



## CLIMATE ACTION MANAGEMENT TEAM

Hayward City Hall – Conference Room 2A  
777 B Street, Hayward, CA 94541-5007

October 20, 2010  
7:00 p.m. – 8:30 p.m.

### A G E N D A

- I. Call to Order
- II. Introductions and Roll Call
- III. Public Comments: *(Note: For matters not listed on the agenda, the Committee welcomes public comments under this section, but is prohibited by State Law from discussing items not listed on the agenda. Items not listed on the agenda brought up under this section will be taken under consideration and may be referred to staff for follow-up as appropriate.)*
- IV. Expectations and Purpose of the Climate Action Management Team
  - o Review of Mission Statement
- V. Election of Chair and Vice Chair
- VI. Update on Development of a Residential Energy Conservation Ordinance (RECO)
- VII. Future Agenda Items
- VIII. General Announcements and Information Items
- IX. Next Meeting: Wednesday, November 10, 2010
  - o Communications Plan and Establishment of Communications Sub-Committee
  - o Review of 2011 Topics List
- X. Adjournment



Assistance will be provided to those requiring accommodations for disabilities in compliance with the Americans with Disabilities Act of 1990. Please request the accommodation at least 48 hours in advance of the meeting by contacting Katy Ramirez at (510) 583-4234 or by calling the TDD line for those with speech and hearing disabilities at (510) 247-3340.



## **CLIMATE ACTION MANAGEMENT TEAM**

### **Proposed Mission Statement for the CAM Team:**

Support and guide efforts to implement the City of Hayward Climate Action Plan by:

- Supporting the City Council Sustainability Committee by providing detailed analysis and recommendations regarding issues scheduled for consideration by the Committee;
- Providing direction to the City's Sustainability Coordinator; and
- Assisting the City with education and outreach associated with the implementation of the Climate Action Plan.

### **Mission Statement of the Council Sustainability Committee:**

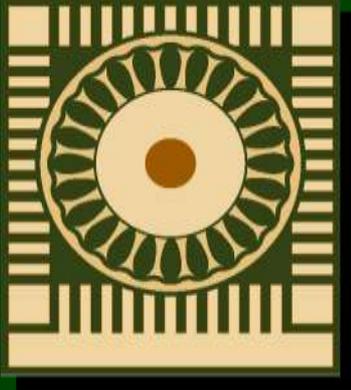
Make Hayward a more sustainable community in order to ameliorate negative impacts of climate change, conserve natural resources and promote a clean environment.

**Topics previously considered by the Council Sustainability Committee:**

Annual Review of Green Building Ordinances and Implementation
Membership in Bay Area Climate Collaborative (BACC)
Summary of Education and Outreach Efforts (Permit Center-Green Display, Website, etc.)
Residential Energy Conservation Ordinance (RECO)
Summary of Issues and Regional Efforts Regarding a Ban on Plastic Bags and Styrofoam Containers
South Hayward BART Form-Based Code Parking Strategies Options
Opposition to State Proposition 16
Large Energy Users Program (a program of the Energy Efficiency and Conservation Block Grant)
Energy Efficiency and Conservation Strategy
Overview of Community Outreach Plan
Ban on Styrofoam Containers
Update on State Green Building Code and its Impacts on Hayward's Green Building Ordinance, including Solar Requirements
Summary of Beacon Award Program
CaliforniaFirst Pilot Financing Program Implementation and Program Continuation
Increase Participation in Food Scraps Collection, Recycling, and Construction and Demolition Debris Programs
Update on Ordinances to Ban Plastic Bags

**Potential topics to be considered by the Council Sustainability Committee in 2011:**

Energy Efficiency and Conservation Block Grant Programs
Annual Review of CAP Implementation
Municipal Implementation Team (MIT) Program
Commercial Energy Conservation Ordinance
Plastic Bag Ordinance
Education/Outreach Efforts
Update on Property Assessed Clean Energy
Sea Level Rise
Transportation Demand Management (TDM) Programs
Local Food Production/Healthy Eating
Public Transportation
Pedestrian Master Plan
Recycling Programs (food scraps, C&D debris, multi-family recycling, City facilities and waste to energy)
Environmentally Preferred Purchasing
Update on Green Team Efforts
Multi-Family Residential Energy Conservation Ordinance



