



The Climate Registry

Becoming ClimatEEfficient™

**Big, Bold, Energy Efficiency Strategies: Achieving Long
Term Market Transformation**

April 28, 2010

**A presentation by Commissioner Dian M. Grueneich
Hosted by The Climate Registry's Cool Planet Project**



The Climate Registry

The Climate Registry

- **Non-profit GHG Registry helps organizations measure and reduce their GHG emissions.**
- **The only government endorsed registry in North America.**
- **A community of 420 business, governmental and NGO leaders**
- **Referenced in the US EPA's mandatory reporting rule; SEC financial disclosure guidance; Congressional climate bills; CARB Scoping Plan**





The Climate Registry

Reducing Energy Usage Reduces Greenhouse Gas Emissions!

1,400 kWh = One ton of CO₂e

200 therms = One ton of CO₂e

One ton of CO₂e is emitted when you:

- Run an average US household for 60 days
- Drive 1,900 miles in a mid-sized car
- Graze one Ugandan dairy cow for eight months

Step 1: Take Inventory!

Measure Your Carbon Footprint

Step 2: Set Reductions Goals!

The Most Cost Effective & Immediate Solution – Energy Efficiency





The Climate Registry

The Cool Planet Project



- ✓ **Energy Efficiency & Climate Change mitigation marketing, education, and outreach program which incentivizes and rewards the installation of large EE projects**
- ✓ **Promotes energy efficiency as the most cost-effective and immediate solution to climate change**
- ✓ **Provides business customers assistance in measuring, verifying, and reporting their GHG emissions profile in exchange for installing energy efficiency (EE) projects**
- ✓ **Educates utility staff and their large commercial and industrial customers about the relationship between energy usage, energy efficiency and greenhouse gas emissions**
- ✓ **Communicates customers' leadership and successes to the public**



