



GREENHOUSE GAS REDUCTION IN THE BUILT ENVIRONMENT

Climate Action Subcommittee

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PED

PROBLEM STATEMENT

- The minimum energy efficiency features (in buildings) required by the State do not fully meet the greenhouse gas (GHG) reduction strategy we've adopted locally.
- GHG reduction in the built environment is part of a larger City-wide strategy to meet long-term requirements imposed by the State.

BACKGROUND

- Previously adopted “All-Electric” code.
- Subsequent 9th circuit court case ruling pre-empts bans on mixed-fuel solutions.
- Santa Rosa ceased enforcement of our all-electric code.
- Staff researching new options to reach our greenhouse gas reduction goals.

BACKGROUND

- Current goal (by the end of 2025) of our City-wide GHG reduction strategy is to have legislation in place for all types of new construction.
- Existing infrastructure measures will need to be considered later to obtain our long-term (2030 and 2045) goals, but have yet to be shown as cost-effective in our area. *

BACKGROUND

- GHG reductions proposed through more efficient buildings and on-site solar/battery solutions.
- Changes to the Energy Code require a cost-effectiveness study.
- We used cost-effectiveness studies conducted by other teams (state, county, and utility companies) that include Santa Rosa specific data.

ANALYSIS

- Studies break down construction into “prototype” models representative of standard uses (Single Family Homes, Multi-Family Homes, and Nonresidential)
- This is intentionally similar to how the Energy Commission defines prototypes in comparing buildings for energy compliance standards throughout the state.

ANALYSIS

- Energy code compliance shown through computer modeling.
- This allows the designer to trade off feature efficiencies in some areas by making up for them with better features in another area.

ANALYSIS

- Codes have historically become more stringent with each code cycle, as the state is pushing towards the same green house gas and energy compliance goals that we are locally.
- The actual increase in compliance margins will need to be reanalyzed every code cycle change (recent history every 3 years).

ANALYSIS

- Proposed ordinance should achieve more than 95% of the energy reductions previously calculated for the all-electric reach code while maintaining mixed-fuel options of compliance.

RECOMMENDATIONS

- New construction designed to a higher energy standard than the state codes.
- Encourage solar/battery installation, but do not include a requirement to provide solar/battery systems of sufficient size to fully support the energy needs of buildings (not shown as cost-effective in the studies available.)

RECOMMENDATION

Residential Alterations (Single- and Multi-Family):

- R-48 Ceiling/roof insulation at alterations with no insulation.
- R-13 Exterior Wall Insulation at alterations with no insulation.

QUESTIONS?