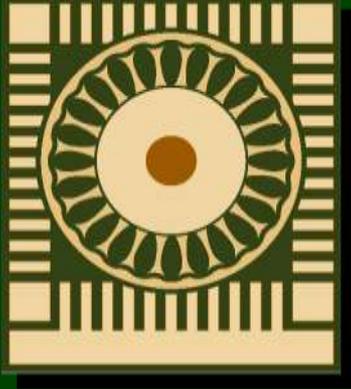
CITY OF  
**HAYWARD**  
HEART OF THE BAY

**Climate Action Management Team  
October 20, 2010**

**Residential Energy Conservation  
Ordinance (RECO)**

Amelia Schmale, Sustainability Coordinator





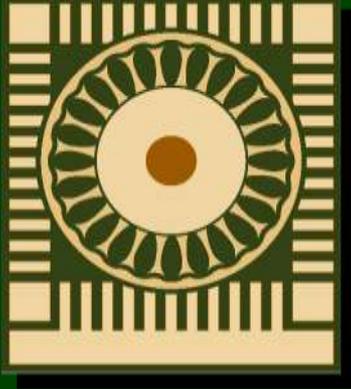
**What is a RECO?**



# What is a RECO?

- A Residential Energy Conservation Ordinance (RECO) is a policy tool local governments can use to improve the energy efficiency of existing homes
- Property owners must demonstrate compliance with energy and water efficiency requirements
- Applied to single family, duplex and/or multi-family buildings





**Why a RECO?**



# Why a RECO?

- Economic benefits: annual energy cost savings and job creation, increased home value
- Occupant benefits: improved comfort, indoor air quality and fire/combustion safety
- Environmental benefits: reduction in greenhouse gas (GHG) emissions, water conservation



# Policy Context- State Goals

## *AB 32 The Global Warming Solutions Act*

- Reduce GHG emissions to 1990 levels by 2020
- Reduce GHG emissions to 80% below 1990 levels by 2050

## *California Energy Commission- Long Term Energy Efficiency Strategic Plan*

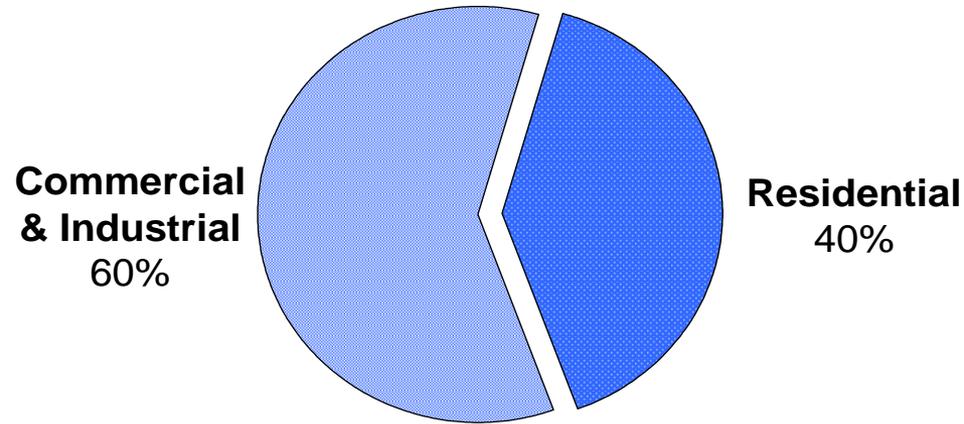
- Reduce energy consumption in existing homes by
  - 20% by 2015
  - 40% by 2020
- Recommends that local governments adopt RECOs

