

Building Bridges to Climate Action: *Opportunities and Challenges from a Local Government Perspective*

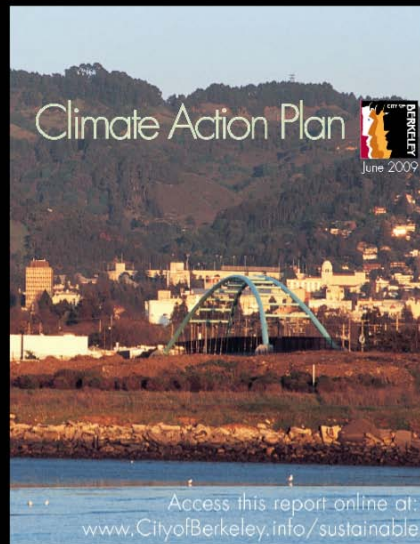
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- Good afternoon...
- Going to focus on implementation, i.e., funding, project/policy development and launch, and tracking
- One of the central themes over the past 2 days has been the potential for and need for harmonization between different levels of government and really all entities, including businesses and individuals
 - Mary Nichols referred to a patchwork quilt in explaining that a range of entities and levels of gov't have a role to play in addressing the climate crisis... there's no one "decider" that can make everything right.
- What I'd like to do today is give some examples of the patchwork quilt in practice from a local government perspective, and really from the perspective of the residents that we serve.
- The examples I'm going to share are positive...they illustrate how different levels of gov't and the private sector can work together to achieve change.
 - But it's also important to keep in mind that even though there are many examples of positive initiatives designed to reduce GHG emissions...the scale of our solutions is still not at scale with the problem

The Power of the Ballot...

35% Reduction
by 2020

80% Reduction
by 2050



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As a policy maker for a local government, my job is to make it easier for residents, visitors, and businesses in Berkeley to do the right thing...the green thing. It's to remove barriers to action.

In Berkeley, our efforts to remove barriers to clean energy in our community and beyond are guided by the City's Climate Action Plan.

Measure G set process in motion...

Strong political and community support...

Useful as a fundraising tool and for leveraging action...

THE CLIMATE ACTION PLAN IS A USEFUL FUNDRAISING TOOL

City awarded approximately \$8.5 million between 2009
and 2010 in support of CAP implementation

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CAP also serving as an effective fundraising tool...secured \$8.5 MM between 2009 – present

Funding is a good example of how the different levels of government work together to create change on the ground...

I could detail several examples of what I mean..but today I'll focus on just a one in the context of removing barriers to clean energy.

Opportunity: Unprecedented funding & alignment of state and federal energy efficiency programs



Case Study: Berkeley Money for Energy Efficiency (ME2) Program

- Provides cash incentives for comprehensive audits and improvements
- \$520,000 in rebates for Berkeley residents

The first opportunity is unprecedented funding from fed and state gov't for energy efficiency as well as alignment across levels of gov't toward the goal of performance-based energy efficiency improvements....

Performance based energy efficiency improvements are the opposite of a one-sized-fits-all prescriptive approach to making a building more energy efficient.

To illustrate this opportunity I'll use Berkeley's Money for Energy Efficiency Program as a case study...

Program provides cash incentives for reducing energy use in a building by at least 20%
\$520k available...

Available for residential and commercial...

Goal of the program is to stimulate demand energy audits and upgrades that are based on building science, that focus on the whole home rather than promoting a prescriptive one-sized-fits all approach.

Air sealing

insulation

Proper sizing and installation of heating and cooling systems and water heating system

Lighting

In some cases, renewables

Single Family & Duplex Rebates		
	Berkeley ME2	PG&E
Whole-House Performance Testing Rebates (i.e., energy audit)		
Incentive	\$200/unit	-
Energy Improvement Rebates		
20% Improvement	\$1,200	\$2,000
Each additional 5% improvement	\$750	\$500
Maximum Rebate	\$5,000	\$3,500
Total Available Funding	\$196,000	NA
Rebate not to exceed 75% of net project cost (gross less PG&E incentive)		

Example of how the program works for single-family homes...

- About \$200k available for SF (120 homes)
- \$130k available for MF (270 apartments)
- \$190k available for commercial (175k square feet)
- Also dedicated funding to subsidize retrofits for moderate income households (\$XX,XXX)

This program exists because of the improved understanding at all levels of government of the value of whole-home energy performance.

