

Chico Energy Pioneers Project

Statewide Energy Efficiency Collaborative Forum

Los Angeles

July 19, 2012

This Program is sponsored by the City of Chico and funded by California utility customers and administered by PG&E under the auspices of the California Public Utilities Commission. Funding is administered through PG&E's Innovator Pilots Program. Partners involved in the program include the City of Chico and PG&E, as well as students and faculty from California State University, Chico and Butte College.



Presentation Outline

- I. PG&E's Innovator Pilot Program
- II. Chico's Climate Action Efforts
- III. Chico's Pilot Goals
- IV. Chico's Pilot Overview
- V. Pilot Participant Snapshot
- VI. Residential Behavior & SmartMeter™
- VII. Pilot Next Steps
- VIII. Scalable, Replicable, Sustainable

I. PG&E's Innovator Pilot Program

- Program mandated by the CPUC in 2010.
- **Provides competitive** funding to test creative ways to accelerate energy efficiency.
- Selection based on likelihood of a project being widely **replicable** and **scalable** across PG&E's service territory.

Map of PG&E's Innovator Pilot Projects

Innovator Pilots
Updated June 22 2012



Innovator Pilots by County

Program Name	Alameda	Butte	Calaveras County	Contra Costa	El Dorado	Humboldt	Mendocino	Napa	Nevada	Placer	Plumas	San Francisco	San Luis Obispo	Santa Clara	Solano
Alameda County: Asset Rating and RECO Tools for Local Governments	●														
Alameda County: Leadership In Energy Efficiency Program (LEEP)	●														
Chico: Chico Residential Retrofit/Education		●													
East Bay: Quest Integrated Services	●														
East Bay: Quest Residential Tenant Landlord Policy Solutions	●														
East Bay: Small Cities Climate Action Partnership (SCCAP)	●			●											●
Humboldt County: Redwood Neighborhood Energy Challenge						●									
Mendocino County: Responsible Energy Awareness Practices Program (REAP)							●								
San Francisco: A Retirement Plan for Commercial Food Service Refrigeration												●			
San Jose: Silicon Valley Energy Watch (SVEW) Micro Grants														●	
San Jose: Silicon Valley Energy Watch (SVEW) Municipal Whole House Rehabilitation Project														●	
San Luis Obispo County: Small and Medium Business and Energy Dysfunction Prediction tool													●		
Santa Clara County: Correctional Facilities Innovator Project Proposal Benchmarking, Best Strategies, Pla...														●	
Sierra Nevada Region: SBC Green Prosperity Initiative			●		●					●	●				
Sustainable Napa County								●							

II. Chico's Climate Action Efforts

- Signatory to U.S. Conference of Mayor's Climate Protection Agreement.
- Greenhouse Gas Emissions (GHG) Inventory Conducted in 2008.
- Set GHG Reduction Target of 25% Below 2005 levels by 2020.
- Draft Climate Action Plan.
 - Recognizes the importance of energy efficiency in older homes.
 - Updated Residential Energy Conservation Ordinance (RECO).

III. Chico Pilot Goals

- Raise awareness about residential energy consumption.
- Understand how to achieve lasting energy efficiency and reduce GHGs through an integrated, two-phased approach:
 - Whole House Energy Assessment and Efficiency Upgrades.
 - Energy Management and Behavior Change.

