



Partnering with Utilities Part 2 – Advanced Topics for Local Governments in Creating Successful Partnerships with Utilities to Deliver Energy Efficiency Programs

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What is TAP?

DOE's Technical Assistance Program (TAP) supports the Energy Efficiency and Conservation Block Grant Program (EECBG) and the State Energy Program (SEP) by providing state, local, and tribal officials the tools and resources needed to implement successful and sustainable clean energy programs.



- The Department of Energy's (DOE) Technical Assistance Program (TAP) is transitioning to a new era of assistance to state and local governments with a reduced set of resources beginning the week of September 30, 2011.
- Effective September 12, 2011, the TAP will commence an assessment of the current program.
- New requests for direct technical assistance will not be considered until the assessment period has concluded at a date to be determined.
- DOE will maintain a waiting list for all requests during this assessment time.

We encourage you to:

1) Get involved with peer exchange:

- One-on-one peer exchange
- Small group peer exchange
- Regional peer exchange calls

The screenshot displays the EERE Solution Center website. At the top, the U.S. Department of Energy logo is on the left, and navigation links for "EERE Home | Programs & Offices | Consumer Information" are on the right. Below the header, the "Solution Center" title is prominent. A search bar with a "SEARCH" button and a "Search Help" link is located to the right. A green navigation bar contains links for "HOME", "WEBCASTS", "PROJECT MAP", "RECOVERY ACT BENEFITS SAVING CALCULATOR", and "REQUEST TECHNICAL ASSISTANCE". Below this, a breadcrumb trail reads "EERE » VIP » Solution Center", accompanied by links for "Printable Version" and "SHARE".

A left-hand sidebar lists various categories: Home, Buildings, Electric Power & Renewable Energy, Energy Education, Financial Products, Industry, Policy, Planning & Energy Security, and Transportation.

The main content area is titled "Technical Assistance Program Peer Exchange Hub - Beta Version". It includes an introductory paragraph about the DOE TAP peer exchange program. A "Grantee Testimonial" box features a quote from a participant in Columbia, MO, about a one-on-one peer exchange with Knoxville, TN. Below this, three sections are detailed: "One-on-One Peer Exchange", "Small Group Peer Exchange", and "Regional Peer Exchange Calls". Each section explains the program's purpose and provides instructions on how to participate, including links to "contact your regional coordinator". A "Regional Peer Exchange Meetings" section mentions the 2011 TAP meetings. A "How to Access" section provides an email address (solutioncenter@ee.doe.gov) and instructions for requesting a peer exchange.

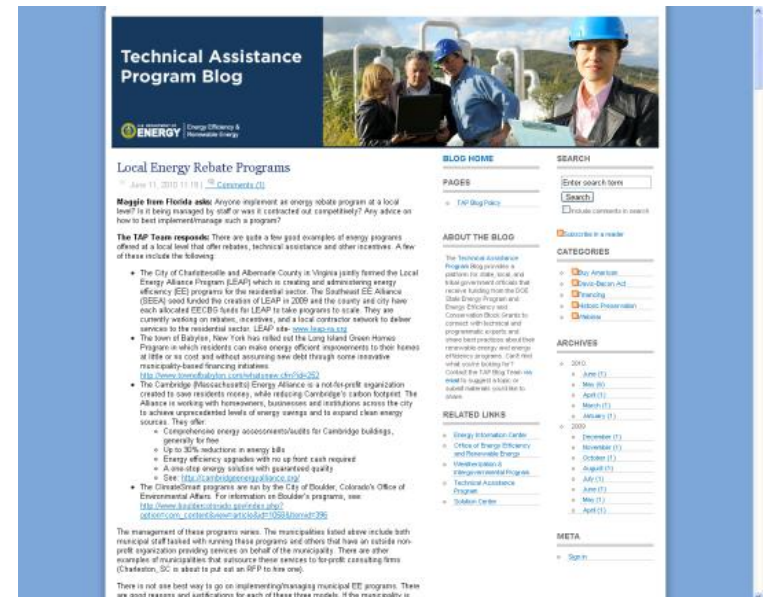
At the bottom of the page, a status bar shows "Internet" with a globe icon.