# Hayward Climate Action Plan – Local Goals

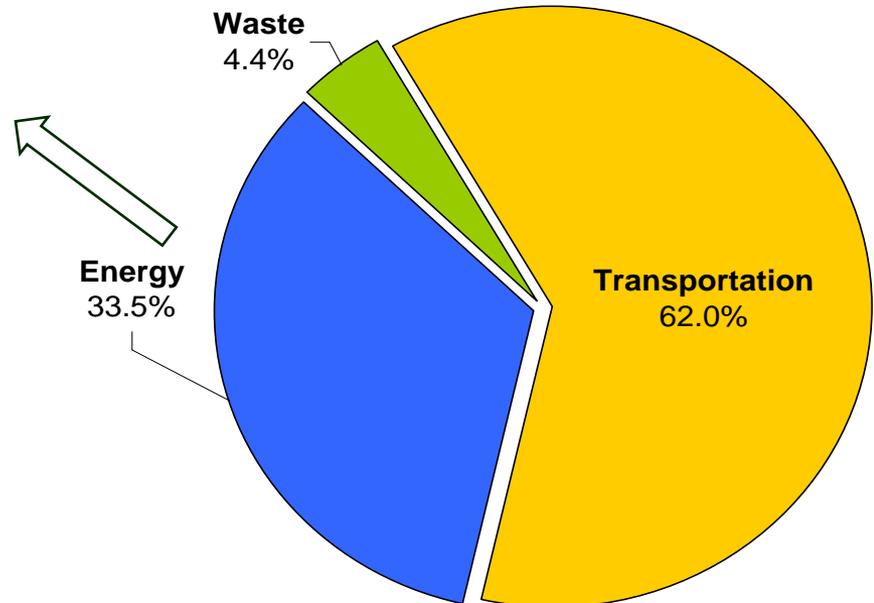
- Adopted by City Council on July 28, 2009
- Reduce Greenhouse Gas Emissions below 2005 levels by:
  - *12.5% by 2020*
  - *82.5% by 2050*
- Improve Energy Performance of Existing Buildings-
  - *reduce electricity consumption to 65% by 2050*
  - *reduce natural gas consumption to 50% by 2050*

# GHG Emissions from Hayward's Buildings

## Energy Emissions



## Hayward City-Wide GHG Emissions - 2005 total emissions = 1.18 million metric tons CO<sub>2</sub>e



# CAP Community-wide Action Priorities

*From Table 1, Hayward Climate Action Plan (CAP), 10/8/2009*

Action #	Short Description	Estimated Annual Emissions Reductions (Metric Tons CO2e)		Priority
		2020	2050	
3.9	Offer energy efficiency financing program for commercial buildings	1,630	132,025	1
3.3	Develop and implement Commercial Energy Conservation Ordinance	5,164	105,152	2
3.7	Energy efficiency financing program for single-family homes	181	40,248	3
3.8	Offer energy efficiency financing program for multiple-family homes	126	33,617	4
5.2	Offer renewable energy financing program for commercial buildings	10,768	22,822	5
6.3	Improve construction and demolition debris program	1,953	15,634	6
4.2	Continue to implement private development green building ordinance for commercial buildings	4,493	77,925	7
5.3	Add solar requirement into private development green building ordinance	2,980	24,660	8
4.1	Continue to implement private development green building ordinance for residential buildings	979	18,836	9
1.8	Prioritize traffic-flow management practices to reduce idling time	23,061	21,875	10
3.1	Develop and implement Residential Energy Conservation Ordinance for single-family homes	639	39,304	11
3.2	Develop and implement Residential Energy Conservation Ordinance for multiple-family homes	983	33,033	12
6.2	Increase participation in food-scrap collection programs	1,495	11,963	13
6.1	Increase participation in recycling programs	15,916	38,216	14
5.1	Offer renewable energy financing program for residential buildings	850	2,149	15



# Hayward RECO Process

- July 28, 2009 – Climate Action Plan adopted by Council
- Feb 3, 2010 – Introduction of RECO to Sustainability Committee
- June 2, 2010 – Overview of RECO to Committee
- Summer 2010 – Cost Effectiveness Research
- August 11, 2010 – First RECO Public Meeting
- September 1, 2010 – Council Sustainability Committee Meeting
- October 20, 2010 – Climate Action Management Team Meeting
- October 25, 2010 – Special Sustainability Committee Meeting
- Early 2011 – Draft Ordinance to Council Sustainability Committee
- Spring 2011 – Draft Ordinance to City Council



### News & Announcements



**HAYWARD LIBRARY**  
CLOSED OCTOBER 21st  
Staff Training Day



**November 2, 2010**  
**California General Election**

**HOLIDAY: OCTOBER 18, 2010 - TODAY!!!**  
Last Day to Register to Vote in this Election  
U.S. citizens 18 years or older are eligible to vote.  
You must register to get on the official list of voters. You need to re-register if you move, change your name, or change your address.

**TUESDAY, OCTOBER 26, 2010**  
Last Day for the Registrar of Voters to Receive your Written Request for a Vote by Mail Ballot.  
If you have an Alameda County Vote by Mail ballot, you may drop off your ballot in the Office of the Registrar.

