REACH CODE STAKEHOLDER ADVISORY COMMITTEE

MEETING #4: EDUCATION, INCENTIVES, WORKFORCE STRATEGY

TOWN OF TRUCKEE

DATE: November 14, 2022





Housekeeping

- Opportunities to submit comments and questions will be available after each local utilities' presentation.
- Open floor discussion is welcome after the presentations today.
- Any questions or comments not addressed in today's meeting will be followed up on separately.



Scan QR Code for access to presentation materials and supplemental resources.

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ID 360°

AGENDA

- 1. Goals for Today's Meeting
- 2. Reach Code Development Timeline Updates
- 3. Decarbonization Resources for the Community
 - 1. Statewide and Federal Incentive Programs
 - 2. Local Utility Programs
- 4. Program Examples from Other Jurisdictions
- 5. Stakeholder Committee Discussion
- 6. Next Steps

— GOALS



- Engage in discussion on the following:
 - **Education** opportunities related to energy efficiency, electrification, and decarbonization.
 - Incentive priorities related to energy efficiency, electrification, and decarbonization.
 - Workforce development strategies related to energy efficiency, electrification, and decarbonization.
- Discuss education and incentives that the Town should promote or consider exploring.

Reach Code Development Timeline Updates







Reach Code Development Timeline Updates

- Town has received 2022 New Single-family Custom Analysis and 2022
 New Nonresidential Custom Analysis from statewide team.
- Expansion of Supplemental Cost-benefit & Economic Impact Analysis scope in progress based on feedback during 9/27 meeting.
- Full reports from statewide team for 2022 New Nonresidential and 2022
 New Multifamily pending.
- Committee to reconvene after the New Year, when all the costeffectiveness data and analyses are complete.

Decarbonization Resources for the Community Federal & State Programs







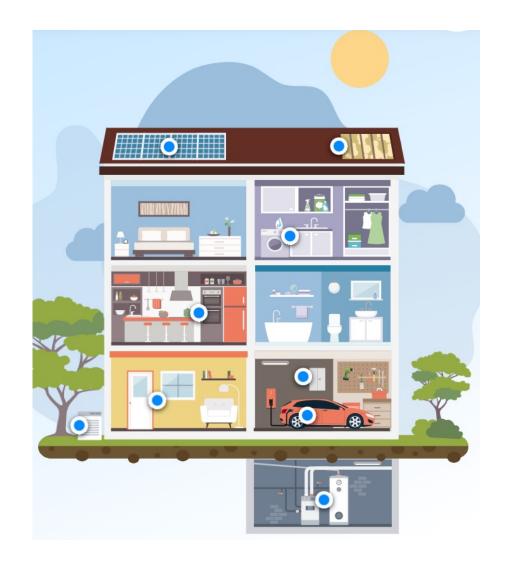
Key Provisions

- Expanded clean energy tax credits to drive wind and solar.
- Climate-smart development financing to local, state, tribal governments.
- Program funding for clean energy (solar, pollution-reducing) in low-income and disadvantaged communities.
- Incentives for homeowners to install heat pumps, EVs, and solar.
- Local government assistance for zero-energy codes.
- State-based workforce development funding to train contractors in energy efficiency installation and electrification improvements.





- Tax credits and rebates for homeowners and renters.
 - Rooftop Solar PV
 - Weatherization and Efficiency Upgrades
 - Heat pump systems
 - Electric system upgrades
 - Electric vehicle (EV)





High-Efficiency Electric Home Rebate Program (HEEHRA)

Appliance/Non-Appliance Upgrade	Rebate	
Air-Source Heat Pump (ASHP)	\$8,000	
Heat Pump Water Heater (HPWH)	\$1,750	
Electric Stove	\$840	
Electric Clothes Dryer	\$840	
Upgraded Breaker Box	\$4,000	
Upgraded Electrical Wiring	\$2,500	
Insulation, Ventilation and Sealing	\$1,600	
Total home cap of \$14,000 cap. Eligible income: < 150% AMI		

- Rebates up to 50% or 100% of project cost (income determined) up to measurespecific caps.
- Available for new construction



- Performance-based, whole home rebates (retrofit only)
 - Rebates for retrofits of up to
 \$4,000/home for market rate customers
 - \$8,000 for LMI homes (for energy savings >35%)
 - Rebate based on either modeled or measured energy savings





About the BUILD Initiative

- BUILD is a residential building decarbonization program.
- BUILD provides incentives and technical assistance to support the adoption of advanced building design and allelectric technologies in new, low-income all-electric homes.
- BUILD encourages adoption of clean energy technologies in affordable housing developments.





