



Please Note:

This template is intended for educational purposes only, without any express or implied warranty of any kind, including warranties of accuracy, completeness, or fitness for any particular purpose. You agree that your use of the template is without any recourse whatsoever to PG&E, SCE, SDG&E, or their affiliates. The template is a draft, and anyone using this document should seek the advice of an attorney to develop appropriate ordinance language to meet its jurisdiction's specific needs, as state and local laws may differ.

Please contact the Codes and Standards Reach Codes Team at info@LocalEnergyCodes.com for additional information.

This program is funded by California utility customers and administered by Pacific Gas and Electric Company, San Diego Gas & Electric Company (SDG&E®), and Southern California Edison Company under the auspices of the California Public Utilities Commission and in support of the California Energy Commission.

2022 Single Family FlexPath Model Reach Code for Existing Buildings

FAQs

May 2024

Q. What do the points represent?

- A. The points in the *Measure Menu* table represent the relative **site energy savings** attributable to each measure. Thus, a measure with 4 points would provide twice as much savings as a measure with only 2 points.

The *Target Score* represents a user-defined (see below) percentage of the maximum cost-effective site energy savings, (the sum of points from all retrofit measures that have been found to be cost-effective). Thus, in the Cost-Effectiveness Explorer if the Target Score is set at 50% of the maximum score, the required measures would save about 50% as much energy as the energy savings attributable to installing all cost-effective measures.

Q. How are the *Target Score* and Measure Points calculated?

- A. The Cost-Effectiveness Explorer calculates the Maximum *Target Score* and the points tables, which are available for export. The user (i.e., staff developing the policy) sets the required *Target Score* in the Cost Effectiveness Explorer.

Q. What is considered cost-effective?

- A. Cost-effectiveness assumes that the bill payer will accrue a positive net-present-value from the measure. For the scope of this policy, the cost is assumed to be the full retrofit cost and is not contingent upon a project. Measures that are only cost-effective during replacements (e.g., appliances and cool roofs) are not part of the set of measures used to establish the cost-effective ceiling.

Q. Could points be based on GHG reductions?

- A. Federal regulations¹ require that, among other things, local and state standards to be based on energy or its equivalent energy cost savings. Site energy savings are generally proportionate to GHG emissions reductions.

Q. Why are some measures mandatory?

- A. Cost-effective measures with very low costs and small savings (i.e., lighting) are recommended to be mandatory to prevent cream skimming.

Electric readiness is presented as mandatory because there are no directly attributable energy savings and therefore it cannot be scored relative to the other measures.

Q. How can I tell how much compliance might cost?

- A. The cost of compliance will vary based on a) the Target Score, b) the scope of project, c) the existing conditions of the home, d) measure selection, and e) market conditions. By

¹ 42 USCode Sec. 6297(f)(3)(F). <https://www.govinfo.gov/content/pkg/USCODE-2022-title42/pdf/USCODE-2022-title42-chap77-subchapIII-partA-sec6297.pdf>

adjusting the Target Score in the Cost Effectiveness Explorer, the user alters the measure combinations that satisfy the requirements.

Typical initial measure costs, as reported in the cost-effectiveness study, are presented below. Costs may vary by climate zone. In addition to the information in the table, the Cost Effectiveness Explorer produces an estimate of the typical compliance costs for a range of *Target Scores* specific to each climate zone and vintage.

Typical Measure Costs – 2,400 Sq. Ft. Home (\$)			
	Pre-1978	1978-1991	1992-2010
Lighting Measures	100	100	100
Water Heating Package	300	300	300
Air sealing	4,700	4,700	4,700
R-38 Attic insulation	6,800	2,600	2,600
R-49 Attic insulation	7,500	3,700	3,700
Duct sealing	2,600	2,600	2,600
New ducts, R-6 insulation + duct sealing	4,900	4,900	4,900
New ducts, R-8 insulation + duct sealing	6,400	6,400	6,400
Windows	11,900	11,900	11,900
Wall Insulation	3,000	na	na
R-19 Raised Floor Insulation	3,700	3,700	3,700
R-30 Raised Floor Insulation	4,200	4,200	4,200
Cool roof .20 Solar Reflectance *	900	900	900
Cool roof .25 Solar Reflectance *	1,800	1,800	1,800
Radiant barrier under roof *	900	900	900
Heat pump water heater replacing gas *	4,400	4,400	4,400
High eff. heat pump water heater replacing gas *	5,200	5,200	5,200
Heat pump water heater replacing electric *	3,900	3,900	3,900
High eff. heat pump water heater replacing electric *	4,700	4,700	4,700
Heat pump space heater *	1,100	1,100	1,100
High eff. heat pump space heater *	4,100	4,100	4,100
Dual fuel heat pump space heater *	2,000	2,000	2,000
Heat Pump Clothes Dryer *	400	400	400
Induction Cooktop *	700	700	700
Solar PV (3kW)	9,700	9,700	9,700

* *Incremental cost at time of replacement*

Q. Why do some measures have points which exceed the Maximum *Target Score*?

A. The points are based on site energy savings; they do not vary based on the *Target Score*. Measures with values that exceed the *Target Score* save more energy than required.

Q. Can a jurisdiction alter the points and score?

A. Jurisdictions may (and should) alter the *Target Score* but may not change the measure points. Users will need documentation supporting the relative energy value of the measure(s) to alter the measure points.

Q. Can other measures be added to the list?

A. If there is documentation supporting site energy savings, additional measures may be added. Contact info@LocalEnergyCodes.com to inquire about revisions.

Q. Why do some measures have no points for newer vintages?

A. Certain measures (e.g., windows, wall insulation) were required at the time of construction in newer vintages and are therefore not eligible for points.

Q. How would this ordinance be implemented?

- A. Specific implementation details will depend upon the triggers, stringency, and scope of each adopted ordinance. Projects that are required to comply with the ordinance would be required to install a combination of measures from the menu that meets or exceeds the *Target Score*. Permit applicants would submit a supplemental form documenting that the measures selected and installed meet or exceed the *Target Score*. Collateral materials have been developed to assist implementation. These materials include: an application checklist; air-sealing checklist; and an exceptions form.

Q. What if compliance would be very onerous because only a few measures are applicable or technically feasible in the home?

- A. There is an exception that allows the Building Administrator to adjust the *Target Score*. The exception form provides specific values for those measures that were used to set *Target Score*, which can be applied as credits. If those measures are deemed to be not applicable (e.g., ducts in a home with hydronic heating) or infeasible (e.g., PV with excessive shading), the Administrator may reduce the *Target Score* by the value of those measures.

Q. How do the vintages account for code cycles that became effective mid-year?

- A. Normally, codes become effective on January 1 of the year following the nominal code cycle. However, in some cycles the effective date was postponed to midyear. In these cases, the vintages are rounded down such that a home permitted anytime during that year is credited with the code effective in the latter half of the year.