We encourage you to:

2) Explore our online resources via
the Solution Center
<http://www1.eere.energy.gov/wip/solutioncenter/>



3) Access the TAP Blog!
<http://www.eereblogs.energy.gov/tap/>



4) Ask questions via our call center at 1-877-337-3827 or email us at
solutioncenter@ee.doe.gov

- Partnering with Utilities Guidebook
 - Types of utilities and other energy efficiency program administrators
 - Energy efficiency program drivers and structure
 - Types of energy efficiency programs and partnership opportunities
 - Overview of how to partner with utilities
 - Successful local government-utility partnership examples
- Partnering with Utilities Peer Exchange Group
 - Learn from others' experience on how to effectively work together to build or enhance energy efficiency programs
 - Develop long-term relationships with peers to establish a network that can be accessed for future projects and programs
 - Be part of a target group to receive additional TAP resources

- **Setting the Stage**
 - Jennifer Clymer, ICF International
- **East Bay Partnership**
 - Neal De Snoo, City of Berkeley, CA
 - Dan Schoenholz, City of Fremont, CA
 - Catherine Squire, Pacific Gas & Electric
 - Gina Blus, Pacific Gas & Electric
- **GreenWorks Orlando**
 - Jon Ippel, City of Orlando, FL
 - Cameron Saulsby, Orlando Utilities Commission
- **Roundtable Discussion**

- Drivers
 - Utilities:
 - Mandated energy-savings targets
 - Minimizing customer bill impacts
 - Managing system load
 - Customer satisfaction
 - Sustainability goals
 - Local Governments:
 - Energy and emissions-reduction goals
 - Energy security / self-reliance
 - Economic development
 - Sustainability goals
- Reporting Requirements
 - Utilities: PUC reporting, 3rd party EM&V
 - Local Governments: Council/Board reporting, in-house EM&V
- Resources
 - Both: Staffing, funding, communication channels, other partners
- Expectations
 - Both: Clarity around roles and timelines

East Bay Partnership

Neal De Snoo, Berkeley, CA

Dan Schoenholz, City of Fremont, CA

Catherine Squire, Pacific Gas & Electric

Gina Blus, Pacific Gas & Electric



- 70,000 square miles, 15 MM people
- 6 MM customers
 - 87% residential
 - 13% non-residential
- In 1976, PG&E became one of the first US utilities to offer energy efficiency and demand management programs for our customers
- 2010-12 Portfolio
 - \$1.338 B Energy Efficiency
 - \$200 MM Demand Response
 - \$300 MM Renewables



**Ranked the greenest utility
in the US in 2009 and 2010**

Why Does a Utility Work with Local Governments?

A kWh is a kWh

- A kilowatt-hour (kwh) saved from energy efficiency does as much work as a kWh from a power plant