Why Participate in BUILD?

- Receive \$2,000,000 in incentives to reduce construction costs
- Reduce long-term utility costs for both developer and residents
- Build applicant's in-house capacity for all electric buildings
- Layer funds with other programs and incentives
- Eliminate costs for gas infrastructure

Who is Eligible?

- Building owners or developers of low-income housing with:
 - Five years' development experience
 - At least one completed lowincome project



What Projects are Eligible?

- Low-income residential housing (single-family and multifamily)
- Building must be all-electric and no hookups to the gas distribution grid
- Demonstrate modeled resident utility cost savings
- Project located in one of four gas service territories:
 - Southern California Gas, Pacific Gas & Electric, San Diego Gas & Electric, and Southwest Gas Corporation



Eligible Residential Buildings

- Newly constructed buildings
- Existing buildings repurposed for housing
- Building additions or renovations where 50% or more of the exterior weight bearing walls are removed or demolished

Sample Eligible Building Types

- Single-family homes
- Duplexes/triplexes/ quadplexes
- Multifamily apartments
- Homeless/transitional housing
- Mixed-use buildings (incentive for residential portion)



TECH Initiative

ABOUT the TECH Initiative

- TECH Clean California is a \$120 million initiative.
- Designed to help advance the state's mission to achieve carbon neutrality by 2045.
- Driving the market adoption of low-emissions space and water heating technologies.
- 40% of program benefits targeted towards lowincome and disadvantaged communities.





TECH Initiative

Key Activities

- Provide comprehensive guidance on product incentives, pilots, workforce development and training opportunities and local and state policies that impact the market.
- Expand the reach of consumer awareness campaign, markets with TECH initiatives in place.

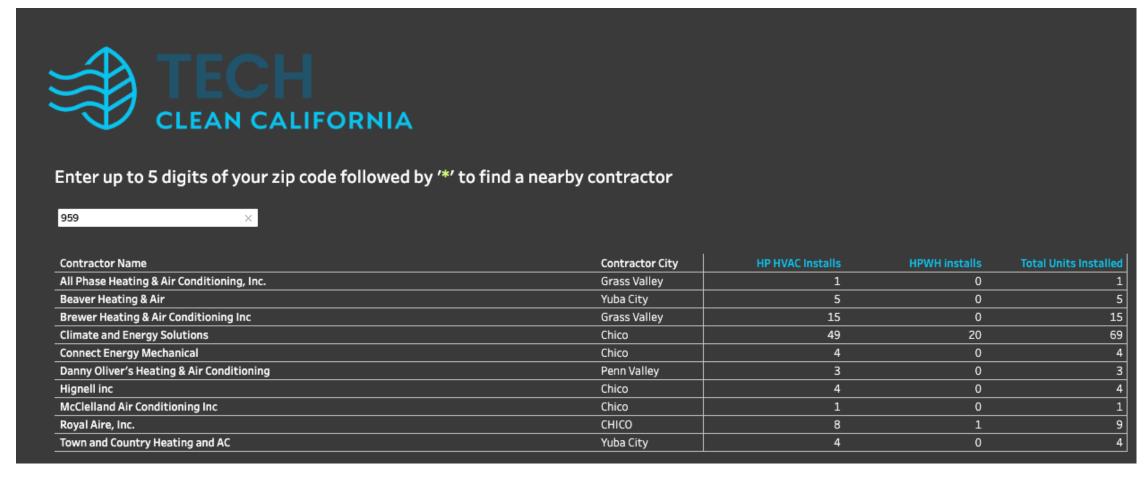


- Develop custom messaging and outreach for low-income customers and disadvantaged communities through low-income facilitators and CBOs.
- Collect and publish sales data, energy and GHG impacts to inform California's long-term decarbonization strategy.



TECH Clean California

 Maintains public data on heat pump installations and tracks the number of installations performed by contractors enrolled in the program.