IV. Chico Pilot Overview

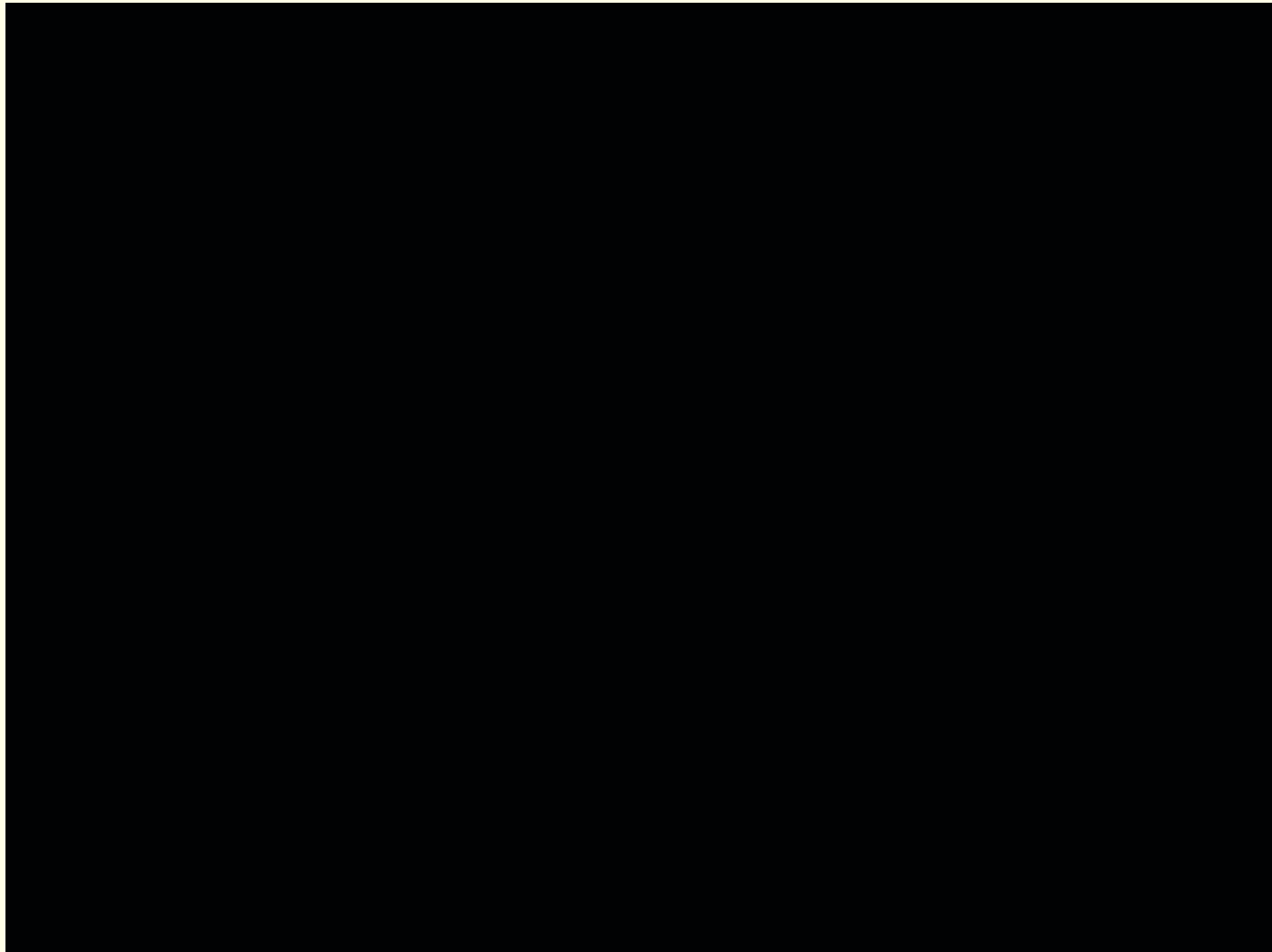
- Project team consists of representatives from the City of Chico, Butte-Glenn Community College, and CSU, Chico.
- Targeted 100 single-family participants
- Three-year project

IV. Pilot Overview (cont.)

Participating Chico homeowners can:

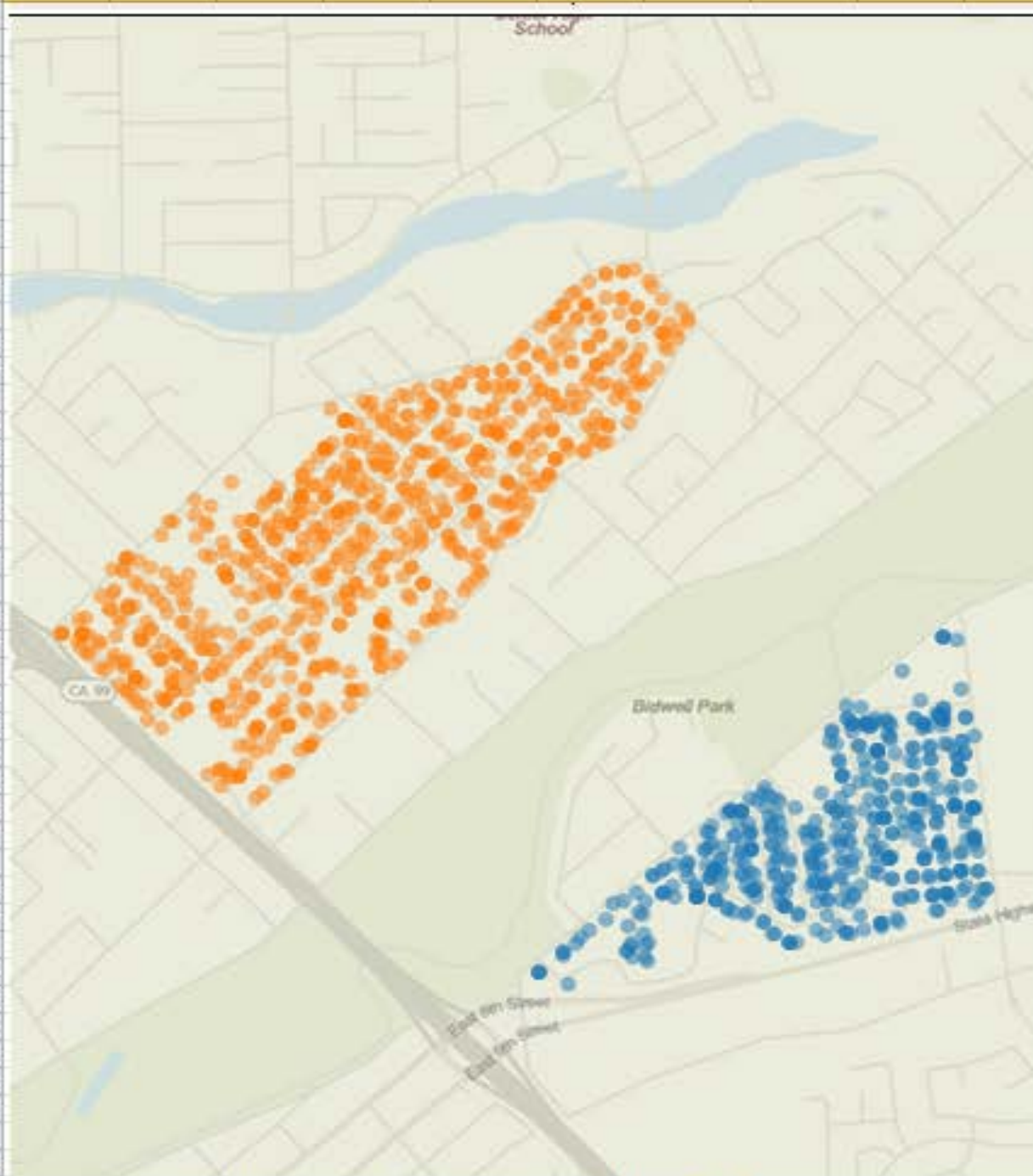
- Receive energy audit for the home.
- Receive no-cost energy upgrades.
- Learn about their home's energy efficiency and what they can do to improve it.
- Learn how to save on home energy bill.
- Work with the Project Team to help set and achieve energy goals.
- Learn how to use their SmartMeter™ to manage household energy consumption.

Program Partners and Experiences



V. Participant Snapshot

- Targeted two neighborhoods with homes older than 1991.
- Moderate-income households (no income limits).
- SmartMeter™ installed at residence for at least a year.
- Be willing to:
 - Participate for duration of pilot.
 - Share energy use information and experiences.



VI. Behavior and SmartMeter™

Behavioral Goals:

- Determine what information and in what form will cause people to modify their energy use.
- Identify primary motivation for taking action.
- Identify barriers to action.
- Determine whether or not socio-economic status and environmental attitudes were a factor in determining people's course of action.

