

Why EE: Why, What and How Energy Efficiency and Sustainability Support Communities

SEEC Forum 101 Workshop
June 14, 2016



Welcome & Intro: SEEC

- Collaborative between the Local Government Commission (LGC), ICLEI – Local Governments for Sustainability, and the Institute for Local Government (ILG) and the state's four Investor-Owned Utilities
- Provides local governments with tools, best practices, cross-state connections, technical assistance and other resources to support EE planning and implementation

Welcome & Introductions

- Expectations
- Any EE experience?
- Priority interests?
- Why EE? Brainstorming!

Why Energy Efficiency?

- ✓ Cost savings
- ✓ Improved operations
- ✓ High-value buildings
- ✓ Resiliency
- ✓ Health, air and water quality
- ✓ Sustainability and climate change
- ✓ Fiscal responsibility to taxpayers
- ✓ State policy requirements – and opportunities



Why EE: Cost Savings!

- ✓ In Amador County, EE water pipe saves pump motor use: upcountry surcharge is removed from water bills (approx. \$300,000 annual savings)



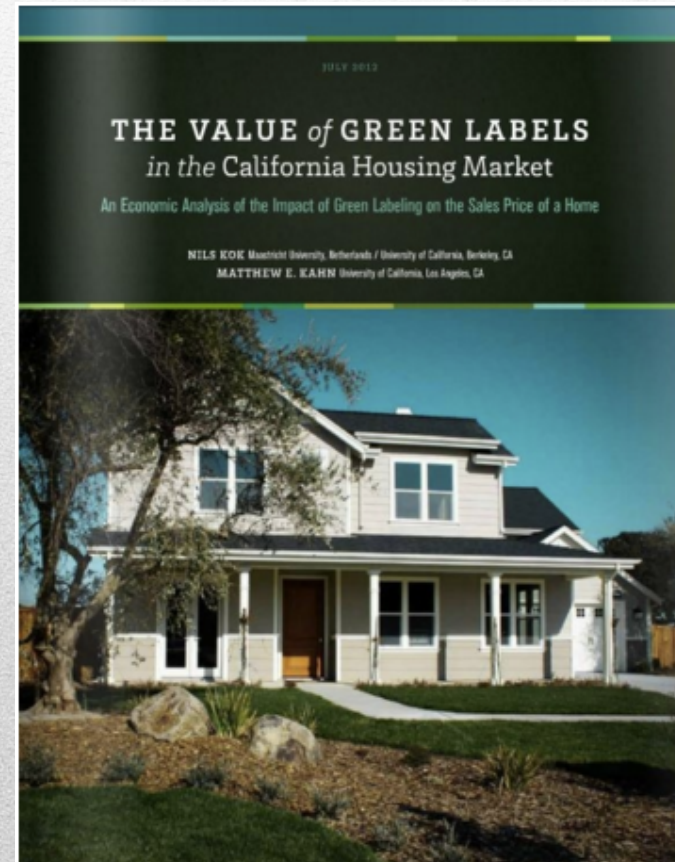
Why EE: Cost Savings!

- ✓ In San Marcos: EE ballfield and outdoor lighting and rate review saved the City \$168,000/year.
- ✓ Additional lighting projects and well pump replacements could save \$140,000/year more.
- ✓ SANDAG [case study](#)



Why EE: High-Value Buildings

- ✓ JCI [fact sheet](#) finds green certified buildings rent for 2-17% more, resell for 5.8-35% more, and have occupancy rates of 0.9-18% more
- ✓ [Study](#) finds homes with PACE-financed improvements resell for more
- ✓ [Value of Green Labels](#) study of California homes find 9% premium