Budget

Remaining Funding Allocation for TECH Clean California General Incentives

	Total Incentives Paid (\$)	Total Paid + In Process (\$)	Reserved Funds (Total Paid + In Process + Unsubmitted) (\$)	Allocated Incentive Budget (\$)	Non-Reserved Budget Remaining (\$)	% of Budget Remaining
Total	9,572,250	30,069,250	47,485,350	40,000,000	-7,485,350	-18.7%
Single Family HPWH & HP HVAC	9,497,550	23,287,950	36,280,950	28,000,000	-8,280,950	-29.6%
Southern California Gas Territory HPWH Incentives	157,750	277,250	349,250	1,500,000	1,150,750	76.7%
Southern California Gas Territory HP HVAC Incentives		Susp	ended - All Incentives F	teserved (\$12,29	92,800)	
Pacific Gas & Electric Territory		Susp	ended - All Incentives F	teserved (\$11,85	55,200)	
San Diego Gas & Electric Territory		Sus	pended - All Incentives I	Reserved (\$1,89	5,600)	
Southwest Gas Territory	16,500	79,700	130,700	456,400	325,700	71.4%
Multifamily HPWH & HP HVAC	74,700	6,781,300	11,204,400	12,000,000	795,600	6.6%
Southern California Gas Territory	70,700	888,100	5,311,200	5,911,200	600,000	10.2%
Pacific Gas & Electric Territory	Suspended - All Incentives Reserved (\$5,080,800)					
San Diego Gas & Electric Territory	Suspended - All Incentives Reserved (\$812,400)					
Southwest Gas Territory	-	-	-	195,600	195,600	100%

Last updated: 6/8/22



TECH: Single-Family Incentives

Heat Pump HVAC Incentives

Equipment Type	Minimum Efficiency Requirements	Total Incentive Per Unit
Package, split, mini/multi-split	Title 24 code minimum	\$1,000

Heat Pump HVAC Incentives — Quality Installation

Quality Installation Measure	Qualifier	Total Incentive (TECH + Local Program Combined)
Manual J completed	Provide calculations	\$300
Duct sealing/replacement and testing	5% Total leakage or less	\$300
Field Measured Performance (based on ASHRAE 221-2020)	Heating System Performance Ratio (HSPr) or Cooling System Performance Ratio (CSPr) = 80% or better	\$400

Note: The above installation incentives are available to be kept or passed on to the customer at the contractor's discretion.



TECH: Single-Family Incentives

Heat Pump Water Heater Incentives

Replacement Scenario	Measure Criteria	Total Incentive Per Unit By Utility Territory
Gas/propane to HPWH	All HPWH sizes	\$2,100 for PG&E \$3,100 for SCG and SWG
Electric resistance to HPWH	All HPWH sizes	\$1,000 for all

Note: The Demand Response Program enrollment bonus is \$50 and is available in all territories and can be kept by contractor



Incentives for Heat Pump HVAC Systems Serving Individual Apartments

Durations Course	System Type			
Previous Space Heat Source	Description	AHRI Test Standard	Total Incentive Per System	
Non-heat pump systems	Split or rooftop heat pump (ducted or ductless)	210/240	\$2,000	
All except PTHPs	PTHP, SPVHP, or unitary through the wall/ceiling heat pump	310/380, 390	\$500 (Single or two-stage compressor) \$1,000 (Variable capacity/inverter-driven)	

Incentives for Heat Pump HVAC Systems Serving Multiple Apartments

Previous Space Heat Source	System Type	Total Incentive (Per Apartment Served)
Non-heat pump systems	HP HVAC equipment serving multiple apartments	\$1,000



Incentives for Heat Pump HVAC Systems Serving Common Areas

Previous Space Heat Source	System Type	Total Incentive Per System
	Split or rooftop heat pump (ducted or ductless)	\$1,800
Non-heat pump systems	PTHP, SPVHP, or unitary through the wall/ceiling heat pump	\$300 (Single or two-stage compressor) \$800 (Variable capacity/inverter-driven)



