

# Local Government Energy Efficiency

## BEST PRACTICES: FINANCING

City of Berkeley

San Francisco Bay Area

Population: 101,000

### SUMMARY

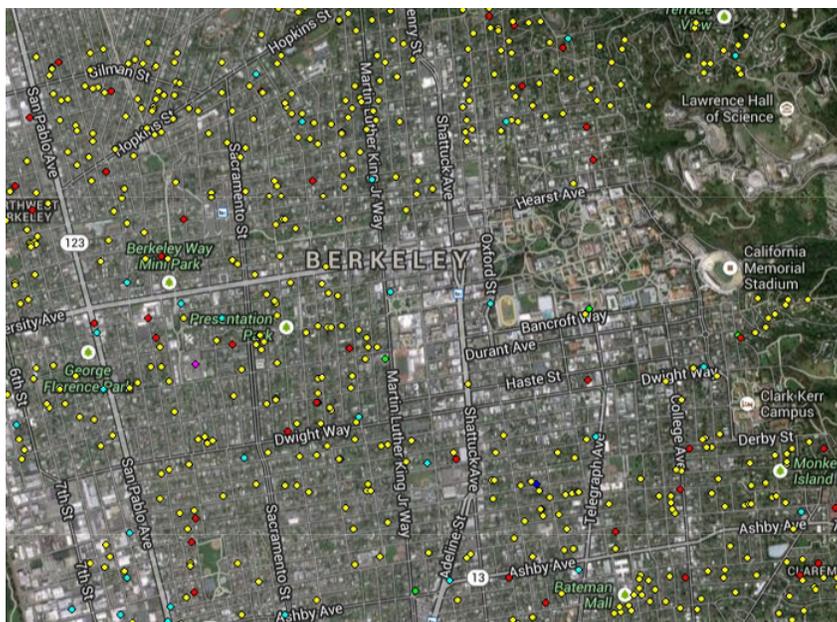
Property assessed clean energy (PACE) programs allow property owners to finance energy efficiency and renewable energy projects on their home or business and pay the project cost back as a line item on their property tax bill over a 20-year period. This innovative financing mechanism was first piloted by the City of Berkeley in 2008-09.

Berkeley's pilot program, called Berkeley FIRST (Financing Initiative for Renewable Solar Technology), provided financing for solar photovoltaic (PV) installations and is serving as a national model. Cities and states across the country are using the Berkeley FIRST model to launch solar and energy efficiency financing programs in their communities.

In California, a statewide PACE program called California FIRST is expected to launch in 2010; Berkeley will participate in the California FIRST program.

California FIRST will include financing for not only solar PV, but also solar thermal, and energy and water efficiency improvements. Berkeley FIRST is a strategy of the Berkeley Climate Action Plan.

## BERKELEY FIRST FINANCING INITIATIVE FOR RENEWABLE AND SOLAR TECHNOLOGY



Solar installation map of Berkeley

### PROGRAM HIGHLIGHTS

Berkeley FIRST was the first in the nation pilot program to provide property tax-based financing for solar installations on residential and commercial buildings.

- Berkeley FIRST eliminated the main barrier to going solar: the upfront cost. By structuring the payment over 20 years, the property owner can take advantage of lowered energy bills while they are repaying the financing.
- Since the solar installation stays with the property, so does the tax obligation – if the property is transferred or sold, the new owners will receive the benefit of the energy improvement and continue to pay the remaining tax obligation.
- Financing eligibility is based on the value of the property and the current status of property tax payments, not on personal credit.
- Berkeley FIRST participants were required to install a certain suite of energy saving measures prior to installing any solar panels, thereby reducing overall energy needs.

# Berkeley FIRST – Financing Initiative

## LESSONS LEARNED

- Property tax based financing is an important tool in expanding the access to clean energy to residents who would not have had access to other funding or otherwise would not have installed solar systems.
- PACE financing works. Participants installed solar and are paying the costs back on their property tax bill.
- Bigger is better. Berkeley’s program tested the PACE concept as a small pilot program. The City is now joining a statewide effort that will make clean energy financing available to thousands of property owners in Berkeley and beyond, thus helping to bring down interest rates and lower the City’s administrative burden and property owners’ administrative costs.
- Finance not only solar, but efficiency too. Now that we know the concept works, financing can be made available for a broader range of energy and water improvements. This is the plan for California FIRST.
- An extensive outreach education program, prior to and as part of the pilot, can leverage the impact of public funds through motivating owners who can do so to install using private financing.
- In addition to the right interest rate, programs of short durations, in particular, need to be structured to limit issues that can lead to withdrawals and, if possible, to allow for replacement reservations.

## THE REST OF THE STORY

Berkeley FIRST is the City of Berkeley’s solar financing program. The pilot program used Berkeley’s powers as a charter city to provide property owners an opportunity to borrow money from the City’s Sustainable Energy Financing District for the installation of solar photovoltaic electric systems. The FIRST program concluded its pilot phase in November 2009.

The pilot was the first in the nation to finance the cost of solar installations through an annual special tax on the homeowner’s property tax bill that is repaid over 20 years. The City Council allocated \$1.5 million in bond funding for the pilot project to finance up to 40 solar PV installations. The capital costs of the individual solar installations were paid through proceeds derived from the sale of the Berkeley FIRST bonds. The bonds will be repaid from an incremental tax charged on the participating property owner’s tax bills. The City of Berkeley contracted with Renewable Funding LLC as the third party administrator and the financier for the Berkeley FIRST program. Renewable Funding oversaw the application process and purchased the Berkeley FIRST bonds as they were

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issued. The costs for the City of Berkeley to administer the program included 1 full-time staff to manage the program and on-going additional support from part-time staff as well as \$80,000 in consulting fees for attorney, financial advisors and outside evaluators.