The Climate Registry

For More Information

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The Climate Registry

Commissioner Dian M. Grueneich, CA Public Utilities Commission

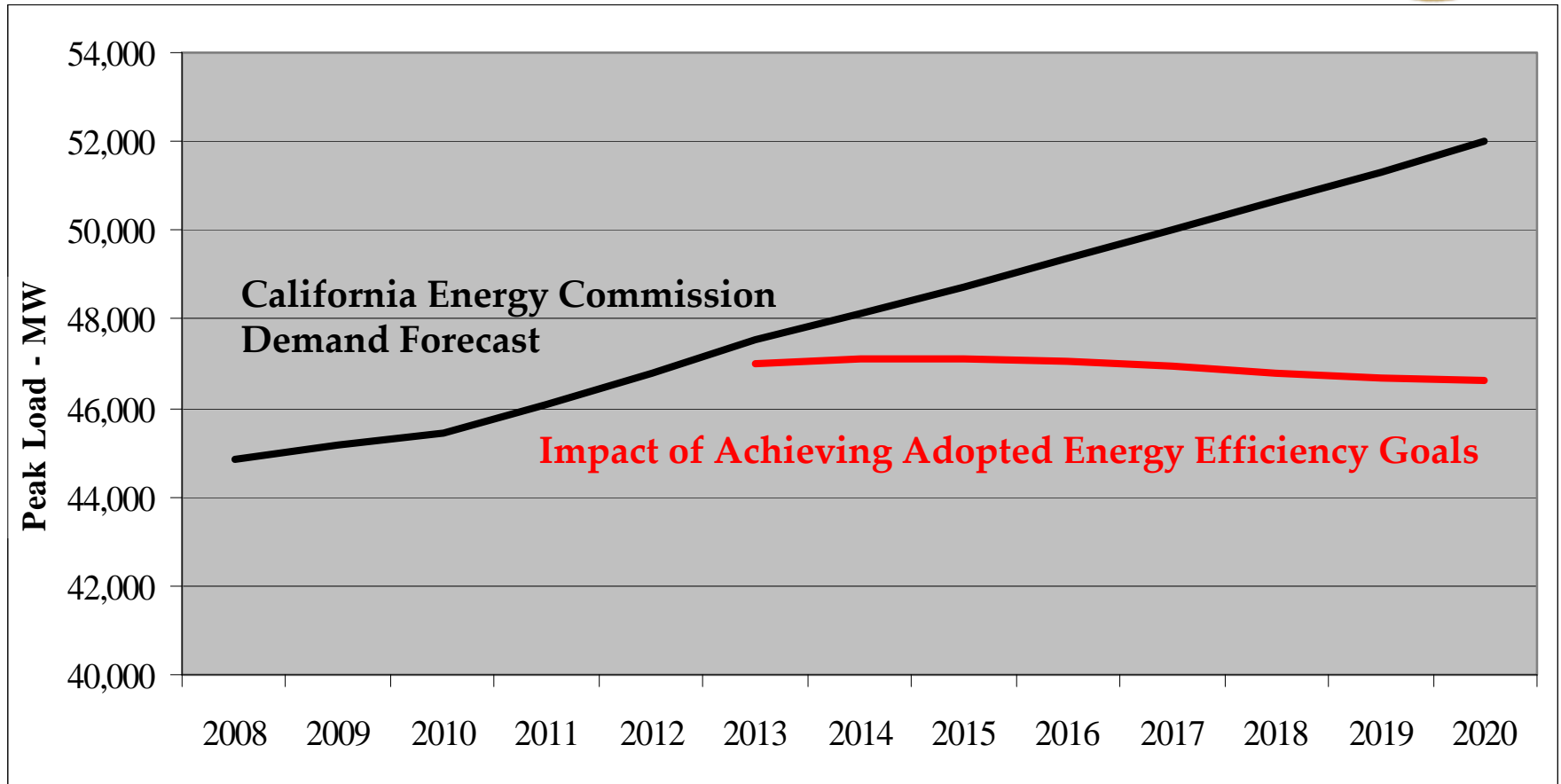
- A nationally recognized expert in energy and environmental issues
- Appointed to the California Public Utilities Commission (CPUC) by Governor Arnold Schwarzenegger in January 2005
- Lead Commissioner on energy efficiency, overseeing the \$8 billion energy efficiency program of the California investor-owned utilities
- Serves on the Leadership Group of the National Action Plan on Energy Efficiency, the Leadership Council of the China-US Energy Efficiency Alliance, the International CHP/DHC Collaborative sponsored by the International Energy Agency, the International Committee of the National Association of Regulatory Commissioners, and the U.S. Department of Energy's Electric and Smart Grid Advisory Committees.
- Received the first Visionary Award from the eeGlobalForum in May 2009 for her leadership role in developing the California Energy Efficiency Strategic Plan.



BIG, BOLD, Energy Efficiency Strategies: Achieving Long Term Market Transformation

Commissioner Dian M. Grueneich
California Public Utilities Commission
April 28, 2010