Incentives for Electrical Panel Upgrades

Previous Equipment	System Type	Total Incentive (Per Apartment Receiving Electrical Upgrade)
Undersized apartment electrical infrastructure that is upgraded as part of an apartment's HPWH or HP HVAC installation	Apartment panel or sub panel upgrades, feeder upgrades, or service disconnect upgrades	\$1,400 Apartment unit must have received a TECH-funded HP HVAC or HPWH and must be all-electric after the electrical upgrade



Incentives for Unitary Heat Pump Water Heaters

Previous Water Heater Heat Source	HPWH Tank Size	Total Incentive Per System
0	< 55 gallons	\$1,400
Gas or propane	>= 55 gallons	\$2,100
Electric resistance	All	\$700

Incentives for Central Heat Pump Water Heaters Serving Two or More Apartments

Previous Water Heater Heat Source	HPWH Storage Volume¹	Total Incentive (Per Apartment Served)
Non-heat pump systems	< 15 gallons per bedroom served	\$1,200
	>= 15 gallons per bedroom served	\$1,800

Storage volume only includes storage volume of water that can be heated directly by the heat pump components of the plant.

Incentives for Multifamily Heat Pump Pool or Spa Heating

Previous Space Heat Source	System Type	Total Incentive Per System
Non-heat pump systems	Heat pump pool heating	\$2,500



California Electric Homes Program - CalEHP

- Program currently under development.
- Program will provide incentives for the construction of all-electric market-rate residential buildings.
- Program will provide incentives for installation of energy storage systems.



Decarbonization Resources for the Community Local Programs







Local Utility Programs

Energy efficiency and savings programs available to the Truckee community.

- Liberty Utilities
- Southwest Gas
- Truckee Donner Public Utility District



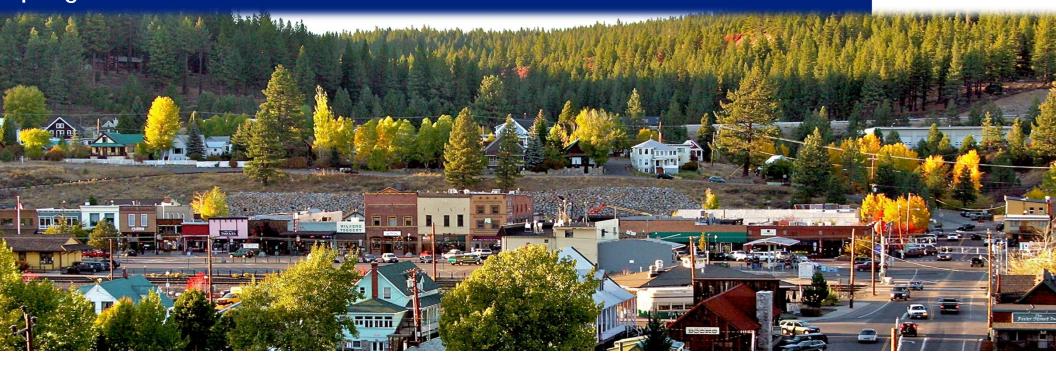




Charting a Sustainable Future

Introduction to TDPUD De-carbonization programs





TDPUD De-Carbonization Programs - Context

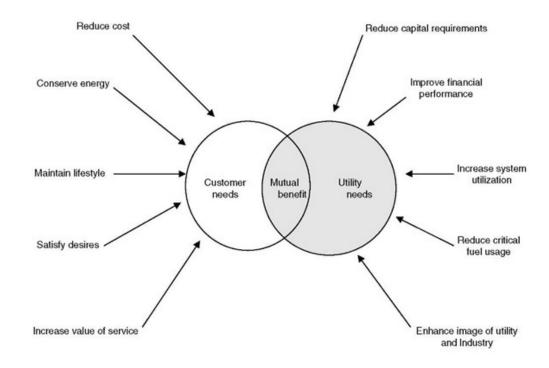
Resource Planning Objectives are Consistent with SB 1020 (currently exceed by ~7 years)

- 60% Renewable and Clean by 2030
- 90% by 2035
- 95% by 2040
- 100% by 2045

Focus has shifted from traditional *conservation* to *decarbonization* - though we still have specific conservation targets.