Why EE: Resiliency

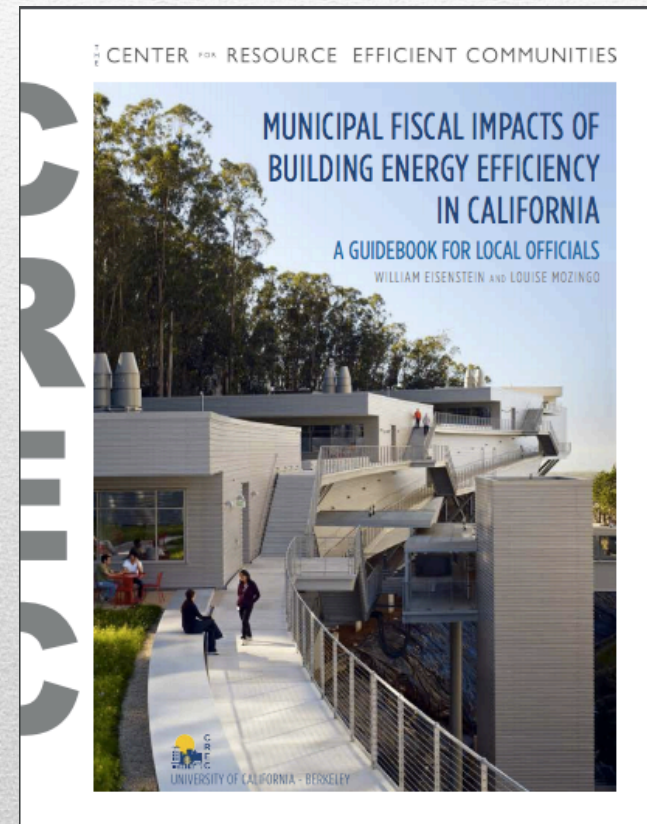
- ✓ Efficient use of resources puts less stress on the grid and energy systems
- ✓ Efficiently-used resources go further in emergencies

Benefit type	Energy efficiency outcome	Resilience benefit
Emergency response and recovery	Reduced electric demand	Increased reliability during times of stress on electric system and increased ability to respond to system emergencies
	Backup power supply from combined heat and power (CHP) and microgrids	Ability to maintain energy supply during emergency or disruption
	Efficient buildings that maintain temperatures	Residents can shelter in place as long as buildings' structural integrity is maintained.
	Multiple modes of transportation and efficient vehicles	Several travel options that can be used during evacuations and disruptions
Social and economic	Local economic resources may stay in the community	Stronger local economy that is less susceptible to hazards and disruptions
	Reduced exposure to energy price volatility	Economy is better positioned to manage energy price increases, and households and businesses are better able to plan for future
	Reduced spending on energy	Ability to spend income on other needs, increasing disposable income (especially important for low-income families)
	Improved indoor air quality and emission of fewer local pollutants	Fewer public health stressors
Climate mitigation and adaptation	Reduced greenhouse gas emissions from power sector	Mitigation of climate change
	Cost-effective efficiency investments	More leeway to maximize investment in resilient redundancy measures, including adaptation measures

From ACEEE's 2015 Report, [*Enhancing Community Resilience through EE*](#)