California's Energy Efficient Future

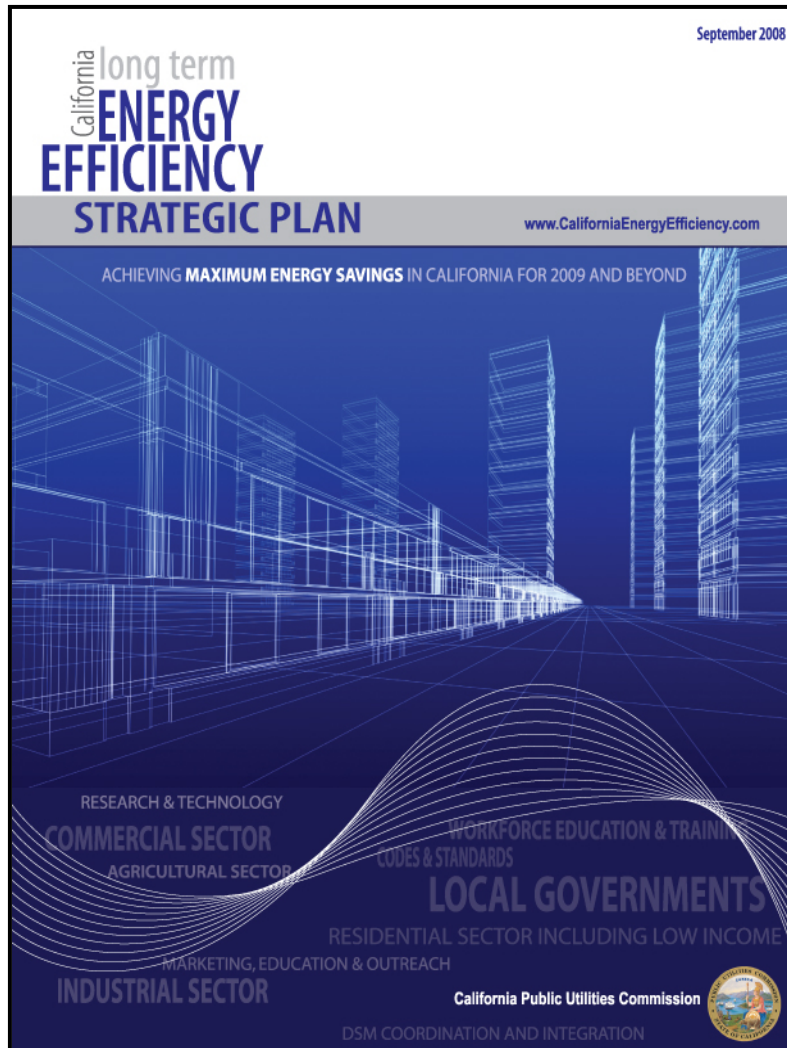


Source: CEC, January 2010



The California Long Term Energy Efficiency Strategic Plan

www.californiaenergyefficiency.com



Overarching Policy Goal



Achieve Market Transformation
For Energy Efficiency Practices
And Technologies Such That
Government Intervention and
Incentives are No Longer
Needed

Create the Conditions for Success of the EE Market



- Energy Efficiency is the highest priority electricity and natural gas resource
- Statewide Brand and Behavior Change Campaign for Energy Efficiency
- Comprehensive Workforce Needs Assessment
- Dynamic Pricing Electricity Rates
- Infrastructure Development
 - Full deployment of advanced metering infrastructure by 2012
- Standards to Accurately Measure Savings
 - New protocol to count savings from behavior change programs
- \$3.8 Billion portfolio of programs for 2010 to 2012

Contents of the Strategic Plan



All Economic Sectors

- Residential, including Low Income
- Commercial
- Industrial
- Agricultural

Cross-Cutting Areas

- Heating, Ventilation, Air Conditioning
- Codes & Standards
- Demand Side Management Integration
- Workforce Education & Training
- Marketing, Education & Outreach
- Research & Technology
- Local Governments

Implementing the Strategic Plan: 2010-2012 Programs



- \$3.8 billion in funding
 - \$3.13 billion for general energy efficiency programs
 - Three Year Savings Potential:
 - ◆ 7,000 GWH ◆ 1,500 MW ◆ 150 MMTherms
- 3 million tons of CO₂e avoided**
- Equivalent to 3 large power plants
 - \$750 million for low income homes and appliances

Program Highlights



- 12 Statewide Programs
- Statewide Education Campaign to Create Behavior Change
- Web Portal for Efficiency Professionals
- Zero Net Energy Buildings Programs
- Advanced Lighting Technologies
- Comprehensive Workforce Education and Training Programs

Aligning Policies with Specific Markets



- Identify high potential areas and market barriers
- Identify and adopt targeted policy tools
- Encourage RD&D to create market push
- Create behavior change to create demand pull
- Develop and disseminate best practices