Winter peaking at ~60% of distribution system design capacity (demand response not currently a cost effective or necessary resource)

Large portion of well education customers with both the means and interest in pursuing home electrification (though with skepticism)

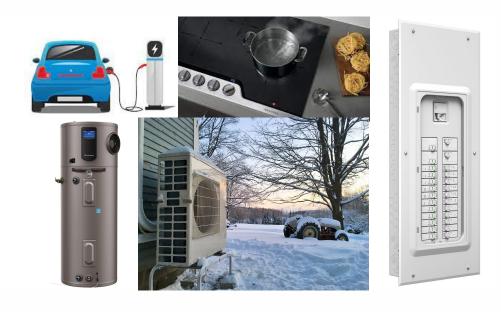


Current Initiatives *Conservation and De-Carbonization Programs*

Classic Rebates



SMART Electrification



Current Initiatives

Conservation and De-Carbonization Programs

Residential Energy Surveys



- Slowly re-launching program inhouse. (Intend to actively start marketing spring '23)
- Entirely virtual audit process paired with "conservation kits"
- Identify opportunities for customers to participate in other District Programs and Southwest Gas programs.

PY22 De-Carbonization Program Participation Snapshot (as of August 2022)

<u>Appliances</u>				<u>DERs</u>		
	Heat Pumps	EV Chargers		PV	ESS	
Enrollment Quantity	7	11	Count	236	11	
Total Incentives	\$9,887.00	\$7,920.68	Total Capacity	1,436 kW	100 kW	
Electric Impacts	-12,708.57 kWh	-33,000.00 kWh	Avg. Capacity	6.09 kW	9.12 kW	
Gas Impacts	1,348.54 Therms	0 Therms	Annual Production	2,155 MWH		
Installed Tonnage	21.6	NA	Storage Capacity		282 kWh	

Current Initiatives

Conservation and De-Carbonization Programs

Education

- Increase local community understanding of why conservation (both energy and water) is important;
- Increase awareness and involvement in TDPUD water and energy conservation programs;
- Increase awareness of TDPUD efforts at decarbonization and how individuals within the community can participate
- Teach conservation lifestyle behaviors
- Conservation Garden





TDPUD Electrification Programs - Takeaways

- Limited participation in rebate offerings
 - Programs are newly re-designed and "suffer" from high saturations of traditional measures (e.g. past program success).
 - Local concerns about grid reliability (really "availability")
- Local HVAC contractors not familiar with (and largely disinterested in) cold weather heat pump options.
- High <u>natural adoption</u> rates for EV chargers (particularly Tesla), Energy Star appliances, and heat pumps.
- Questionable utility for ESS (battery) for PSOM and extended outages. High natural adoption in certain pockets despite no real economic payback.



Pushing program focus towards education, outreach, and behavior!

Liberty's Home Energy Audit Program

Available to all residential customers

- Evaluation of the home to help to understand energy usage and identify opportunities to increase efficiency
- Virtually or in-person
- Customers will receive a report with the findings and recommendations
- Energy Efficiency Kit delivered to the home following the audit (may include LED lamps, advanced power strips, shower heads/faucet aerators)



Energy Efficient Home Improvements Can

SAVE YOU MONEY AND ENERGY

Now you can take advantage of the Energy Savings Assistance (ESA) Program and save money on your energy bills. As a Southwest Gas, Liberty Utilities or Bear Valley Electric income-qualified customer, you may be eligible for energy efficient home improvements at no cost to you.

Whether you rent or own, you'll see savings at home and in your pocket. Conserving energy just got a whole lot easier.

Your home can be more efficient with:

- Weatherstripping and caulking
- · Ceiling insulation
- · Water-restricting devices
- · Water heater blankets
- Minor repairs to exterior doors and windows
- Switch and outlet cover plates and gaskets
- Pipe insulation
- · Evaporative cooler and air conditioning covers
- · Other minor home repairs

Emergency Disaster Relief Program (EDRP)

Southwest Gas customers are provided certain protections under the California EDRP in times of a declared emergency. These mandated protections include a suspension on disconnections for non-payment, waiver of deposits, and flexible payment options. swgas.com/edrp

THERE ARE TWO WAYS

TO QUALIFY!