[MORE >>](#)



**STATE OF THE CITY**

PRESENTATION >> PDF  
PRESENTATION >> PPT



**HAYWARD DEPARTMENT OF MOTOR VEHICLES**  
CLOSED UNTIL FURTHER NOTICE

[LETTER >>](#)

**Get Ready to S...**  
October 21, 2010



**Southgate Neighborhood Meeting #2**  
October 18, 2010  
[ENGLISH NOTICE >>](#)  
[SPANISH NOTICE >>](#)



**Residential Energy Conservation Ordinance**  
Special Meeting of the City Council Sustainability Committee on the development of a Residential Energy Co.  
Monday, October 25th, from 7 to 9pm.  
[MORE >>](#)



**Hayward Executive Airport**  
**Request for Qualifications**  
Subur Creek Improvements  
[DOCUMENT >>](#)



**Hayward Fire Department fights Apartment Fire**  
[VIDEO >>](#)



**Hayward Arts Council - "Holiday Members Show"**  
When: October 14 - December 17; Thursday - Saturday, 10 am to 4 pm  
Where: Green Shutter Gallery, 2255 Main St., Hayward  
[FLYER >>](#)

**Register To Vote**

**Disaster Preparedness**

**STOP GRAFFITI Reward Hotline**

**GREEN HAYWARD**

**KHCG TASK FORCE**

**Water Conservation**

**Mural Art Program**

CITY HALL Business Hours	
Monday - Friday	8:00AM - 5:00PM <small>(excluding Holidays)</small>
Saturday & Sunday	CLOSED
<small>Some City functions located in City Hall such as the Revenue Division and Development Services have modified hours. Information on specific hours of operation can be found on the City Website.</small>	



**Res Ord Special Commit**  
Energy C will meet Chamber 9pm.  
[MORE >>](#)



**Hayward Request for Sulphur**  
Dr...  
Hayward Concept Design



- City Council Priorities and City Initiatives >>
- FY 2010-11 Positions & Salaries Schedule >>
- FY 2011 & 2012 Operating Budget >>
- Adopted FY 2010-2019 Ten-Year Capital Improvement Program >>

### ACCESS HAYWARD

ABOUT HAYWARD  
MAYOR & CITY COUNCIL  
CITY COUNCIL MEETINGS  
PLANNING COMMISSION MEETINGS  
BOARDS, COMMISSION & COMMITTEES  
COUNCIL STANDING COMMITTEES

AIRPORT  
CODES, ORDINANCES & FEES  
DEPARTMENTS  
EMPLOYMENT  
LOCAL LINKS  
VOLUNTEERING

### BLOGS

- City Clerk
- City Manager
- Climate Action Plan
- Library News & Events
- Mural Art Program
- Refresh Your Life
- TeenSpace

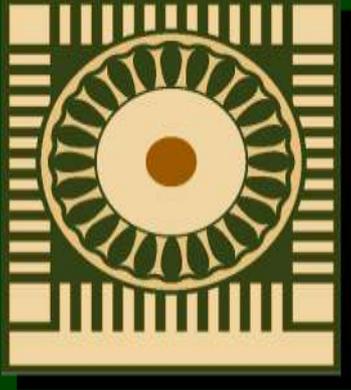
- City Documents
- Hayward Open For Business
- Disaster Preparedness
- GREEN HAYWARD
- Water Conservation
- ELECTIONS
- Register To Vote
- STOP GRAFFITI Reward Hotline
- KHCG TASK FORCE
- Mural Art Program



# RECOs in Other Cities and Counties

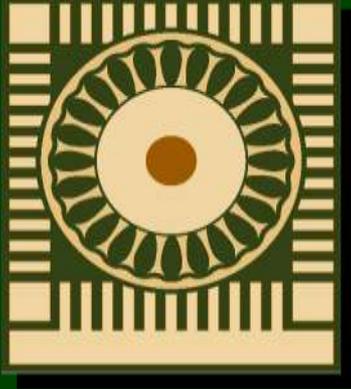
- **Berkeley, CA**
- **Boulder, CO**
- **Burlington, VT**
- **Marin County, CA**
- **Palo Alto, CA**
- **Rohnert Park, CA**
- **San Francisco County, CA**





## Ordinance Elements

- **Triggers**
- **Retrofit Measures**
- **Incentives**



# Triggers

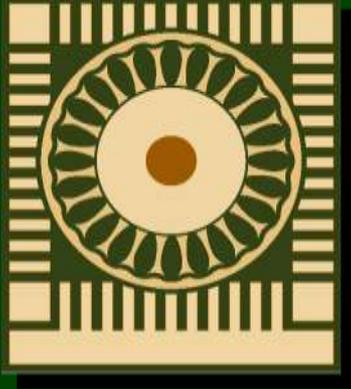
- **Remodels**
- **Point of Sale**
- **Date Certain**