Case Study: Berkeley ME2 Program

Feds get it

- Stimulus included \$90 billion for clean energy

State gets it

- CEC deploying standards for building performance; investing in green jobs
- CPUC dedicating \$72 million for building performance rebates

Local governments get it too!

www.CityofBerkeley.info/me2

•Obama administration gets it: \$90 billion for clean energy, including efficiency, renewables, investment in the grid

Energy efficiency is a substantial component of this...something like a third Good article in TIME: How the Stimulus is Changing America

Berkeley received \$1.1 MM in EECBG funds plus about another million for other energy efficiency programming

•CEC gets it: Its allocating \$314 million in Federal stimulus funds to energy retrofits and appliance rebates. It's also working to deploy a standard for rating a home's energy efficiency and for conducting energy efficiency retrofits.

•CPUC get it too: It's Energy Efficiency Strategic Plan sets a goal of retrofitting 120,000 homes between 2010-2012. It's starting to commit funding to whole-home retrofits...it dedicated \$72 million statewide to rebates for whole home energy efficiency retrofits

•Plan calls for the following goals:

By 2020:

- 25% of existing homes achieve 70% decrease in purchased energy from 2008 levels
- 75% achieve 30% decrease
- 100% of MF homes exhibit 40% decreased in purchased energy below 2008 levels

In other words, several stars are aligned to lower the cost of energy efficiency analysis and improvements in Berkeley buildings right now.

Typical Berkeley Resident



What does this mean if I'm a resident of Berkeley:

We estimate you can make a 20% performance improvement for about \$4k total project cost...

- Federal dollars available for my retrofit, provided through the City program (\$200 for an audit, \$1,200 for retrofit that achieves 20% improvement)
- CPUC/PG&E dollars available for my retrofit (another \$2,000 gets me to \$3,200k for improvements total...about 80% of project cost)
- Standards exist to ensure quality retrofits and appropriate training for contractors... this largely driven by state
- Local job creation and training for people that can do the retrofit work
- Trained contractors become the spokespeople for this type of work...they do the marketing

Challenge: Sustaining the stimulus

Again using **Berkeley ME2** as an example...

3 important components of building on one-time stimulus boost:

1. Data: All ME2 participants provide historical and future energy use data
2. Funding: ME2 program dovetails with CPUC-funded PG&E rebate program
3. Training/Capacity Building: Contractors market whole-home energy performance

Now that I've pointed out some opportunities and synergies...I want to point out some challenges...

Many argue that the stimulus should have been bigger in order to stabilize the economy...

Certainly it would be difficult to make it bigger now given the dysfunction in the U.S. Senate.

So these funds are one-time funds. How do we ensure that we learn from stimulus funded projects and find ways to sustain that funding?

Collect data to show there's progress

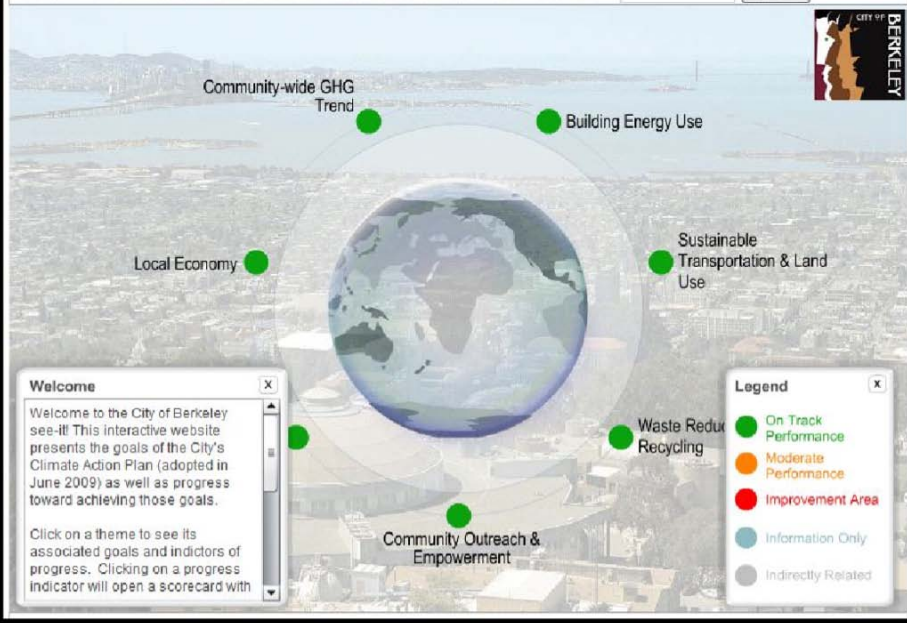
Leverage stimulus by creating financing/funding

