

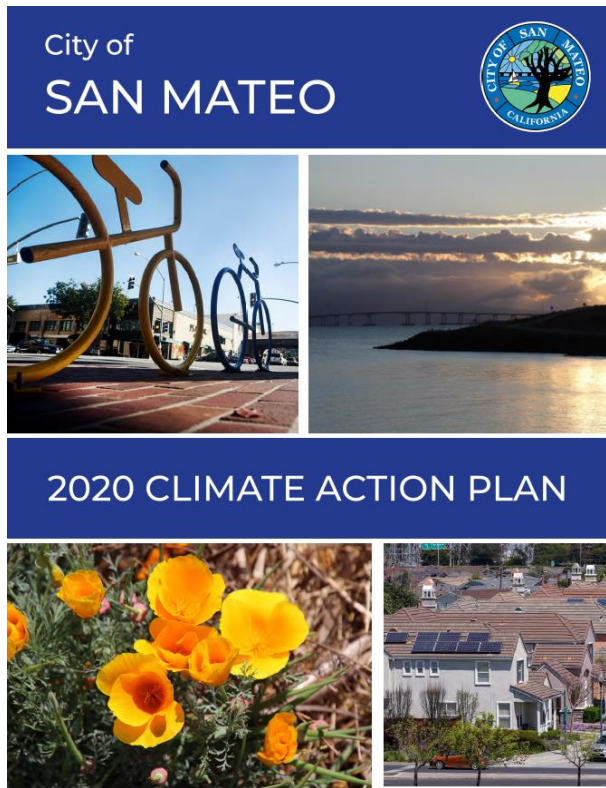


Reach Codes for the 2022 Building Code

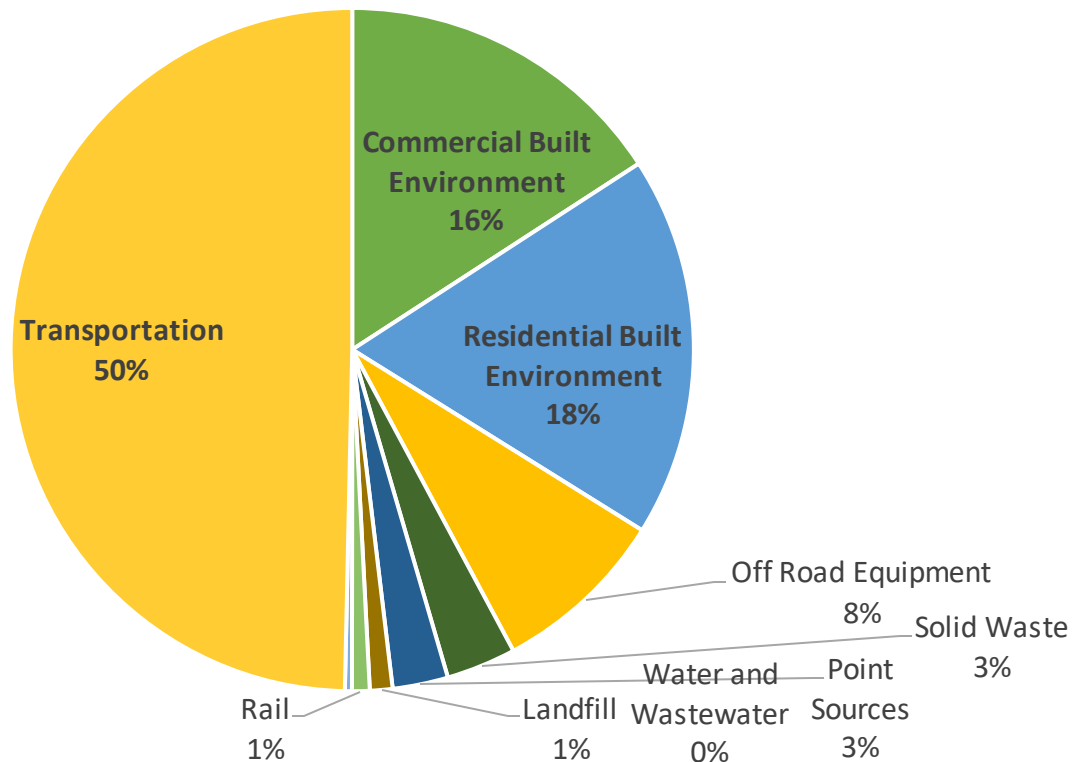
July 13, 2022

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2017 Greenhouse Gas Emissions



Building Electrification