1. Public Assistance Program Eligibility

If you or someone in your household participate(s) in any of the following programs:

- · Medicaid/Medi-Cal (age 65 and over)
- Medicaid/Medi-Cal (under age 65)
- · Medi-Cal for Families A&B (Healthy Families A&B)
- Supplemental Security Income (SSI)
- · CalFresh/SNAP (Food Stamps)
- · Head Start Income Eligible (Tribal Only)
- · Bureau of Indian Affairs General Assistance
- · Women, Infants, and Children (WIC)
- · National School Lunch Program (NSLP)
- · Low Income Home Energy Assistance Program
- · CalWORKS (TANF) or Tribal TANF

2. Income Eligibility

Effective July 1, 2022 to May 31, 2023.

Number of Persons Living in My Home	Annual Income		
1	\$33,975		
2	\$45,775		
3	\$57,575		
4	\$69,375		
5	\$81,175		
6	\$92,975		
7	\$104,775		
8	\$116,575		

for each additional person add \$11,800

New Measure Updates

- **Smart Thermostats**
- Central Air Conditioner (AC) Replacement

Liberty's Energy Savings

Assistance Program (ESA)

- Central Heat Pump Replacement 0
- Heat Pump Water Heaters
- Dishwashers
- Freezers 0
- Room AC Replacement
- Central AC Tune-up
- Heat Pump Tune-up
- Smoke and Carbon Monoxide Detectors

TO FIND OUT MORE ABOUT THE ENERGY SAVINGS ASSISTANCE PROGRAM. PLEASE CONTACT:

Energy Savings Assistance Program



Southwest Gas





Liberty Utilities Contractor 866-812-5766 | 8 am to 5 pm Bear Valley Electric Service Contractor 800-808-2837 | 8 am to 5 pm



Commercial Incentives Program

Available to all non-residential customers

Provides support for planning/implementing energy efficiency projects

Prescriptive incentives for:

Lighting

Cooling

Commercial kitchen equipment

Refrigeration

- Prescriptive incentives are fixed values offered on per replaced/upgraded unit basis
 - Custom incentives based on estimated annual energy savings





California Energy Efficiency Programs

Prepared for the Truckee REACH Code Advisory Committee

November 14, 2022



Energy Savings Assistance (ESA) Program

Energy efficient home improvements at no cost to qualified Southwest Gas customers may include:

- Weatherstripping and caulking
- Insulation
- Water-restricting devices
- Water heater blankets
- Repair or replacement of doors and windows
- Switch and outlet cover plates and gaskets
- Pipe insulation
- Evaporative cooler and air conditioning covers
- Appliance repair or replacement
- Duct work repair
- Other minor home repairs



ESA Program Qualifications

Qualified Southwest Gas customers may be owners or renters and qualify for program inclusion in two ways:

- 1. Public Assistance Program Eligibility if any person in the household participates in any of the following programs:
 - Medicaid/Medi-Cal (age 65 and over)
 - Medicaid/Medi-Cal (under age 65)
 - Medi-Cal for Families A&B (Healthy Families A&B)
 - Supplemental Security Income (SSI)
 - CalFresh/SNAP (food stamps)
 - Head Start Income Eligible (Tribal only)
 - Bureau of Indian Affairs General Assistance
 - Women, Infants and Children (WIC)
 - National School Lunch Program (NSLP)
 - Low Income Home Energy Assistance Program (LIHEAP)
 - CalWORKS (TANF) or Tribal TANF



ESA Program Qualifications

2. Income Eligibility – The household annual income is at or below 250% of the

Federal Poverty Level:

Effective July 1, 2022 to May 31, 2023			
Number of Persons in Household	Annual Income		
1	\$33,975		
2	\$45,775		
3	\$57,575		
4	\$69,375		
5	\$81,175		
6	\$92,975		
7	\$104,775		
8	\$116,575		
For each additional person add \$11,800			



ESA Application Process

- 1. Call 866-812-5766 or complete online form at www.swgas.com/esa.
- 2. Prequalification
 - Verification of program or income eligibility
 - Energy education
 - Identification of measure to be installed
- 3. Installation of weatherization measures
- 4. Post-installation inspection/audit and confirmation of measures installed
- 5. GHG emissions reductions are estimated based on the number and type of measures installed