- Reduce first costs

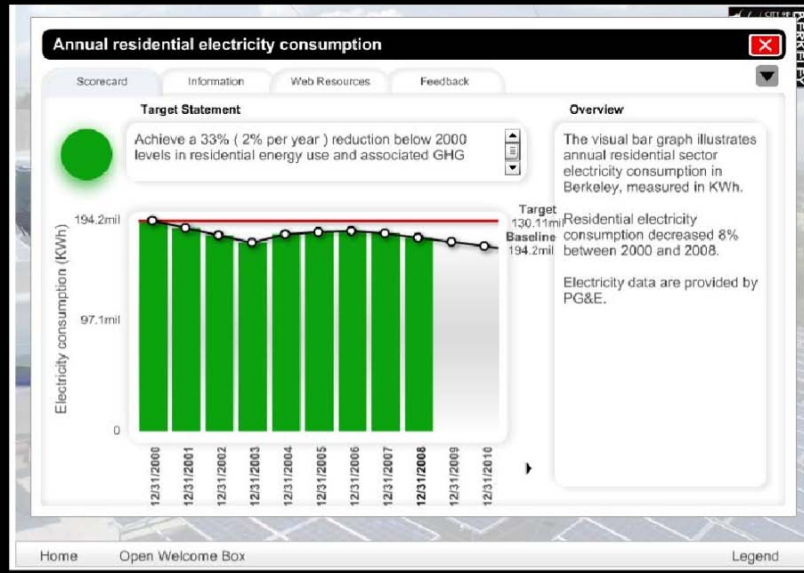
- Make it a mass market program

- More capacity in the market...induce demand, which will reduce costs

- Contractors become marketing force



Residential electricity use down 8% between 2000 and 2008



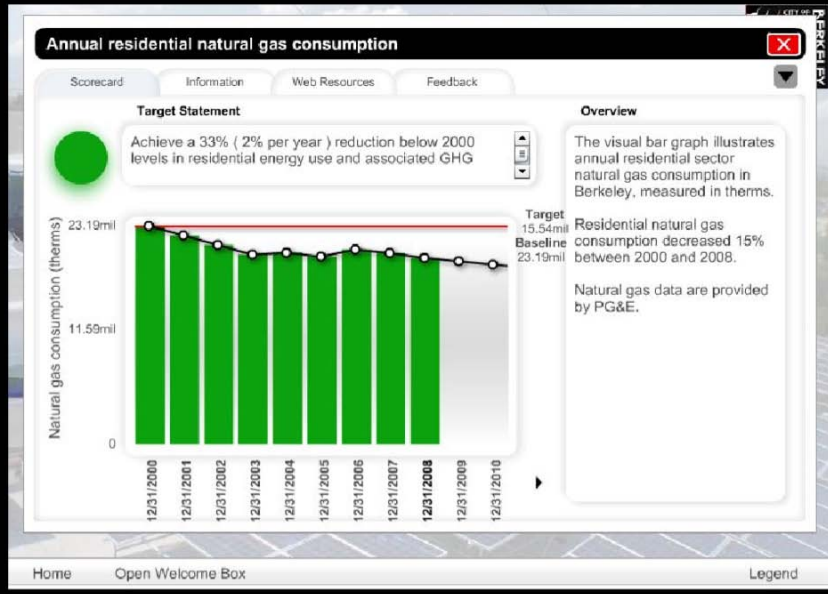
Commercial sector electricity use is down 4% in the same time period

Things that are driving this trend...

- Energy crisis in early part of the decade
- Economic downturn
- But also City programs and policies...

Our goal over this coming year is to get more granular data that shows the impact of the various programs that are contributing to this trend...

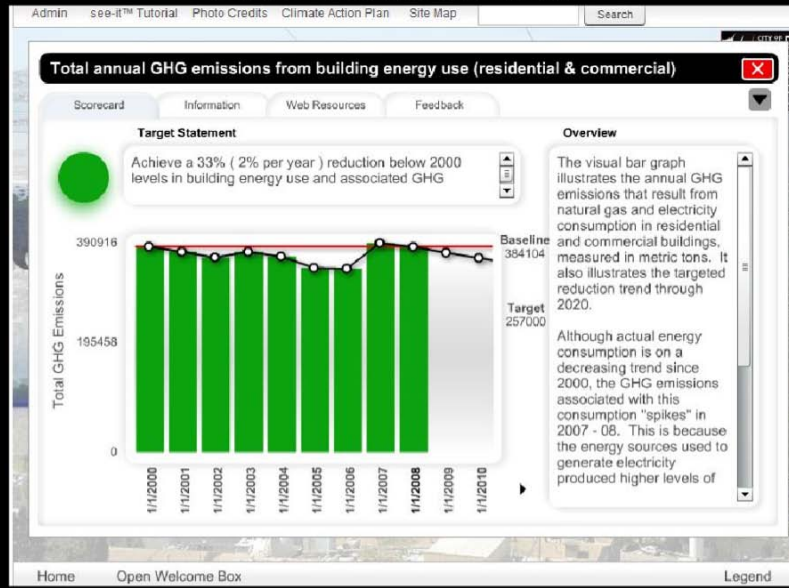
Residential natural gas use down 15% between 2000 and 2008