VI. Behavior and SmartMeters™

- In order to determine energy use reductions as a result of behavior change, participants were split into 3 groups:
 - Initial student consultation, whole-house assessment, and retrofits.
 - Initial consultation, assessment, retrofits, and a Blue Line™ Power Cost Monitor.
 - Initial consultation, assessment, retrofits, and an additional intensive “one-on-one” consultation from the student group.

V. Behavior and SmartMeters™

Findings to date...

- Average home price was \$200,000, compared to \$327,000 for the City.
- Participants were more energy conscious than a comparable national sample.
- Compared to other Chico residents, participants are slightly older.
- A core number of participants are well educated, and active in sustainability initiatives.
- Most want to take additional steps to save energy and to improve the comfort of their home.

My Energy Use

Show my electricity by year

Account:

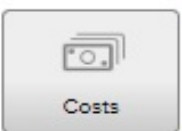
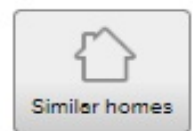
Jun 2011 – Jun 2012
My usage & weather



If you are a Solar or NEM customer, please visit www.pge.com/solarupgrade for more information about what's available in My Energy.

Find tips to reduce your use:

- Free steps to take
- Smart purchases
- Great investments



■ Your usage
■ Average outdoor temperature (°F)

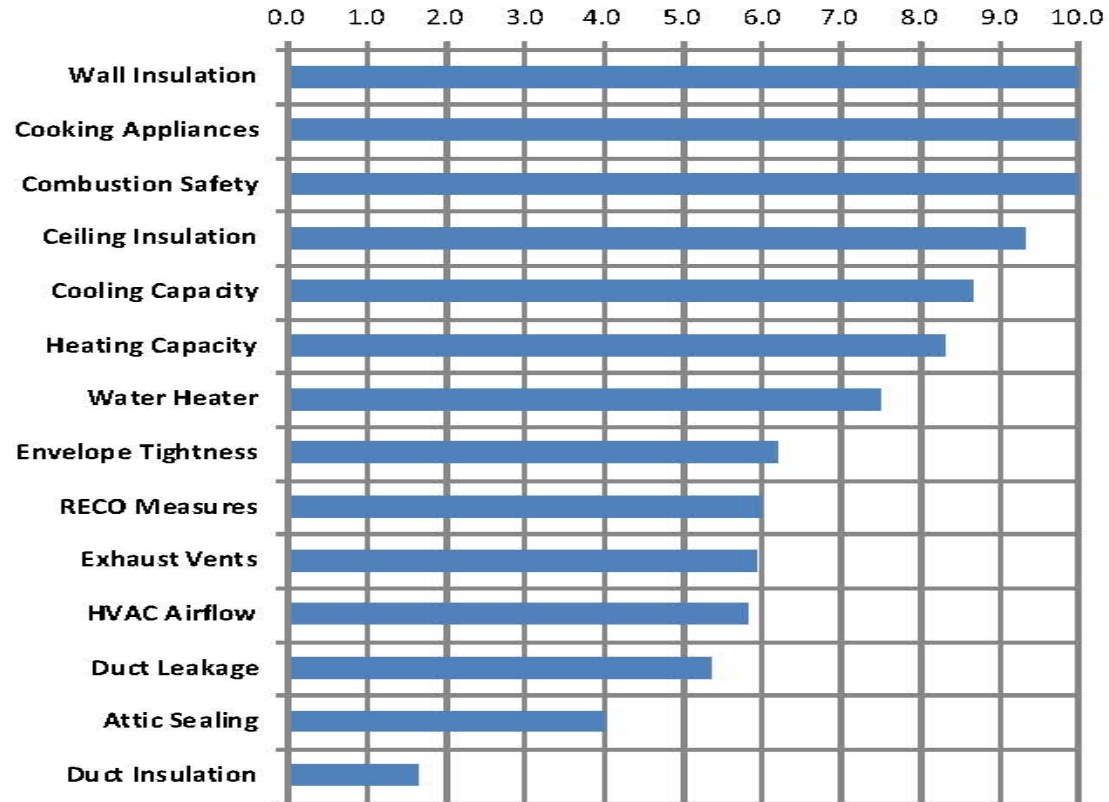
The graph displayed above depicts only usage and volumetric usage charges based on available interval data. The graph does not include other fees such as local utility user taxes and certain other taxes, surcharges and fees or medical baseline adjustments. As a result, the volumetric usage charges displayed in the graph will not reflect all of the charges on your bill.