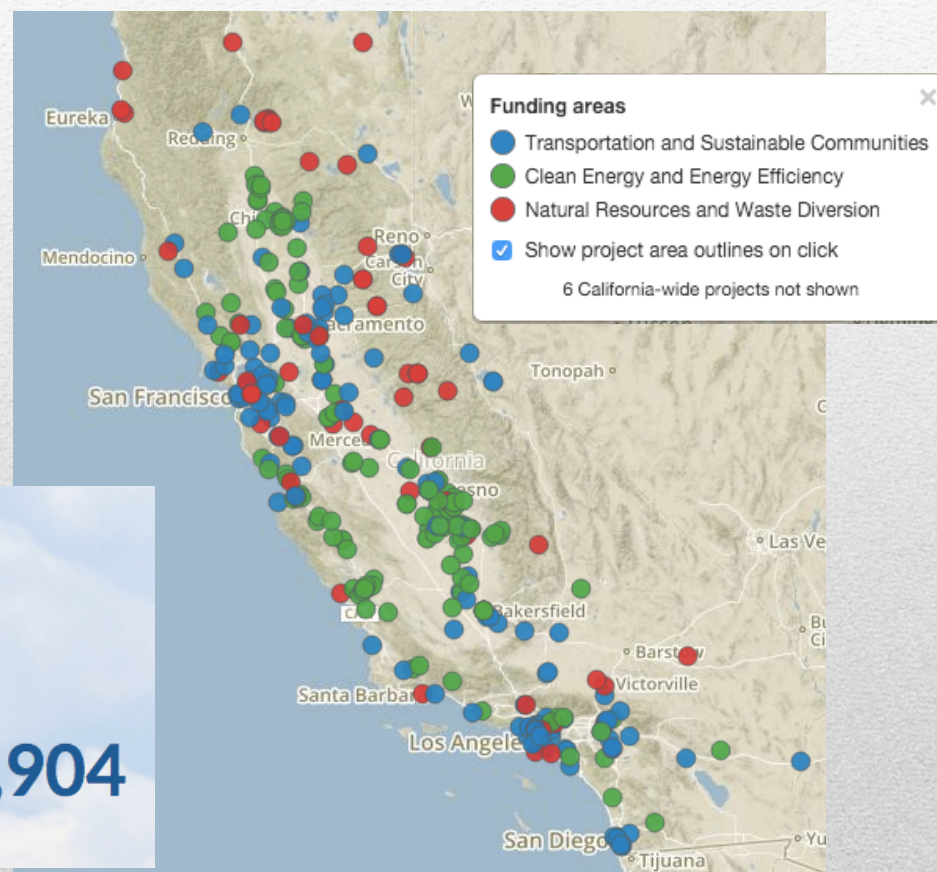
Why EE: Fiscal Responsibility

- ✓ UC Berkeley [study](#) describes gas efficiency compliance opportunities as “found money”: local governments earn back \$3.79 per \$1 invested in enforcing



Why EE: Funding Opportunities

- Cap and trade \$\$ support



Local Government Case Studies

- ✓ Think: Why are these local governments pursuing energy efficiency?

EE Case Study: Madera County



- Energy-efficient HVAC upgrades to County Library's 40-year old mechanical system
- 1.6 MW solar installed on Jail, Library and Government Center

EE Case Study: Madera County

- \$11M cost: \$15M in savings
- County Board Chair Farinelli: *"As a result of our work... the County has improved comfort in public facilities, reduced the impact of utility rate increases, cut our electricity bills by half, and made critical investments in its infrastructure to propel the County into a more sustainable, environmentally sound future."*
- County Officer Fleming: *"With this extensive sustainability program, we have helped protect our local taxpayers and helped showcase Madera County as a leader in energy efficiency and renewable technology. As Madera County continues to grow, it must continue to make these critical investments in its infrastructure that not only prepare our County for a more sustainable future, but do it in a way that ultimately saves our taxpayers real dollars."*

EE Case Study: Palo Alto

- Palo Alto 2015 Earth Day Report:

- ✓ Green Building Ordinance and an Energy Reach Code
- ✓ Green Gas Program
- ✓ Compliance education

Palo Alto Earth Day Report Shows Progress, Significant Challenges Ahead



Palo Alto, CA – The City of Palo Alto has already surpassed its initial climate protection goal set by the City Council in 2005 (a 2 percent reduction from 1990 levels of greenhouse gas emissions by 2012), and is now looking to set new goals as part of its updated Sustainability and Climate Action Plan. As highlighted in the City's latest Earth Day report that will be discussed at the City Council's April 20 meeting, Palo Alto has cut its greenhouse gas (GHG) emissions by an estimated 32 percent from 2005 and 37 percent from 1990 levels.

California has set the goal of reducing GHG by 20 percent from 1990 levels by 2020, and set an aspirational goal to reduce emissions by 80 percent by 2050. The Palo Alto report highlights that specific measures to accelerate reduction of GHG emissions from the use of natural gas and a significant reduction in solo car driving will be needed to further reach the goal.

- "Palo Alto is a global leader in sustainability, and our city is visited regularly by delegations around the world that come here to learn about our innovative approaches, progressive policies and ambitious goals," said City Manager James Keene. "As we update our sustainability and climate action plan and Council sets new goals, the challenges of ongoing drought, the quickening pace of climate change and the reality that we will need to make major changes in transportation will test us as never before, if we hope to establish a sustainable future."

EE Case Study: Del Mar

- Del Mar Climate Action Plan adopted June 6th:
 - Residential EE retrofits, benchmarking, and solar
 - Pool cover program
 - Efficient transportation
- “The City of Del Mar (City) is committed to continuing to provide a high quality of living in a way that supports sustainable land use patterns, healthy living, and community character. By using energy more efficiently, harnessing renewable energy to power buildings, recycling waste, and enhancing access to sustainable transportation modes, the City can keep dollars in its local economy, create new green jobs, and improve community quality of life in sustainable ways.”