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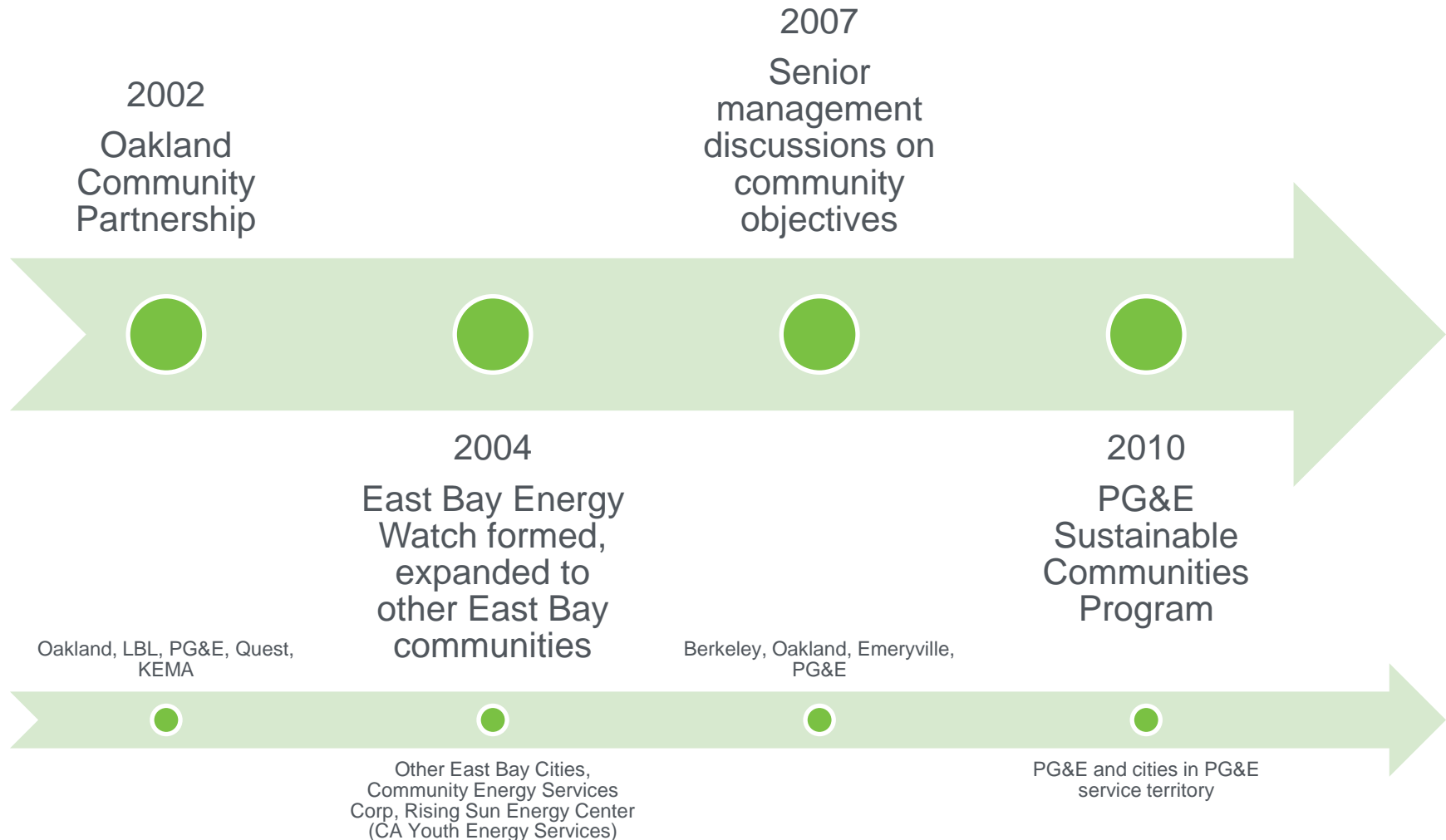
Why we do it

- It's less expensive than generating a new kWh
- PG&E earnings aren't tied to energy sales (decoupling)
- It helps the state meet its energy efficiency and greenhouse gas (GHG) reduction goals
- It's the right thing to do for the environment
- Local Governments want to partner with Utility

- Account Management
- Government Relations
- Government a “channel” to reach customers
- Integrated Demand Side Management
 - **Energy efficiency**
 - Local government facilities
 - Hard-to-reach sectors (small and minority-owned businesses [SMB], residential, non-profits)
 - Codes and standards assistance
 - Demand response
 - Renewables
- Climate planning
 - Climate Action Plan support
 - Innovator Pilots

- Total Resource Cost (TRC) methodology applied to vast majority of program portfolio
 - A few pilot programs are “non-resource” (exempt)
 - Impact of those programs is measured qualitatively, such as improved relationship, innovative new ideas that can scale
 - ...But energy efficiency program uptake is also expected
- Challenges
 - Cost-effectiveness is difficult to achieve when building capacity in local government entities
 - Documenting influence (attribution) is labor-intensive