Home Performance at a Glance:

Your Home Performance Score Card

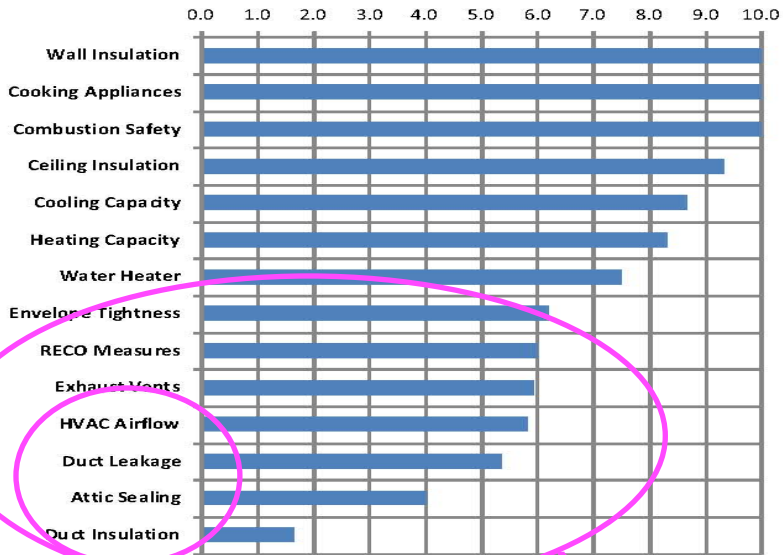
0.0- Needs work- May be health and safety related, Deep energy savings possible
 5.0- Moderate performance results- Areas of cost savings
 10.0- Optimal efficiency/performance achieved



Home Performance at a Glance:

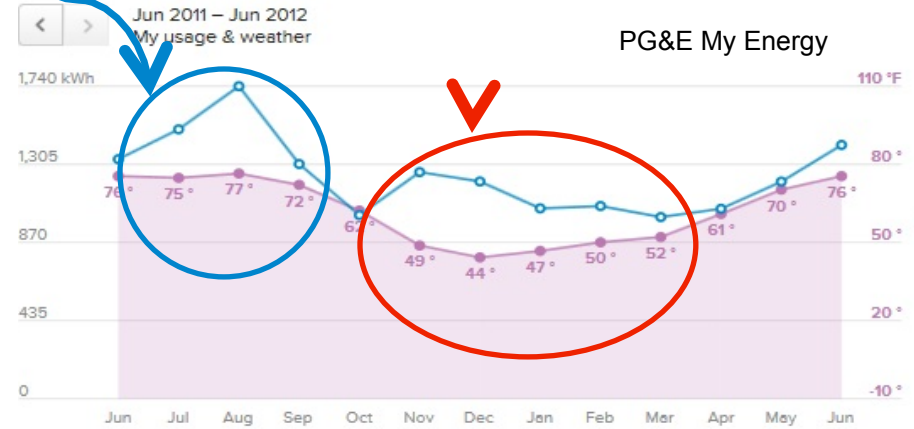
Your Home Performance Score Card

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Cooling system On

Heating System on



Target Areas Become Evident:

- HVAC
- Duct leakage
- Attic Air sealing

VII. Pilot Next Steps

- Pilot scheduled to be complete in February 2013.
- Share participant feedback and lessons with communities.
- Provide real-world examples with other local governments to assist with innovative approaches to achieve residential energy efficiency.

VIII. Scalable, Replicable, Sustainable for Local Governments

- Enlist partners, such as local universities, colleges, Valley Contractors Exchanges, local contractors etc. to assist in the educational component and the benefits of using SmartMeters to save energy.
- Include whole-house assessments in existing programs, such as low income weatherization and/or home rehabilitation programs.

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