# Trigger Options

- **Remodels > \$50,000:** RECO must be met as part of the regular permit process; and certified BPI home performance contractor must sign for certain retrofit measures
- **Point of Sale/Time After Sale:** RECO must be met within a designated grace period (e.g., 1, 2 or 3 years) after building sale
- **Date Certain:** RECO must be met by a fixed deadline (e.g., 10 or 12 or 14 years after effective date) for all single family/duplex , or for a subset of homes (e.g. dwellings built before 1978)





## Retrofit Measures

- Prescriptive approach
- Performance approach

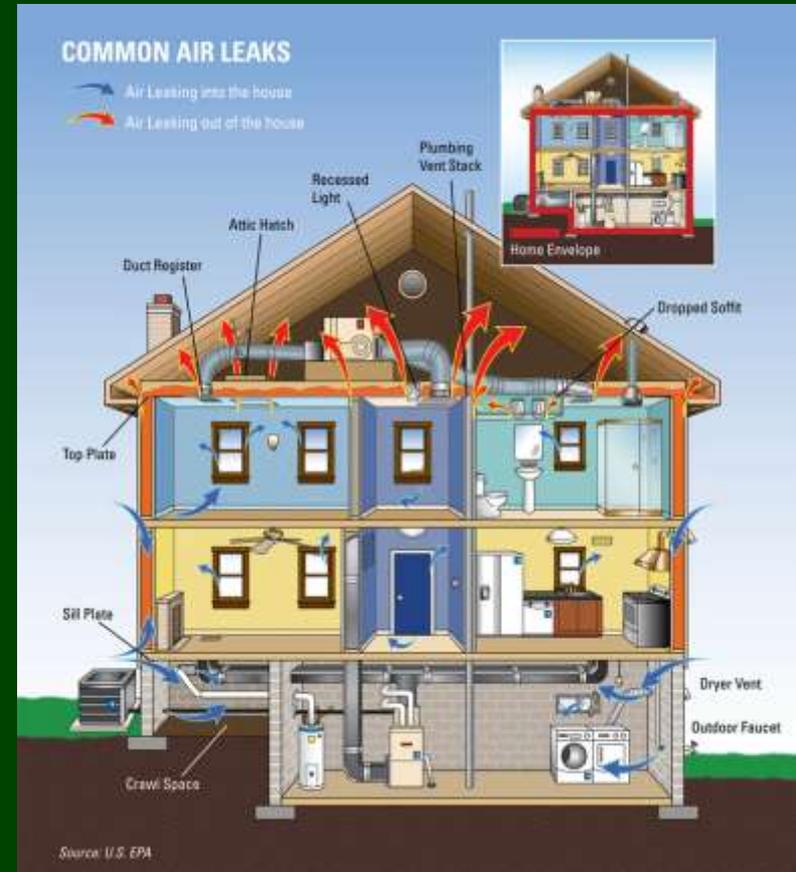


# Prescriptive Approach

## A checklist of specific retrofit measures

*A basic prescriptive “Package” could include the following:*

- Air sealing
- Attic insulation (quality installation)
- Floor insulation
- Duct testing and sealing
- Insulation of water heater and pipes
- Combustion safety and CO alarm
- New water heater
- *Loading order: must do air sealing before insulating*



# Performance Approach

## Evaluation of overall home energy use to produce customized retrofit recommendations

- Results in a report with an efficiency score
- Basis for eligibility for incentives/rebates and financing
- Higher level of accuracy when estimating potential energy savings
- Home is re-tested to measure actual efficiency improvements





# Retrofit Measures Analyzed for Cost-Effectiveness

- From the California Home Energy Retrofit Coordinating Committee (CA HERCC), a consortium of federal, state and local governmental agencies and other organizations
- Retrofit measures appropriate in the mild Hayward climate:
  - Air Sealing
  - Attic Insulation
  - Duct Sealing (Existing)
  - Wall Insulation
  - Raised Floor Insulation (above crawl space)
  - New Heating System
  - New Water Heater