East Bay Partnership history



- Evolution
 - Ad Hoc → Programmatic → Strategic
- PG&E's Roles
 - Integration with broader portfolio
 - Management and administration
 - Funding
- Cities' Roles
 - Assemble private sector and non-profit partners
 - Identify objectives and target markets
 - Leverage funding
- Why program was created
 - Climate Action Goals → 33% reduction from 2000-2020
 - CA Public Utility Commission energy efficiency goals

- **Municipal Facilities**
- BEST (SMB outreach and direct install)
- California Youth Energy Services (residential direct install)
- Energy Upgrade California (residential retrofit)
- Climate planning (GHG inventories, outreach campaigns)

- **Lighting**
 - Audits
 - Installation
 - Enhanced rebates
- HVAC
- Rate plan review

- 72,000 sq. ft. building
- Pre-retrofit
 - T8, installed 1997, standard ballasts
 - 817,000 kWh/year
 - \$122,000/year
- Post-retrofit (first year)
 - 5000K T8, high efficiency ballasts
 - 697,000 kWh/year (15% decrease)
 - \$100,000/year (18% decrease)
- Project metrics
 - Total cost: \$37,400
 - Cost to city (after rebates/incentives): \$15,700
 - Payback: 8 months
 - Avoided costs since 1/07: \$110,000
 - Avoided electricity usage: 600,000 kWh
 - GHG reduction: 180 tons

- Look for opportunities to de-lamp
- When replacing lights, replace **all** lights
- Plan for some initial lamp failures
- Lighting has great payback—may want to combine with other projects with lesser payback
- Communicate cost savings to staff

City of Berkeley Money for Energy Efficiency (ME2)/Energy Upgrade California (EUC) Overview



- PG&E
- DOE Energy Efficiency and Conservation Block Grant (EECBG)
- Association of Bay Area Governments (ABAG - metro COG)
- CA Energy Commission
- Alameda County cities
- StopWaste.org
- Building Performance Institute
- Contractors

Source	Amount
Berkeley ME2 EECBG	\$350,000
PG&E	~\$400,000
ABAG/SEP	~\$20,000
Client Share	~\$1,000,000
Total	~\$1,770,000

Fundamentals

- *Draft Sealing*
- *Insulation*
- *Duct Sealing*
- *Lighting*
- *Appliances*
- *Water Efficiency*
- *Plug Loads*

Major Systems

- *Space Heating*
- *Water Heating*
- *Cool Roof*
- *Low E II Windows and Doors*

Renewables

- *Solar Thermal*
- *Solar Electric*
- *Wind*
- *Rainwater Catchment*
- *Greywater*

ME2/EUCA Incentives

Energy Model	Berkeley ME2 Audit	Berkeley ME2 Upgrade*	PG&E Energy Upgrade CA	ABAG Audit	ABAG Upgrade	Total
				EXPIRES 01/31/12		
15%	\$200*	\$900	\$1,500	\$300	\$2,000	\$4,700
20%	\$200*	\$1,200	\$2,000	\$300	\$2,000	\$5,500
25%	\$200*	\$1,950	\$2,500	\$300	\$2,000	\$6,750
30%	\$200*	\$2,700	\$3,000	\$300	\$2,000	\$8,000
35%	\$200*	\$3,450	\$3,500	\$300	\$2,000	\$9,250
40%	\$200*	\$4,200	\$4,000	\$300	\$2,000	\$10,500
45%	\$200*	\$4,950	\$4,000	\$300	\$2,000	\$11,250
50%	\$200*	\$5,000	\$4,000	\$300	\$2,000	\$11,300

- Berkeley hired HMG for Outcomes Evaluation
 - Compare modeled improvements to actual bill impacts
 - Accurate results will be after EECBG grant term
- Staff conducting process evaluation
- EECBG objective = \$61 per first year million British thermal units (MMBtu) savings
- PG&E cost effectiveness requirements
 - Portfolio Total Resource Test > 1.0
 - EUC is much lower
- Data acquisition is challenging
 - Client account and service IDs
 - Release forms
 - Data queries

- ME2 and EUC cumulative performance metrics
 - Single Family and Duplex Rebates ONLY