EE Case Study: Blue Lake Rancheria Tribe

- ✓ Energy efficient hotel development
- ✓ LED lighting
- ✓ Insulation and high-efficiency HVAC (with efficient motors, economizers)
- ✓ Water conservation programs
- ✓ Community-scale renewable energy—biomass, solar, battery storage, microgrid

Energy Director: “The short payback, ongoing energy savings, and greenhouse gas reductions demonstrated to the Tribal Council how the economics of a clean energy strategy could dovetail with the goal of environmental remediation. They recognized it was a relatively small investment with a multilayered benefit, and it motivated them to do more.”



The Blue Lake Hotel entrance. Built in 2009, it was the first hotel in California to be used as an energy-efficiency model by the regional utility.



Blue Lake Rancheria Microgrid

EE Case Study: Camarillo

“Your city is committed to reducing the energy it uses to manage municipal affairs. As outlined in its Energy Action Plan, by the year 2020 Camarillo’s goal is to shrink its energy use by 10% over the year 2008. So how are we doing? We’ve made impressive progress. The City recently completed a ten-year Energy Performance Contract that resulted in savings of over 15 million kilowatt hours (kWh) of energy. This was accomplished by upgrades to facilities at City Hall, the City Corporation Yard, and the Water Department. Examples include:

- Installing high-efficiency heating, ventilation, and air conditioning equipment
- Implementing an energy-control system
- Retrofitting office-lighting lamps and ballast
- Installing high-efficiency electric motors for a water pump station and two wells
- Installing a 75-kW solar power system that has resulted in an 82% decrease in electricity consumption at the Corporation Yard”



The image shows the cover of the "City Scene" newsletter for the City of Camarillo. The title "City Scene" is in a large, green, stylized font with a leaf motif. Below it, it says "A newsletter for the citizens of Camarillo". The issue is dated "Jan. - Feb. 2016" and is "Volume 22~Number 3". There are two main sections: "Camarillo City Council" listing Mayor Michael D. Morgan, Vice Mayor Jan McDonald, Charlotte Craven, Kevin Kildee, and Bill Little; and "Be Prepared for Wet Weather" with a list of emergency preparedness steps. A "Department Directory" for Building & Safety is also listed. A "WATERSHEDS" section with a photo of a river and the text "Keep them clean. Keep them healthy." is on the right. The website "cleanwatershed.org" is mentioned.

Why EE: EPA Video

- <https://www.youtube.com/watch?v=gwVkBcljBho>

Learn more:

- Case studies like this and more are posted to the EECoordinator.info website
- Get more information through WEEkly Updates
 - the value of EE and local government activities
 - EE and sustainability funding opportunities
 - Opportunities to weigh in on EE and sustainability policies and programs
- Contact the Coordinator: Jordan Decker, jdecker@lgc.org

Why EE: State Policies Overview

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Introduction to SEEC Resources

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About SEEC

The Statewide Energy Efficiency Collaborative (SEEC) is an alliance to accelerate action by California cities and counties to **reduce greenhouse gas (GHG) emissions and save energy.**

About SEEC

The collaborative employs a variety of **strategies to catalyze local climate and energy action:**

- Education and tools for climate action planning
- Venues and opportunities for peer-to-peer networking and information sharing
- Technical assistance to implement, track and assess progress of cities and counties
- Support and recognition for local agencies participating in the Beacon GHG emissions and energy efficiency program

SEEC Partners

SEEC is made up of **3 statewide NGOs and California's 4 Investor Owned Utilities**, funded through the State of California Public Utilities Commission energy efficiency programs.



SEEC Key Joint Projects

- *State of Climate Action* Report reviewing local government best practices, opportunities and barriers to EE and climate achievements
- Technical assistance regional demonstrations:
 - Cap and trade funding
 - Weatherization
 - Zero net energy roadmapping

Coordinator Resources

- Topical resources, best practices and connections to what other local governments are doing:
 - climate action planning
 - benchmarking
 - retrofits
 - community engagement
 - new ordinances
- Answers to questions about programs, funding, etc.
- Access resources via:
 - WEEkly Updates
 - EECoordinator.info
 - Contacting the Coordinator: Jordan Decker, jdecker@lgc.org