EXAMPLE: ADVANCED LIGHTING STRATEGIC PLAN

- Strategic Lighting Plan (SLP) process began in December 2008
- 5 public workshops and numerous conference calls in 2009
 - Included more than 100 stakeholders
- Draft SLP released in March 2010

Barriers to Advanced Lighting Deployment



- Cost
- Proprietary protocols
- Existing circuitry
- Short-term thinking
- Installation and maintenance
- Invisible benefits
- Invisible benefits
- Lack of knowledge
- Inadequate building codes
- Incompatibility
- Split Incentives
- Sockets v. Systems

Policy Solutions



Aligned Priorities



GOAL: Develop coordinated policies and procedures that will accelerate the lighting market transformation in California and incentivize state-of-the-art technologies and best practices.

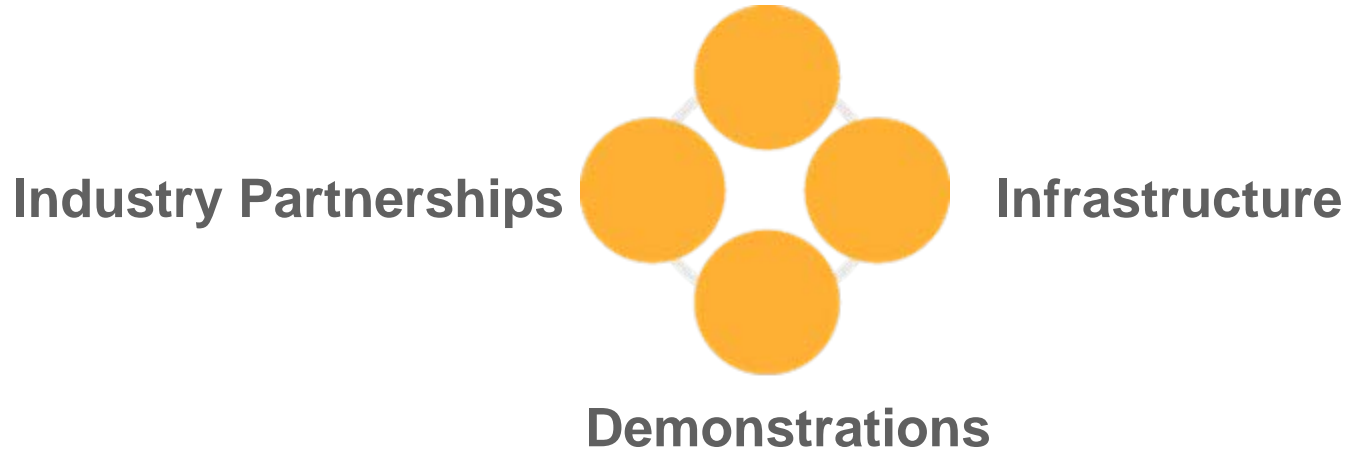
RESULT: By 2020, existing policies and procedures in California will enable lighting technologies to achieve 60 to 80% reduction in lighting energy consumption and support zero net energy building standards.

FUNDING: \$89 Million for 2010-2012 Programs

Creating Market Push



Paradigm ReDesign



GOAL: Develop RD&D partnership pipelines to create the lighting solutions needed to transform the market and achieve ZNE goals

RESULT: Create a portfolio of RD&D solutions that support a 60-80% reduction in electrical lighting energy consumption by 2020

Creating Demand Pull



Marketing & Education



GOAL: Create widespread end-user desire for use of and purchase of energy efficient, responsive and environmentally-sound lighting systems.

RESULT: By 2020 consumers preference has transformed as measured by an 80% decrease in perceived barriers and a 50% decrease in inefficient lighting market share in key market segments (over 2010 baselines).