	Applicants	Completed	Avg Impv't	Modeled kWh eq	Modeled Dollars Reduced	Modeled CO2 (mt)	Jobs (hrs)
ME2 PTD	545	37	33%	421,000	\$18,000	80	>3,000
EUCA Berkeley PTD	72	55	34%	NA	NA	NA	NA
ME2 Planned	150	76	NA	705,000	\$41,000	134	NA

- Work where interests are aligned and win-win is possible
- Need champion *and* worker bees inside utility and city
- Engage stakeholders across utility and city to maintain broad support and leverage resources
- Be ambitious but practical
- Track and communicate outcomes - energy savings, improved customer engagement and satisfaction, community presence
- For deeper collaborations, look for top level commitment

The Partnership is Constantly Evolving

Safe, reliable, affordable energy delivery



Energy efficiency and DR programs

Community investment



Climate action planning

Integrated community planning



- PGE Resources for Local Governments
 - www.pge.com/sustainablecommunities
- CA Public Utilities Commission Energy Efficiency
 - <http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/>
- CA Energy Commission Resources for Local Governments
 - <http://www.energy.ca.gov/localgovernment/index.html>
- Energy Upgrade CA
 - www.energyupgradeca.org/county/alameda/overview
- Berkeley's ME2
 - www.ci.berkeley.ca.us/me2

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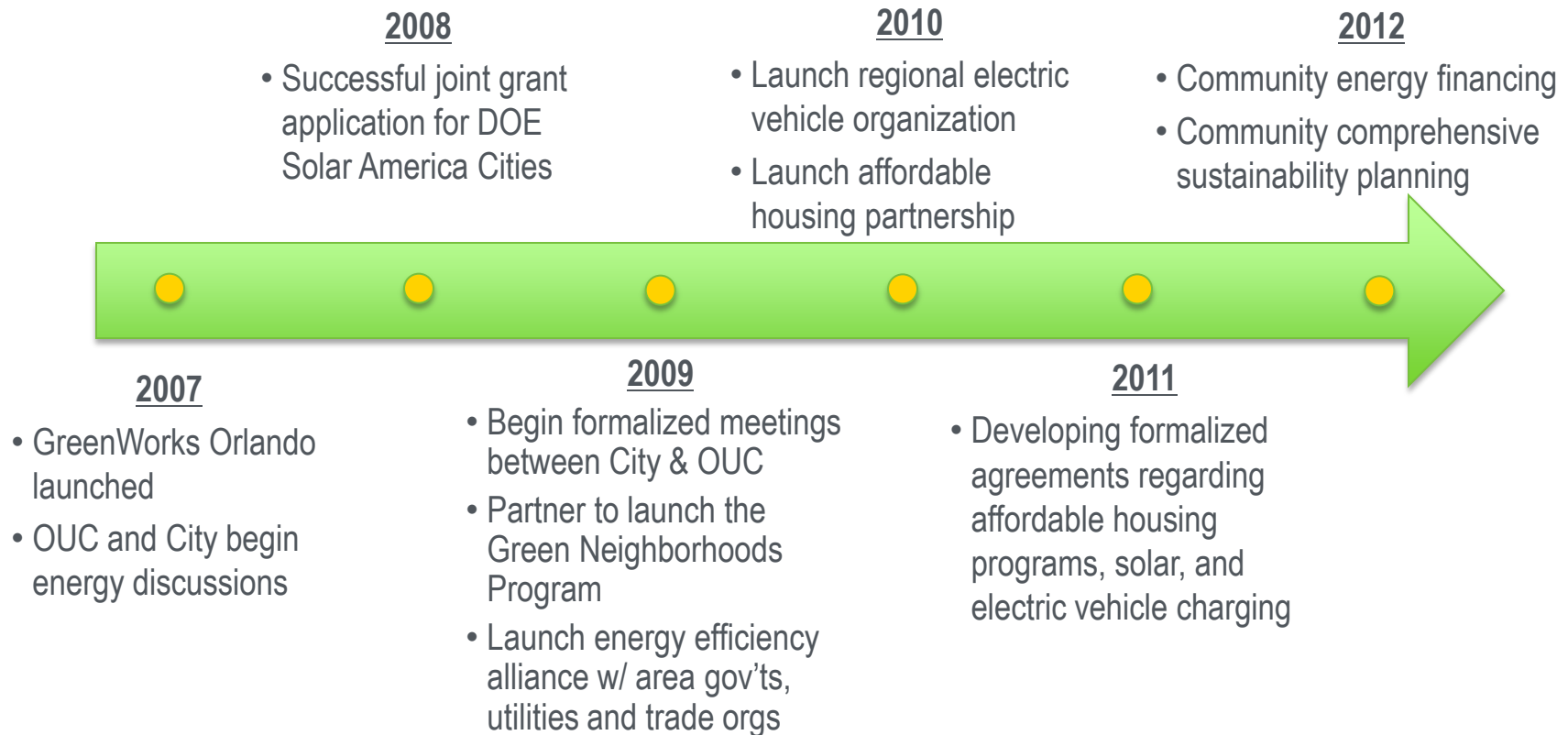