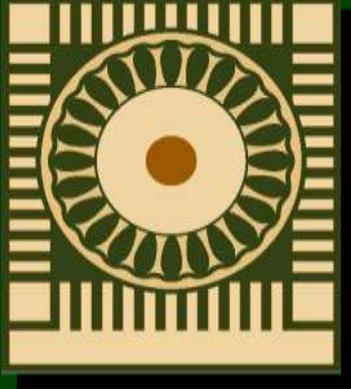
# Retrofit Costs and Paybacks

(RECO Report, Executive Summary, Table 1)

<u>Energy Retrofit Measures</u>	Average Retrofit Cost (\$)	Average Payback with No Incentives (Years)	Net Retrofit Cost <u>with</u> Incentives (\$)	Average Payback <u>with</u> Incentives (Years)
Duct Sealing	\$1,029	27.8	\$415	11.2
R-30 Attic (from R-0)	\$1,178	24.6	\$1,028	21.5
R-38 Attic (from R-0)	\$1,319	27.0	\$1,169	23.9
Gas Water Heater EF=0.58	\$1,400	58.1	\$1,400	58.1
Air Sealing	\$1,411	33.9	\$706	16.9
Gas Water Heater EF=0.62	\$1,625	41.8	\$1,625	41.8
Air Sealing + Duct Sealing	\$2,440	31.0	\$1,220	15.5
Air Sealing + R-30 Attic (from R-0)	\$2,589	29.1	\$1,589	17.8
Air Sealing + R-30 Attic (from R-11)	\$2,589	43.0	\$1,589	26.4
Air Sealing + R-38 Attic (from R-0)	\$2,828	31.2	\$1,414	15.6
Air Sealing + R-19 Raised Floor	\$3,016	36.2	\$1,508	18.1
Air Sealing + R-30 Attic + Duct Sealing	\$3,617	31.1	\$1,809	15.6
Air Sealing + R-38 Attic + Duct Sealing	\$3,856	32.7	\$928	7.9

*"with Incentives" include the combined PG&E and U.S. Home Star Prescriptive incentives*