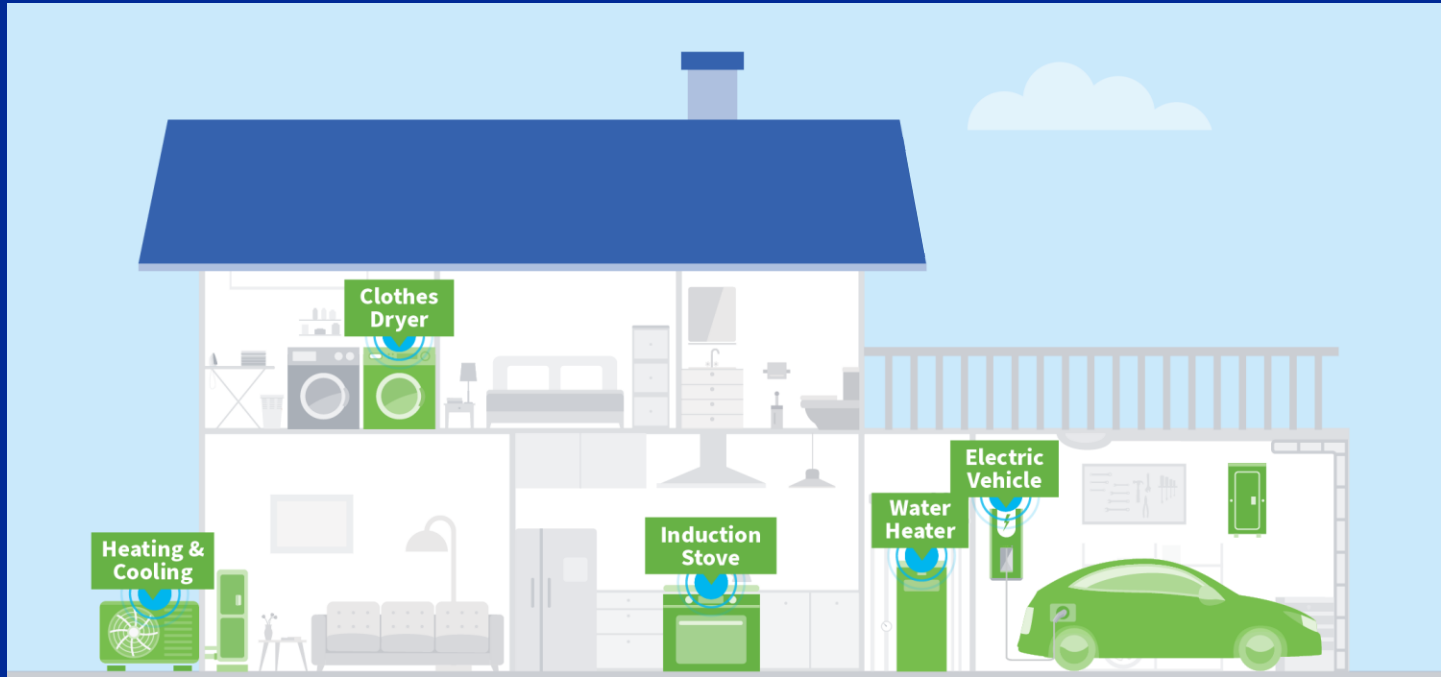


Image credit: <https://www.peninsulacleanenergy.com/all-electric-homes/>

Feedback from April SIC Meeting

New construction

- All-electric required for all building types
- Enhanced EV Readiness for all building types