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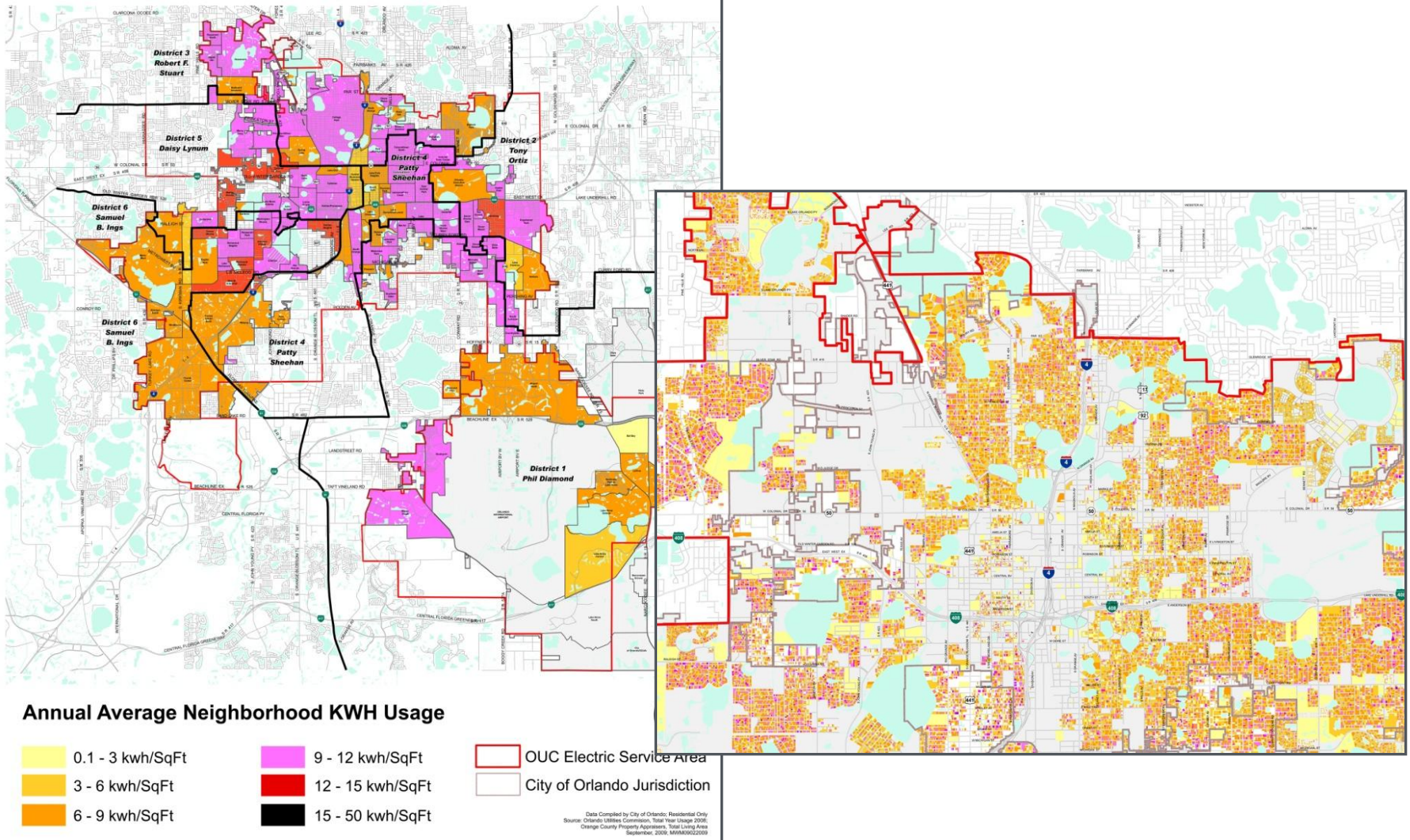