Develop and Disseminate Best Practices



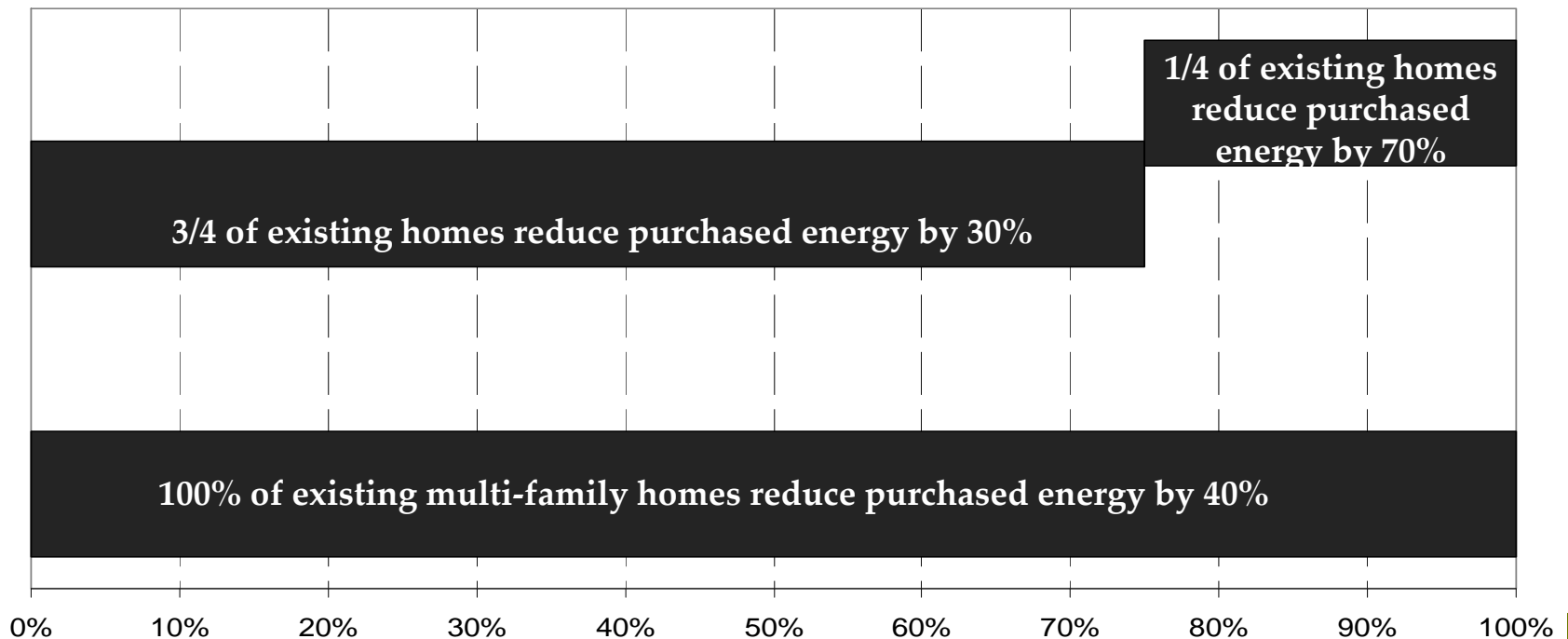
GOAL: Advance best practices for integrated systems design, installation, operation and maintenance to achieve sustainable* lighting solutions

RESULT: By 2020 100 percent of new installations meet best practice standards and optimally maintained throughout their useful life

CA Home Retrofit Target



“By 2020, reach all existing homes with attractive financing for a comprehensive package of whole house energy efficiency retrofit measures including comprehensive audits and installation services for shell upgrades, high efficiency HVAC systems, demand response, and distributed renewable energy options.”

