

The Electric Program Investment Charge
Proposed 2012-2014 Triennial Investment Plan
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Comments Concerning
Technology Demonstration and Deployment, Program Administration
R&D into HVAC Design

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1) Technology Demonstration and Deployment

Chapter 4 Technology Demonstration and Development S11.1, page111

Chapter 7 Program Administration Table 19, page 169

Table 19 identifies a minimum 20% match fund requirement for Technology Demonstration and Deployment projects. If this results in a requirement for pre-award identification and commitment of matching funds it would eliminate a class of highly successful demonstration programs like the State Partnership for Energy-Efficient Demonstrations (SPEED). To avoid this the Commission should consider establishing procedures that would permit post-award identification and commitment of matching funds and exclude technology screening, site identification, monitoring, and evaluation from the match requirement.

Post-award screening of technology, along with verification of the suitability hosts sites, is part of the core work of a successful demonstration and deployment assistance initiative such as SPEED. While in-kind match funding from host sites is typically available post-award at the level of 20% or more of the demonstration installation cost, the host sites (and thus the source of matching funds) need to be vetted post-award before Commission funds are irrevocably committed.

A productive demonstration and deployment initiative such as SPEED will deploy significant post-award effort to screen potential technologies through the lens of actual demonstration venues, as well as explore multiple host site venues to find suitable matches with candidate technologies. Technologies may be sent back to the product development cycle and discussions with several host sites may occur before low-risk demonstration projects are successfully developed. This pre-demonstration value-

added substantially lowers risk associated with the eventual investment of funds in the baseline monitoring, installation of the technology, post-installation monitoring, and analysis of demonstrations.

Co-funding is not typically available at all for the technology screening, host site identification, monitoring, analysis, and documentation tasks. In the unlikely event such co-funding were offered from technology manufacturers, it would be un-desirable as it would impact the independence of the demonstration and technology validation process.

2) Research and Development into HVAC Design

Chapter 3 Applied Research and Development Table 2, page 21 and S1.2 page 26

The Strategic Objective description and narrative identify research and development into new component, system, modeling, and diagnostic technology for heating, ventilating, and air-conditioning (HVAC) systems. However, traditional HVAC design methodology leaves a huge amount of low- and no-cost efficiency untapped with existing technology. Also, achieving the efficiency potential of new technology will be impeded by traditional HVAC design methodology.

The Commission should consider revising the Strategic Objective description and narrative to include language about R&D into HVAC design methodology. This could include feedback of information about existing building operations into design, accurate load assessment for low-energy buildings to enable a wider range of high-efficiency HVAC options, and managing margins of safety to avoid gross over-sizing of equipment. R&D could establish and formalize methods that better integrate HVAC design into the whole-building design and performance targeting process.