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Evolution of a Partnership



Residential Energy Intensity





BOB SMITH
555 MAIN STREET
ORLANDO, FL 32802

Home Energy Report

Account number: 1234567890
Report period: 05/26/11 – 06/25/11

We are pleased to provide this personalized report to help you save energy.

The purpose of the report is to:

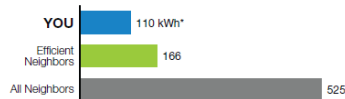
- Provide information
- Help you track your progress
- Share energy efficiency tips



This information and more is available at
www.ouc.com/energyreport

Last Month Neighbor Comparison

You used **34% LESS** electricity than your efficient neighbors.



* kWh: A 100-Watt bulb burning for 10 hours uses 1 kilowatt-hour.

Who are your Neighbors?

All Neighbors

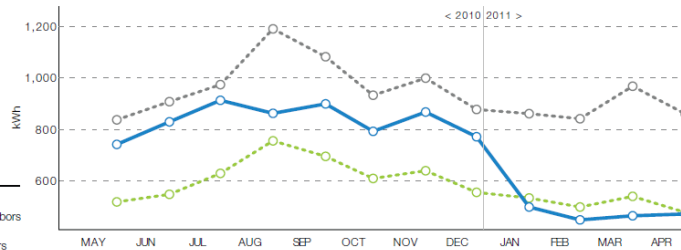
Approximately 100 occupied, nearby homes that are similar in size to yours (avg 2,856 sq ft) and have both electricity and natural gas service

Efficient Neighbors

The most efficient 20 percent from the "All Neighbors" group

Last 12 Months Neighbor Comparison

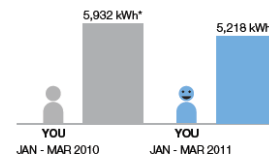
You used **22% MORE** electricity than your efficient neighbors. This costs you about **\$150 EXTRA** per year.



Turn over for savings →

Personal Comparison

How you're doing compared to last year:



* kWh: A 100-Watt bulb burning for 10 hours uses 1 kilowatt-hour.

So far this year, you used **12% less** electricity than last year.

★ You're on pace to use less in 2011

Looking for ways to save even more? Visit
www.ouc.com/energyreport

Action Steps | Personalized tips chosen for you based on your energy use and housing profile

Quick Fixes

Things you can do right now

- ☐ **Be smart about clothes washing**

Water heating accounts for about 90% of the energy used for washing clothes.

Unless your clothes have oily stains, washing with cold or warm water is effective. Some detergents are made specially for cold water, though most detergents will work.

For more savings, run only full loads and don't use the "sanitary" or "allergy-free" cycles, which use extremely hot water and increase energy use significantly.

SAVE UP TO
\$25 PER YEAR

Smart Purchases

Save a lot by spending a little

- ☐ **Spotlight your work spaces**

Whether you're preparing dinner, writing at a desk, or reading a book, light is important. Instead of spreading it around the room, focus light where you need it most.

Using desk lamps or under-the-counter lighting for specific tasks brightens important spaces, and it can significantly reduce your energy consumption.

Most of these lights are also compatible with energy-efficient bulbs.

