solution must bring the air conditioners back online randomly over a period of 3-5 minutes.

Technology to Address FIDVR

- The cost of the AHRI R&T research project is estimated to be \$100,000.
- Co-funding of the research was sought from SCE, but SCE declined to provide co-funding.
- The project is currently on hold within AHRI awaiting financial sponsors from among the stakeholders.
- Next steps?