

GENERAL PLAN UPDATE: Climate Action Plan Follow-Up

Planning Commission Workshop #5

December 6, 2018



Tonight's Topic

- Climate Action Plan Update
- Follow-up from Sept. 20 PC Workshop
 - Reviewed all public comments
 - Met with Governor's Office of Planning and Research (OPR) staff
 - Report Back



Public Comments - Key Issues and Concerns



- CAP doesn't go far enough, should include more stringent GHG reduction measures
- CAP implementation details need to be more specific for each measure
- Specific comments on individual GHG reduction measures

Recommended Changes



I. Revise Measure TACM-9 - EV Charging

- Adopt new minimum EV charging and parking standards:
 - EV-ready, EV-capable, and minimum charging stations installations
 - Aligned with existing reach codes and best practices
- Public charging in all City-owned municipal facilities
- Publicly-available charging for TNC drivers (e.g., Lyft, Uber)



Recommended Changes

2. Revise Measure BE-7: Phase in Solar PV Requirements and Solar-Ready Buildings

- Phase in requirements for solar PV for single-family and low-rise multifamily (consistent with recent State changes)
- Phase in non-residential requirement to be “solar-ready”
- 2019 Title 24, Part 6
- Trend = moving towards zero-net energy buildings, per statewide goals



Recommended Changes

3. Revise BE-6: Shift Focus to Electrification

- All-electric homes and electrification of existing homes/buildings.
- Support growing movement to decarbonize buildings
- Major program investments by SMUD, incentives available
- City can take action by:
 - Streamlining permitting of all-electric new construction or retrofit projects,
 - Reduce/waive fees, other incentives to match SMUD’s commitment
- Explore phasing in new minimum standards prior to 2030
 - Need to address legal and institutional barriers first

A typical 2,100 sq. ft. home saves:

1
ton
of CO₂ per year.

\$1k
in avoided cost for gas, fire insurance, and maintenance.

PROGRAM OVERVIEW

Must meet code and receive no gas service.

\$4,000 for all-electric single family home
\$1,250 per all electric multifamily unit.

BONUS
\$1,000 (SF) / \$500 (MF)
for induction cooking.

Customers may also take advantage of available EV & storage program.

SMUD also offers marketing support for projects.

Recommended Advanced All-Electric Technologies*

*While SMUD encourages advanced all-electric technologies the program only requires the home to be all-electric.

SOLAR PV + BATTERY STORAGE

Use all the solar power generated. Store some generation during the day and discharge at night.

INDUCTION COOKING

Directly heats pots & pans using electromagnetic energy. Cooking surface cool to the touch, better temperature control, and safer cleaning.

SMART THERMOSTAT

Schedule and automate heating and cooling needs, based on occupancy, while allowing for communication with other smart devices in the home.

HEAT PUMP HVAC SYSTEM

Air to air heat pumps can deliver up to 300% efficiency.

HEAT PUMP WATER HEATER + THERMOSTATIC MIXING VALVE

Produce less or much hot water than electric water heater. Can be used as a thermal battery.

HEAT PUMP DRYER

Can be 50% more energy efficient than conventional electric resistance clothes dryer. Less heat means color fade slow.

ELECTRIC VEHICLE CHARGING

Pre-wiring is required to code and SMUD offers a free SMUD charger or two years of free charging.

Source: SMUD

	Baseline: Electric and Gas Home	All-Electric Home
Electricity Consumption	4,530 kWh/yr	7,670 kWh/yr
Natural Gas Consumption	370 Therm/yr	0 Therm/yr
GHG Emissions (source)	6700 lb CO ₂ /yr	4100 lb CO ₂ /yr
Total kTDV ¹	80 kTDV/yr	71 kTDV/yr
Total Estimated Energy Bill	\$1,020/yr	\$890/yr

¹ Does not include lighting or miscellaneous plug loads. Based on energy modeling of a typical 2,100sf single-story home. GHG emissions averaged over first 15 years. Individual energy use may vary based on individual lifestyle and behavior. Savings are estimates only and will vary depending on occupancy and behavior. TDV is the time dependent valuation of energy used in Title 24 compliance software.

For questions or more information, go to smud.org/SmartHomes

Recommended Changes



4. Additional State Legislative Actions

- SB 100
 - Changes in renewable electricity portfolio standard: 50% by 2026, 60% by 2030
 - New zero-carbon electricity standard for 2045
- Title 24 Energy Code – triennial code update (2019)
 - 2019 changes go into effect on January 1, 2020
 - Full details were unknown until mid-2018 after draft CAP prepared

Other Potential Changes



- Scale back GHG reductions achieved by 2020
- Form Citizens Climate Action Committee, following CAP adoption
- Specify timing of certain implementation procedures, including project-level review and developing CAP Checklist for 15183.5 streamlining.
- Add list/range of possible funding sources



Other Potential Changes

- Identify equitable implementation opportunities (e.g., solar for low-income communities working with partners)
- Increase waste diversion targets to near-zero:
 - 75% by 2020
 - 80% by 2030
 - 90% by 2040
 - 95% by 2050

Recommended Action

- Provide direction to incorporate the major changes described tonight into the draft CAP
- Bring back the final draft CAP as part of the General Plan Update

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