Energy Efficient Appliance Rebates

Category	Rebate Program	Description	Amount	Exp. Date
Water Heating	California Natural Gas Tankless Water Heater- Homeowner/Renter	Receive a rebate on qualifying models if you are a Southwest Gas Residential customer.	\$225	Dec 31, 2025
Water Heating	California Natural Gas Storage Water Heater- Homeowner/Renter	Receive a rebate on qualifying models if you are a Southwest Gas Residential customer.	\$75	Dec 31, 2025
Washer- Dryer	California Clothes Washer- Homeowner/Renter	Receive a rebate on qualifying models if you are a Southwest Gas Residential customer.	\$25 - \$50	Dec 31, 2025
Washer- Dryer	California Natural Gas Clothes Dryer- Homeowner/Renter	Receive a rebate on qualifying models if you are a Southwest Gas Residential customer.	\$50	Dec 31, 2025
Heating- Cooling	California Natural Gas Fireplace- Homeowner/Renter	Receive a rebate on qualifying models if you are a Southwest Gas Residential customer.	\$50 - \$100	Dec 31, 2025
Heating- Cooling	California Natural Gas Gravity Wall Furnace- Homeowner/Renter	Receive a rebate on qualifying models if you are a Southwest Gas Residential customer.	\$25	Dec 31, 2025
Heating- Cooling	California Smart Thermostat- Homeowner/Renter	Receive a rebate on qualifying models if you are a Southwest Gas Residential customer.	\$100	Dec 31, 2025
Heating- Cooling	Special Offer Home Heating Inspection	Special Offer: \$75 per-unit home heating inspection running October 1, 2022 – November 30, 2022.	\$75/unit	Dec 1, 2022

www.swgas.com/en/residential-rebates-and-promotions



Other CPUC Approved Conservation and Efficiency Programs

- **Residential Equipment Direct-Install (RED) Program:** The RED Program offers low flow showerheads, smart low flow showerheads, kitcheb abd bathroom faucet aerators and duct sealing measures to all residential customers at no charge. Southwest Gas has filed a request with the CPUC to add pipe wraps, water heater blankets and smart thermostats to the program.
- **New Homes Rebate:** The New Homes Rebate program offers rebates to homebuilders of single-family homes that are built to the State of California *Title 24 Energy Efficiency Standards* and equipped with high efficiency natural gas appliances.
- **Solar Thermal Rebates:** The Solar Thermal Rebate program offers rebates to residential and commercial customers for the installation of solar thermal systems for pools and residences.



With questions please contact:

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Program Examples from Other Jurisdictions







Town of Los Altos Hills, CA

- <u>Building Electrification webpage</u> with electrification resources by end use and rebates available to the community.
- Established Home Electrification Assessment
 Program to assess a home's existing natural
 gas appliances + provide homeowners with a
 customized path for migrating off natural gas
- Town is offering \$1,000 rebates for 14
 homeowners who replace a fossil-fueled
 water heater with a HPWH.





Town of Portola Valley, CA

- Energy Upgrade Portola Valley Program
- Residents can schedule a Home Energy
 Assessment and a Water Use Assessment.
- Partnered with interested Energy Upgrade
 California-qualified contractors.





Town of Fairfax, CA

- Town enrolled in Willdan's HPWH electrification program and replaced gas water heaters in various Town buildings.
- Pursuing electrification initiatives at facilities to lead by example and educate community.
- Provides resources to connect residents, businesses, and contractors to regional rebates, incentives, and training programs.

Town of Crested Butte, CO

- Conducted case study of new 3,000 sq. ft. home in Town regarding equipment cost differences.
 - Gas v. electric heating, hot water heating, and stoves.
 - Available rebates
 - Utilizing cold-climate HPs found to be costeffective.
- Leverages rebates from local utility.



- Streamlining Electrification Permitting
 - Similar to Expedited PV & EV Permitting required by the State.
 - Focus on electrification of appliances (HPWH, HP HVAC).
 - Leverage existing expedited review requirements and resources.
 - Evaluate permit fee structures to achieve parity between electric & natural gas or to favor electrification.
 - Develop dedicated electrification application, permit review, and inspection processes.



Discussion



Next Steps



Next Steps

- Committee to reconvene after the New Year, when all the costeffectiveness data and analyses are complete.
- State (Custom) and Supplemental C/E studies finalized.
- Develop local code based on statewide model code language and community and industry feedback.
- Bring reach code to Town Council.
- Undergo state approvals and begin local enforcement.