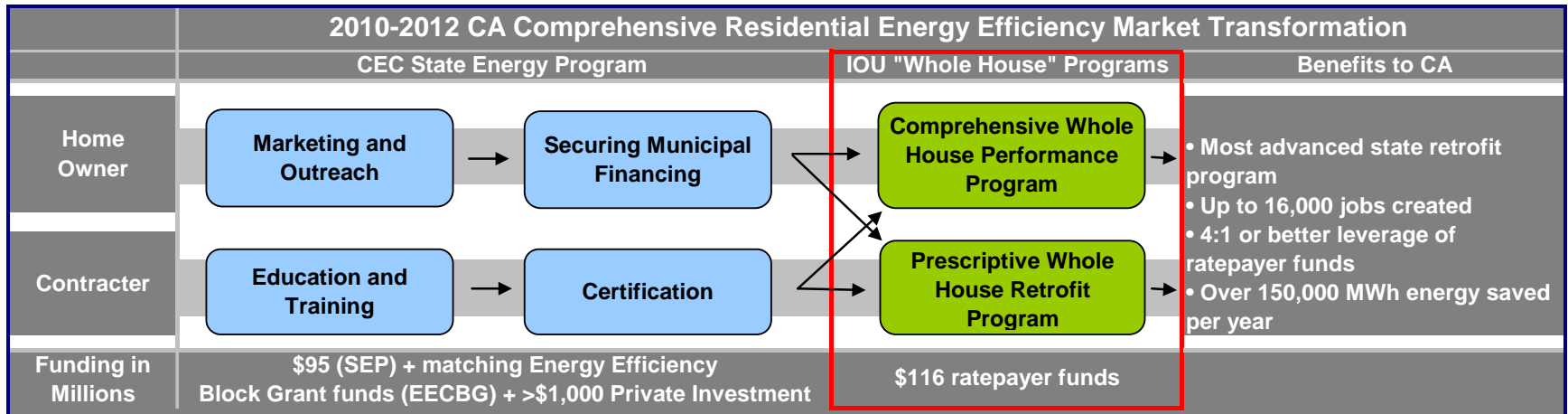


Source: p. 19 CA Long Term Energy Efficiency Strategic Plan
www.californiaenergyefficiency.com

Opportunity: Matching Ratepayer with Federal Program Funds



CA Ratepayer/ARRA Coordination Plan:



Key elements of the CA Home retrofit Programs^[1]:

Establishes 2 program tiers: Prescriptive, Performance

Targets 130,000 homes (1% of CA) over 2010-2012

Delivers savings of 20% or greater per household

Designed to be compatible with Federal program funding (REEP Program/HOMESTAR)