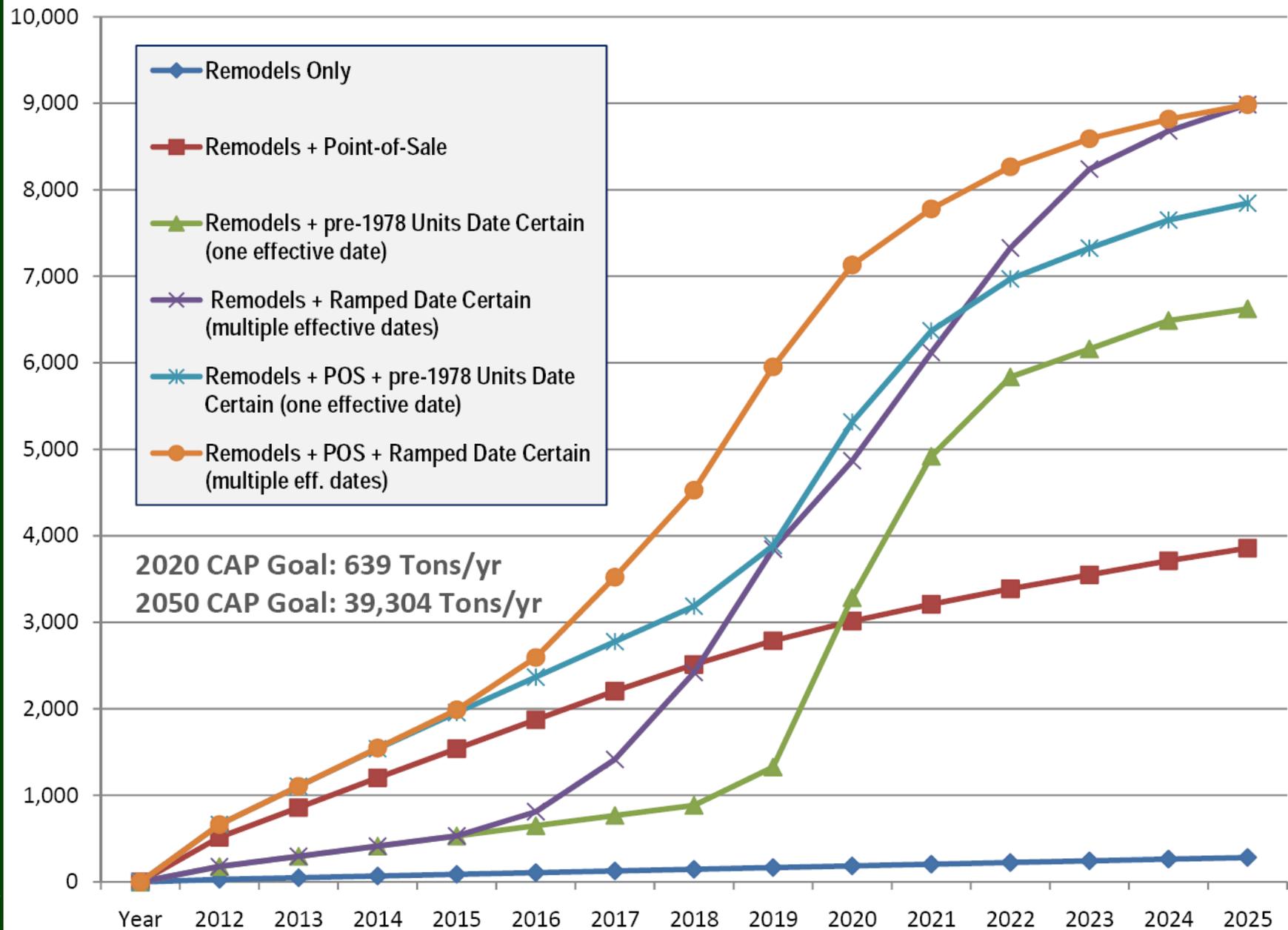
# Potential for Energy Savings

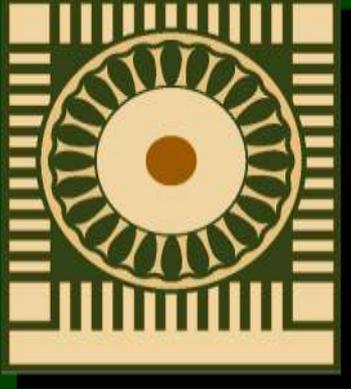


# Potential Number of Homes Affected

- **Remodels > \$50,000:** 60 homes/yr based on recent Hayward data = estimated 600 homes over 10 years assumed representing **2.1%** of all single family/duplex dwellings
- **Point of Sale/Time After Sale:** average of 1,000 homes/yr = estimated 10,000 homes over 10 years representing **34.3%** of all single family/duplex dwellings
- **Date Certain:** RECO must be met by a fixed deadline (e.g., 10 or 12 or 14 years after effective date) for **100%** of dwellings; or for a subset such as older homes built before 1978 = **72%** of dwellings
- Possible exemptions (e.g., based on family income or disabilities) may alter number of homes affected

# GHG Reductions by Trigger Type





# Incentives



# Assistance

- U.S. HOME STAR Program
- PG&E Rebates
- PG&E Energy Partners Program
- Energy Upgrade California
- EECBG-funded Audit Program



# Federal Incentives

## - U.S. HOME STAR Program

Passed the U.S. Congress, but not funded yet

- Potential U.S. Home Star program incentives are pending approval of energy bill and funding of tax credits;



- Up to \$3,000 for prescriptive, up to \$8,000 for performance

# Utility Incentives

## - PG&E Residential Retrofit Incentive Program

### Existing Rebates for Individual Measures

- \$150 for insulating > 1,000 sf attic
- \$100 for duct sealing
- Other rebates for new HVAC, appliances, etc.
- <http://www.pge.com/rebates/>



### Prescriptive Package

- \$1,000 for attic air sealing, attic insulation, duct sealing, hot water pipe insulation, low-flow showerhead installation, combustion safety testing

### Whole House Retrofits

- Performance audit, minimum % energy use reduction
- Up to \$3,500 for single family property owners



# Utility Incentives

## – PG&E Energy Partners Program

### Free for Income Qualified Owners & Renters

- No-cost home energy improvements (house, apartment or mobile home)
- Attic insulation, weather stripping, caulking, energy-efficient lighting and refrigerators, window repair and more
- Furnace and water heater repair and replacement available to qualifying home owners
- <http://www.pge.com/energypartners/>



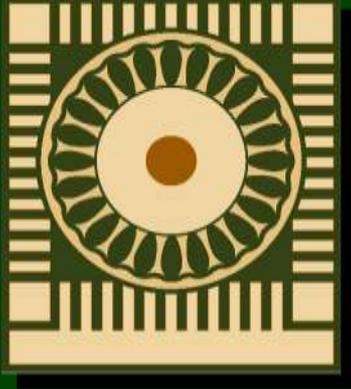
# Assistance

## Energy Upgrade California

Online clearing house for building energy retrofit programs, incentives, rebates, financing, qualified contractors

<http://www.acgreenretrofit.org/>





# Staff Recommendations



# Recommended Triggers

- Remodels/Additions > \$50,000; and
- Date Certain for Pre-1978 Homes (e.g., 2023 or 2025); and
- Time After Sale (2 years).

