



**CALIFORNIA
ENERGY COMMISSION**



California Energy Commission

STAFF REPORT

Appendix F: Technical References

**FOR THE 2025 BUILDING ENERGY EFFICIENCY
STANDARDS**

Energy Conservation Manual

October 2025 | CEC-400-2026-006-AP-F

APPENDIX F – TECHNICAL REFERENCES

2006 International Energy Conservation Code, International Code Council. Publications at 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795. 888-422-7233.

www.iccsafe.org.

2015 International Energy Conservation Code, International Code Council. Publications at 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795. 888-422-7233.

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ANSI/RESNET/ICC 301-2014 Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index, International Code Council. Publications at 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795. 888-422-7233. www.iccsafe.org.

Rubin - Codes and States Enhancement Initiative (CASE) Plug Loads and Lighting Modeling. Eric Rubin, Daniel Young, Maxmilian Hietpas, Arshak Zakarian, Phi Nguyen (Energy Solutions), June 2016

Dobos - PVWatts Version 5 Manual, National Renewable Energy Laboratory (NREL), Aron P. Dobos, September 2014

Ecotope - A Guide to HPWHsim, Ecotope, April 15, 2016

Ecotope - Heat Pump Water Heater Model Validation Study, Ecotope Inc., Northwest Energy Efficiency Alliance, Report #E15-306, March 2, 2015

Ecotope - HPWHsim Project Report, Ecotope, April 14, 2016

Fuentes - A Simplified Thermal Model for Flat Plate Photovoltaic Arrays, Martin K. Fuentes

Lutz – Calculation to Determine Hourly Energy Consumption of Tankless (Instantaneous) Water Heaters, Jim Lutz, April 2, 2019

Kruis – Development of Realistic Water Draw Profiles for California Residential Water Heating Energy Estimation, Neal Kruis, PhD - Big Ladder Software, Bruce Wilcox, PE, Jim Lutz - Hot Water Research, Chip Barnaby – Revised (March 2019)

Gilman - Errata for SAM Photovoltaic Model Technical Reference, National Renewable Energy Laboratory (NREL), P. Gilman, December 2015

Gilman - SAM Photovoltaic Model Technical Reference, National Renewable Energy Laboratory (NREL), P. Gilman, December 2015

Documents are available at the [Reference Documents Page for the CBECC Modeling Software](http://www.bwilcox.com/BEES/reference.html) (<http://www.bwilcox.com/BEES/reference.html>).