SAVE
\$15 OR MORE PER YEAR

Great Investments

Big ideas for big savings

- ☐ **Pay less to keep outdoor lights on**

Operating outdoor lights all night could cost you over \$40 per year on your electric bill. Luckily, you can reduce energy usage without sacrificing security or style.

Incandescent lights with motion sensors only operate when needed, saving you even more than efficient bulbs.

Or, unplug entirely and install outdoor solar lights, which are available as wall-mounted, post or patio lamps.

SAVE UP TO
\$35 OR MORE PER LIGHT ANNUALLY



runs on OP@WER®

- Funded by EECBG and Utility
- Budget: \$700,000
- Retrofit of 1,200 residential homes
- Targeted neighborhoods



GNP Details and Results

- Overview of work
- Job Creation
- Projected savings
- Expansion of program

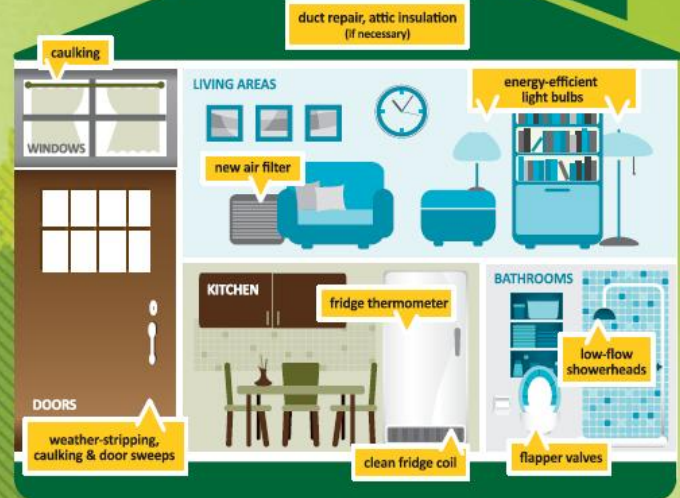


GREEN NEIGHBORHOOD PROGRAM

FREE energy-saving home improvements

The City of Orlando and OUC—The *Reliable One* are providing qualified residents with **free** energy-saving home improvements that could add up to significant savings on your electric bill.*

Here are some energy-saving improvements you can expect:



* Actual energy savings may differ from those estimated due to variations in energy use and habits.

- Coalition-led. Members include:
 - AIA, USGBC, BOMA, ASHRAE, NAIOP and IFMA
- Goal:
 - Register 2,011 buildings in ENERGY STAR Portfolio Manager by end of 2011
 - Improve energy efficiency 10% by 2014
- Chosen as an EPA National Community Showcase
- Funded by DOE and Orange County, FL
- Resulted in realigned utility incentive offering



- Find the champions and develop the relationship
- Understand goals of partner entity
- Align strategy to extent possible and then advocate for changes
- Collaboration needs to benefit both parties
- Success begets success, so loudly communicate achievements
- Always have a few ideas for next steps

- City of Orlando GreenWorks
<http://www.cityoforlando.net/greenworks>
- OUC Reliably Green
http://reliablygreen.ouc.com/en/what_ouc_is_doing_0.aspx
- Get Ready Central Florida
<http://www.plugandgonow.com/>
- Central Florida Energy Efficiency Alliance
<http://www.greenismybusiness.com/>
- Solar Cities Orlando
http://reliablygreen.ouc.com/en/what_ouc_is_doing_0.aspx

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Roundtable Discussion

Moderator: Jennifer Clymer, ICF International

Participants: Neal De Snoo, City of Berkeley, CA
Dan Schoenholz, City of Fremont, CA
Catherine Squire, Pacific Gas & Electric
Gina Blus, Pacific Gas & Electric
Jon Ippel, City of Orlando, FL
Cameron Saulsby, Orlando Utilities Commission

**** Please submit your questions online. ****

- Understand goals, benefits, and challenges of each party
- Communicate achievements in quantifiable, meaningful terms to build support
- Gain support of high-level program champions and program staff to ensure long-term success
- Have an eye to the future

Thank you!

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