# Remodel/Addition Trigger

- Remodel and addition projects that exceed \$50,000
- Used alone or in combination with other triggers in most RECOs
- Increased awareness
- Clearly defined event: building permit
- Cost of retrofits may be reasonable when compared with overall project

# Date Certain Trigger (for pre-1978 Homes)

- Increased public awareness and encourages owners to use incentives while available
- Allows plenty of time to get RECO started, do education and outreach, work out administrative procedures
- Allows for important data collection and a mid-course review by the City (e.g., 2015) for possible revisions
- Increased resale value for owners who have met RECO requirements
- Create an opening to work with the California Public Utilities Commission (CPUC) and PG&E for a long term commitment to energy retrofit incentives that support a RECO
- Will establish an effective long term strategy by the City to work toward AB32 goals

# Time After Sale Trigger

- Compliance by seller or buyer
- If buyer, could be completed within 24 months of sale
- Clearly defined event: transfer of ownership
- Used in a few RECOs including the Cities of Berkeley, and San Francisco, California and Burlington, Vermont
- Cost may be considered reasonable vs. other costs associated with the sale and some remodeling by buyer

# Criteria for Recommended Prescriptive Measures

- Installed cost around or below \$3,000;
- Simple payback with no incentives  $\leq$  30 to 35 years;
- GHG reduction in the range of 8% to 9%; and
- Improvement of HERS 2 existing rating by more than 10%

# Recommended Retrofit Measures

**Mandatory Features:** low cost items such as low-flow toilets, showerheads and faucets; hot water pipe insulation; fireplace closures

**Compliance Options:** owner chooses any one of the following options in consultation with qualified performance contractor:

1. Air Sealing + R-30 Attic or Roof Insulation (from no insulation or existing insulation  $\leq$  R-13); or
2. Air Sealing + Duct Sealing (existing ducts); or
3. Air Sealing + R-19 Raised Floor Insulation (from no insulation) or
4. HERS 2 Rating + Improve Existing House Score by  $\geq$  20%.
  - *If no prescriptive option is feasible, air sealing alone will meet the compliance requirement*

# Compliance Options

	<b>Compliance Options</b>	<b>Average Cost</b>	<b>Cost with Possible Incentives</b>
<b>1</b>	<b>Air Sealing + R-30 Attic</b>	<b>\$2,589</b>	<b>\$1,589</b>
<b>2</b>	<b>Air Sealing + Duct Sealing</b>	<b>\$2,440</b>	<b>\$1,220</b>
<b>3</b>	<b>Air Sealing + R-19 Floor</b>	<b>\$3,016</b>	<b>\$1,508</b>
<b>4</b>	<b>HERS 2 Rating, Reduce Score by 20%</b>	<b>variable</b>	<b>- 50%</b>
	<b>Air Sealing Only</b>	<b>\$1,411</b>	<b>\$706</b>



# Cost Cap Recommendations

- Maximum expenditure by homeowner:
  - **Remodels/Additions > \$50,000:** None
  - **Point of Sale/Time After Sale:** 1.0% of sale price
  - **Date Certain:** 1.0% of assessed property value
- If homeowner demonstrates that no compliance option can be completed for less than Cost Cap, mandatory features and air sealing only shall meet the requirements.

# Administration

- No City inspections.
- Air Sealing will require work by a BPI-certified contractor. Documentation will be required to be submitted to City.
- Administrative Fee of \$61 may be charged to cover costs.

# Common Questions

- **Are there exemptions for low income and/or disabled homeowners?**
  - Standard RECO will not apply, but owners must participate in PG&E's Energy Partners Program (as available).
- **What if I have already done work on my home?**
  - Previous work will qualify for compliance.
- **What if my home has no attic/crawl space/forced air furnace?**
  - If measures cannot be done, they will be exempted, however, air sealing and other low cost measures will be required.



# Questions & Discussion