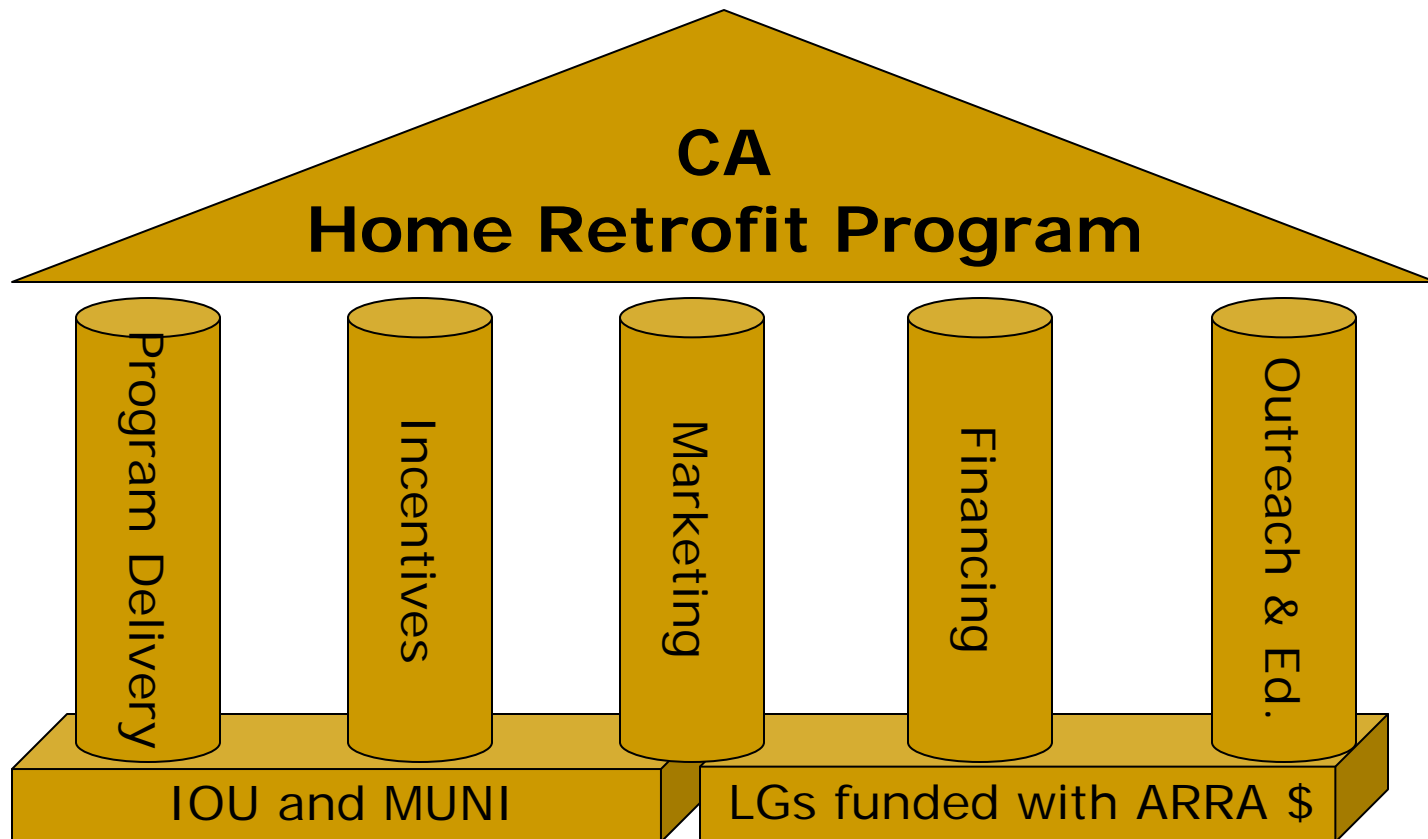
Well-coordinated with State Energy Office use of ARRA funds and intent of municipal financing programs

^[1] Detailed discussion can be found in pages 104-119 of the D. 09-09-047 available at: http://docs.cpuc.ca.gov/word_pdf/AGENDA_DECISION/107378.pdf

California's Home Retrofit Program



Multiple coordinated parallel efforts drawing from different funding sources.



Program Access Channels



Change Account
Calls

Home Performance
Contractors

Roofing Contractors

IOU Marketing

Siding Contractors

Online Efficiency
Surveys

Home Improvement
Big Box

HVAC Contractors

Solar Installers

Insulation Contractors



Energy Efficiency Web Portal Summer 2010



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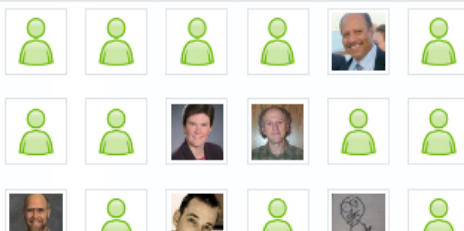
TOPICS PEOPLE GROUPS CONTENT



Welcome

Join our network of energy expertise. This portal is a home for collaboration and best practice sharing for policymakers, practitioners, utilities, environmentalists and the private sector to work towards a bright green future.

Latest Members



Latest Groups

-  [Marketing & Outreach Best Practices](#)
6 Members
-  [EE Portal Beta Group](#)
18 Members
-  [Local Government](#)

Latest Content

- [Green Cities California Best Practices for Environmental Sustainability](#)
- [Nielsen 2009 Energy Audit Report](#)
- [The Psychology of Climate Change Communication](#)
- [California Public Utilities Commission Clean Energy Weblinks](#)