

## Introduction

The Southern California Regional Energy Network (SoCalREN) Improvement Submittal Checklist and Modeling Design Guidelines were developed in order to assist participating analysts and raters with the job submission process for the SoCalREN Multifamily Program in Southern California. Below you will find the elements that Quality Assurance (QA) reviewers observe when reviewing an application—organized in six sections: Project Files, Verification Report, Multifamily Combustion Air Safety (CAS) Workbook Form Test-Out, Energy Pro Model, and Outside Hand Calculations and Other Documents.

### Project Files

- All required files shall be submitted into the Multifamily Portal. The required files are named: Verification Report, Building Permit Confirmation and Sign-Off for the SoCalREN Multifamily Program, Combustion Safety Multifamily Combustion Air Safety (CAS) Workbook Form, Energy Pro Model and Outside Calculations (if used).

### Verification Report (see sample report)

- Cover page shows site name, address and a photo of the property.
- Projected savings from implementing the total energy efficiency and water conservation measure (if appropriate) in dollars and kWh and therms.
- Each improved measure has a description of the improvement and photo documentation representative of each upgrade:
  - a. Where (location) the measure is installed, quantity and efficiency
  - b. Spec sheets, invoices to document total volume purchased or specification of equipment verified on-site.
- Results of the diagnostic testing conducted on-site.
- Summary of the combustion analysis testing completed during the test-out.
- Table of sampled units/spaces and highlighted sample rate according to the [Assessment Protocols](#).
- ECON-2.
- Alignment of improvements in Verification Report and EnergyPro modeled envelope improvements.

### MF CAS Workbook Test-Out Form

- The CAS Form (on the SoCalREN Rater Resources Page), or equivalent, is submitted. If no CAS testing was required at the test-out, this shall be noted with the reason in the Verification Report. The file does not need to be submitted.
- The CAS form for the Improvement Submittal has identical data results as the Initial Assessment Submittal MF CAS Workbook Form.
- Project name, BPI analyst name, BPI number, temperature and test-out date.

- Complete all appropriate fields below. Cross out the fields not used.
  - a. Location Information:
    - Unit number or space with location (interior closet/conditioned space, exterior unconditioned closet, utility building, etc.)
    - CO, ambient CO completed.
  - b. Gas Oven:
    - All fields completed (if no gas oven, then write in electric oven).
  - c. Combustion Ventilation Area:
    - Complete all fields.
  - d. Worst Case Test and Natural:
    - Complete all fields if testing was needed; otherwise, cross out.
  - e. Results:
    - Complete with pass or fail.
  - f. Notes:
    - Available for any unclear issues or communication about CAS testing—e.g., further actions are needed or recommendations need to be made.

## EnergyPro Model Post-Construction

- The data values for Improvement Submittal testing results are reasonable.
- Upgraded systems are correctly modeled.
- Alternatives selected in EnergyPro match the assembly types in the Building Tree.
- Alternatives selected do not include: Building leakage, lighting, HVAC and DHW tune-ups, appliances (except indoor refrigerator), PVs, DHW all pipes insulated or recirculation loops.
- Alternatives section align with Verification Report.
- ECON-2 includes modeled and custom savings, which are supported by included Hand Calculation spreadsheets.
- A CF-4R/CF-3R is included if credit is taken for HERS verification tests.
- If fan energy savings are claimed for ventilation, then pre- and post-documentation are provided.

## Outside Hand Calculations and Other Documents

- Permit sign-off form.
- Cost of energy improvement only.
- Custom calculations include pre- and post-quantities and efficiencies that match the customs input of EnergyPro.
- Custom calculations that are approved for the Program.

**Energy Upgrade California® Home Upgrade** provides assistance and incentives for home improvement projects that can reduce energy use and make homes more comfortable. This statewide program is managed locally by utilities and regional energy networks and directed by the California Public Utilities Commission in collaboration with the California Energy Commission. Funding comes from utility customers under the auspices of the California Public Utilities Commission. Incentives are offered on a first-come, first-served basis and are effective until the funding is expended or the program is discontinued. Terms and conditions apply. See program rules for details. Programs may be modified or terminated without prior notice. ©2018 Southern California Regional Energy Network. Trademarks are property of their respective owners. All rights reserved.