DOCKETED

Docket Number:	19-BSTD-02
Project Title:	Residential Alternative Calculation Method Variable Capacity Heat Pump Modeling Approach
TN #:	226470
Document Title:	Download link to ETCC VCHP Report
Description:	Supporting material for VCHP workshop
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Organization:	California Energy Commission
Submitter Role:	Commission Staff
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Emerging Technologies Coordinating Council (ETCC) Project:
Variable Compressor Speed Heat Pumps

PDF report available for download at:
https://www.etcc-ca.com/reports/variable-compressor-speed-heat-pumps

Category:
Residential

Project Number:
ET14PGE8761

Start Year:
2014

End Year:
2016

Markets Segments:
Residential

Project Type:
Demonstration
Electric Energy Savings
Product Evaluation

Type of Technology:
HVAC, Residential

Organization:
Pacific Gas and Electric (PG&E)

Project Status:
Development

Savings Type:
Home

Project Summary
An ET project could help the resolve the existing impasse regarding ductless mini-splits in the market, and would need to have a field demonstration component which allows actual performance to be compared to central split system heat pumps and develops best practices for the design, installation, commissioning, and maintenance. There is also a lab component needed to set up testing to run automatically changing conditions in an "outdoor" room. These results would then be compared to the 4 fixed-point rating testing required by AHRI and DOE. Currently, with respect to Title 24, this equipment is treated/modeled as if they are a minimum efficiency central forced air heat pumps with ducts in the attic, which neglects any energy efficiency credit associated with duct loss. For new construction the output of the ET project could be a Compliance Option for single and multiple headed mini-split heat pumps complete with computer simulation protocols and HERS field verification requirements. For existing construction prescriptive requirements would be developed. A core product could be developed from the ET project.