Existing building renovations

1. Electric-readiness (panel capacity)
2. Electric-readiness (outlet installed)
3. Heat pump AC
4. Heat pump pool heater
5. Heat pump water heater

Electrification Policies

- Reach codes (time of permit)
- Time of sale or property transfer:
 - energy assessment or fossil fuel equipment disclosures
- Building performance standards
- “End of Flow” ordinance
- Carbon neutrality policy
- Financing and rebates for electrification

New Construction: All-Electric Reach Code

- All buildings required to be all-electric
- Exceptions:
 1. Commercial kitchens
 2. Hotel/motel laundry
 3. Infeasibility

Existing Building Renovations: Electrification Reach Code Options

Electric-readiness

Reach Code	Trigger	Building type	Permits per year	GHG impact	Upfront cost	Utility bill cost
1) Panel capacity and breakers reserved	Panel upgrade or replacement	Residential	192	No direct impact	\$0	No impact
2) Outlet installed	Kitchen or laundry renovation	Single Family Residential	147	No direct impact	Add \$500 - \$,2000	No impact

Air Conditioning

Reach Code	Trigger	Building type	Permits per year	GHG impact	Upfront cost	Monthly utility bill cost
3) Heat pump AC	New AC or replacement AC	Single Family and duplexes	299	Space heating = 203 therms 36% avg household gas use	Add \$1,500	Save \$10 - add \$11

Pool and Outdoor Equipment

Reach Code	Trigger	Building type	Permits per year	GHG impact	Upfront cost	Monthly utility bill cost
4A) Pool heating	New pool	Residential	5	Pool heating = 162 therms	Add \$800-\$1,300	Save \$8.75
4B) Prohibition of gas infrastructure in backyard	New pool or gas insert permit	Residential	10	Pool heating = 162 therms	Pool: Add \$800 - \$1,300	Pool: Save \$8.75

Water Heater

Reach Code	Trigger	Building type	Permits per year	GHG impact	Upfront cost	Monthly utility bill cost
5A) Heat pump water heater	Water heater replacement	Single Family	134	Water heating = 308 therms 55% avg household gas use	Add \$1,500 - 4,500	Savings or no impact
5B) Heat pump water heater	Renovation and water heater replacement	Single Family	<134	Water heating = 308 therms 55% avg household gas use	Add \$1,500 - \$4,500	Savings or no impact

Other Electrification Efforts

- Induction Cooktop Loaner Program
- Outreach events
- PCE All-electric Leadership Award's Program
- The Switch is On



Electrification Policies

- Reach codes (time of permit)
- Time of sale: energy assessment or fossil fuel equipment disclosures
- Commercial building performance standards
- “End of Flow” ordinance
- Carbon neutrality policy
- Financing and rebates for electrification

Recommendation

Provide feedback on potential amendments to the 2022 Building Code for new construction and existing buildings related to building electrification.

Thank You

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New Construction: All-Electric Reach Code

- All new construction required to be all-electric
- Exceptions:
 1. Commercial kitchens
 2. Hotel/motel laundry
 3. Infeasibility

Existing Building Renovations: Reach Code Options

- 1) Electric-readiness (panel capacity) at time of electrical panel upgrade – Residential
- 2) Electric-readiness (outlets installed) at time of kitchen or laundry room renovations – Single Family Residential
- 3) Heat pump air conditioning – Single Family and duplexes
- 4) Pools and outdoor equipment – Residential
 - A. Electric/solar pool heating
 - B. Prohibition of fuel gas infrastructure in the backyard
- 5) Heat pump water heating – Single Family Residential
 - A. HPWH at time of replacement
 - B. HPWH as part of major renovation