Thirteen solar installation projects, distributed throughout Berkeley, received funding through the Berkeley FIRST pilot program.

# Best Practices – Financing

The City of Berkeley continues to encourage the installation of solar photovoltaic and solar thermal systems. Legislation to create financing programs like Berkeley FIRST have been adopted by many states and localities. Vice President Biden has endorsed the Berkeley FIRST model as a national strategy for clean energy.

Berkeley is working with a statewide consortium to develop a California First program to tap into efficiencies of scale and expand the program to include energy efficiency improvements and solar thermal rather than continuing the program on its own.

All solar installations in Berkeley, including those installed through Berkeley FIRST, are graphically illustrated on the City's online solar map. The solar map enables users to not only see existing installations but also to estimate the solar potential of specific roof space within Berkeley.

The City is also tracking energy produced from solar and overall greenhouse gas emissions on its Climate Action Plan website: [www.cityofberkeley.info/climate](http://www.cityofberkeley.info/climate).

## LEARN MORE

### Berkeley FIRST Web Page:

- [www.ci.berkeley.ca.us/ContentDisplay.aspx?id=22196](http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=22196)

The City of Berkeley has produced a **“Guide to Energy Efficiency and Renewable Energy Financing Districts for Local Governments.”**

- [http://www.ci.berkeley.ca.us/Planning\\_and\\_Development/Energy\\_and\\_Sustainable\\_Development/Energy\\_Financing\\_Districts\\_Guide.aspx](http://www.ci.berkeley.ca.us/Planning_and_Development/Energy_and_Sustainable_Development/Energy_Financing_Districts_Guide.aspx)

**The City of Berkeley's Climate Action Plan tracks greenhouse gas emissions for Berkeley including monitoring the progress of renewable energy goals.**

- [www.cityofberkeley.info/climate](http://www.cityofberkeley.info/climate)

## GAINING POLITICAL SUPPORT

Berkeley FIRST received wide support from the community who see the program as a benefit to property owners. The solar installer's industry also supported the Berkeley FIRST program and helped to publicize it with their customer base.

Because the special tax district only affects those who will voluntarily choose to participate in the program, little-to-no opposition was voiced at the City Council meeting when the ordinance was heard. In fact, its popularity has been quite dramatic; a mere nine minutes after the online application opened, 40 applications had been received. And by the close of the two-week application period, the number of applications had reached 77.

The Berkeley FIRST program has attracted international and national attention including press and interest from other city department administrators who are looking to replicate the program in their home communities.

**Community Energy Services Corporation**, a nonprofit organization partnering with the City to provide technical advising services, can provide a free solar analysis. See the SmartSolar Program:

- [www.cityofberkeley.info/ContentDisplay.aspx?id=37808](http://www.cityofberkeley.info/ContentDisplay.aspx?id=37808)

**The Berkeley solar map** illustrates where in Berkeley solar is being installed and includes a calculator to estimate the cost or savings to go solar.

- [www.cityofberkeley.info/solarmap](http://www.cityofberkeley.info/solarmap)

**An initial evaluation of the Berkeley FIRST pilot program** including important lessons learned has been prepared and is available:

- [www.cityofberkeley.info/ContentDisplay.aspx?id=26580](http://www.cityofberkeley.info/ContentDisplay.aspx?id=26580)

# Local Government Best Practices

## SIMILAR PROGRAMS

### Be Palm Desert Energy Independence Program

- [www.cityofpalmdesert.org/Index.aspx?page=484](http://www.cityofpalmdesert.org/Index.aspx?page=484)

### Sonoma County Energy Independence Program

- <http://www.sonomacountyenergy.org/>

**California FIRST** is a statewide effort to provide the financing and administrative functions for communities adopting AB811 programs. It is a program of California Communities, a statewide joint powers authority sponsored by the California State Association of Counties and the League of California Cities.

- [www.californiafirst.org](http://www.californiafirst.org)

*Berkeley FIRST eliminated the main barrier to going solar – the upfront cost – by structuring the payment over 20 years.*

*Vice President Biden has endorsed the Berkeley FIRST model as a national strategy for clean energy.*

## ADDITIONAL RESOURCES

- The Energy Aware Planning Guide, developed for the California Energy Commission, contains policy and implementation ideas; energy, environmental and economic benefits; and other resources on energy financing districts. Check the Community Energy section of the Guide: [www.energy.ca.gov/energy\\_aware\\_guide](http://www.energy.ca.gov/energy_aware_guide)
- ICLEI—Local Governments for Sustainability ([www.iclei.org](http://www.iclei.org)) offers a suite of resources to aid local governments implement energy efficiency measures and reduce greenhouse gas emissions.
- The Institute for Local Government’s California Climate Action Network ([www.ca-ilg.org/climatechange](http://www.ca-ilg.org/climatechange)) provides resources, information, and recognition to assist local agencies reduce greenhouse gas emissions and save energy.
- The Local Government Commission ([www.lgc.org](http://www.lgc.org)) provides many free resources to assist local governments in reducing greenhouse gas emissions and energy use including newsletters and publications, fact sheets, model projects, and articles.

For more information about this case study: Joseph Oldham, Statewide Local Government Energy Efficiency Best Practices Coordinator, [joldham@lgc.org](mailto:joldham@lgc.org)

Funded by California utility customers and administered by California’s investor owned utilities under the auspices of the California Public Utilities Commission.