Commercial sector nat gas use is down 2% in the same time period

Our RECO ordinance is a significant factor in capturing natural gas savings and is contributing to this trend

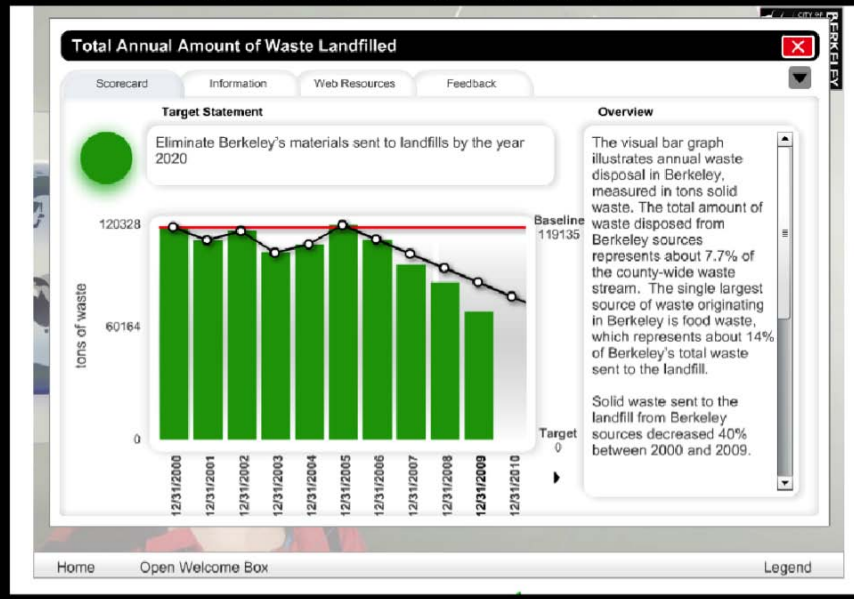
2008 GHG emissions on par with 2000 GHG emissions...



And yet despite energy use reductions, our total GHG emissions remain steady...
This is largely due to the increase in GHG emissions per kWh of electricity delivered by PG&E

In drought years such as '07 and '08 less hydro electricity is produced...
more electricity produced by natural gas
This speaks to the importance of the RPS...

Solid waste disposal down 40% between 2000 and 2009



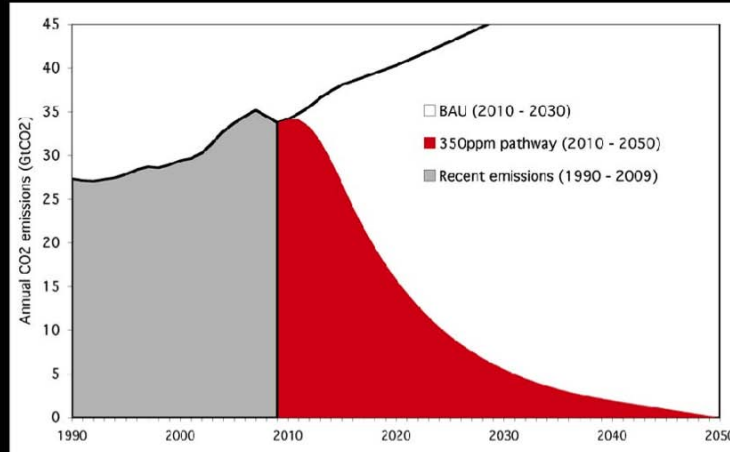
What's driving this trend?

- economy
- green cart program
- ongoing outreach and education

Number of street & park trees up 8% between 2000 and 2009



The Ultimate Challenge...



Source: Paul Baer and Tom Athanasiou, "A 350 ppm Emergency Pathway"

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Brief reminder of the scale of the challenge...

Global CO2 concentrations are now at about 390 ppm

Many climate scientists, most notably of whom is James Hansen of NASA, say that to avoid major climate disruption we need to get back to 350 ppm by end of this century.

The last time global CO2 concentrations were at 350 was in the mid-1980s (see co2now.org)

Many climate scientists say we have years, not decades, to stabilize CO2 levels in the atmosphere.

Global emissions would have to peak in 2011 or soon thereafter and then decline by 10% per year after that.

Emissions would be 50% below 2000 levels by 2020 and 100% below 2000 levels in 2050 in order to achieve 350 by 2100.

Emissions could peak later, but that would require larger and more costly reductions annually thereafter to still achieve 350 by 2050.

To learn more:

www.CityofBerkeley.info/sustainable

www.CityofBerkeley.info/climate

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