

MAKING A MARKET: Multifamily Rooftop Solar and Social Equity in Los Angeles



Presented by:

LABC Institute

City of Los Angeles

JP Morgan Chase & Co.

The Rosalinde and Arthur Gilbert Foundation

The 11th Hour Project

UCLA Luskin Center for Innovation

USC Program for Environmental and Regional Equity

US Department of Housing and Urban Development

Acknowledgments

The LABC Institute in collaboration with the Los Angeles Business Council (LABC) is pleased to present ***Making a Market: Multifamily Rooftop Solar and Social Equity in Los Angeles*** and gratefully acknowledges the 11th Hour Project, The Rosalinde and Arthur Gilbert Foundation, JP Morgan Chase, and the US Department of Housing and Urban Development for generously underwriting this inaugural study.

We would also like to thank the Los Angeles Housing Department for their contributions to this study. Finally, we thank the innovative organizations featured in this study for their considerable support of this project and vision in creating real solutions to meet our region's housing needs and challenges.

Making a Market Steering Committee

Kelly Boyer

Director, Multifamily HUB for Los Angeles, US Department of Housing and Urban Development

Brad Cox

Senior Managing Director, Trammell Crow Company; Chairman, LABC Institute

JR DeShazo

Director, UCLA Luskin Center for Innovation

Doug Guthrie

General Manager, Los Angeles Housing Department

Mary Leslie

President, LABC Institute

Jacob Lipa

President, PSOMAS; Chairman, LABC

Antonio Manning

Region Executive, JPMorgan Chase, Global Philanthropy - West/Southwest

Ramon Mendez, Jr.

Director of Solutions, Enterprise Community Partners, Inc.

Manuel Pastor

Director, USC Program for Environmental and Regional Equity

Special thanks to the authors, JR DeShazo, Director, UCLA Luskin Center for Innovation; Manuel Pastor, Director, USC Program for Environmental and Regional Equity (USC PERE); Mirabai Auer, USC PERE; Vanessa Carter, USC PERE; Nicholas Vartanian, UCLA Luskin Center for Innovation. Thank you also to Jason Greenwald, Sugerman Communications Group; Adam Jacobson, Los Angeles Business Council; and Zarui Neksalyan, Los Angeles Business Council. All stakeholders contributed greatly in terms of thought and input to the final report; however, errors are sole property of the author.

April 12, 2011

Dear Business and Community Leaders:

We are proud to release ***Making a Market: Multifamily Rooftop Solar and Social Equity in Los Angeles***. This study builds on the LABC Institute's efforts to create solutions to the jobs and affordable housing imbalance in the region.

Last year, the Los Angeles Business Council (LABC) released the first of its solar studies, ***Designing an Effective Feed-in Tariff (FiT) for Greater Los Angeles***, a program that would allow businesses, public and non-profit organizations, and residents to install solar panels on their roofs and parking lots and sell the power generated back to the local utility. Participants would receive a payment back from the utility for each Kilowatt-hour fed back into the power grid. The CLEAN (Clean Local Energy Accessible Now) LA Solar Program (FiT) will generate a cost-effective source of renewable energy, create local jobs, and bring in revenue for businesses and ratepayers.

The initial study identified a 1.4 GW potential for multifamily rooftop solar potential, which this study further investigates. To that end, today marks the release of ***Making a Market***, a major collaboration among the LABC Institute, USC Program for Environmental and Regional Equity, the UCLA Luskin Center for Innovation, U.S. Department of Housing and Urban Development and the City of Los Angeles. This study illustrates a vision of a new privately funded and publicly incentivized market for multifamily rooftop solar that reduces owner and tenant utility costs, provides a new revenue stream for owners, and creates and retains jobs for local workers.

We would like to thank our underwriters, whose enthusiasm and commitment made this project possible, and the visionary leaders whose efforts serve as the basis for this study. We hope that this study sheds light onto an extraordinary program to help make Los Angeles more competitive, and create thriving communities throughout our region.

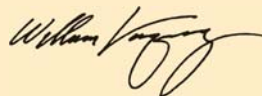
Sincerely,



Mary Leslie
President
LABC Institute



Brad Cox
Chairman
LABC Institute



William Vasquez
Director
Community Planning and Development
U.S. Department of Housing and
Urban Development

Executive Summary

Making an Inclusive Market: Multi-family Rooftop Solar and Social Equity in Los Angeles

Overview: Solar Power in the Land of Sunshine

With President Obama's focus on clean energy investments and innovation, along with his efforts through the US Department of Housing and Urban Development (HUD) to build sustainable, affordable and energy-efficient communities, there has never been a better time for making a market for solar investments in affordable housing. According to HUD's stated goals, the nation's housing market needs to create and sustain a sufficient supply of affordable housing. Los Angeles is no different, and has the opportunity to lead the way for the nation.

In the city known around the world as the home of dreams and sunshine, it stands to reason that a robust solar energy program would be part of the clean-energy solution for Los Angeles. Local policy-makers are now engaged in designing such a program, which would help realize California's proposed new law to meet 33 percent renewable energy by 2020, of which 70 percent would need to be generated from California sources. With input from academic researchers, community and business leaders, environmental groups, neighborhood councils and other stakeholders, the City of Los Angeles stands poised to enact a solar energy program that would bring clean, renewable energy to Angelenos at a reasonable cost. In fact, by providing incentives for homeowners and business-owners to install solar panels on their roofs, the city would catalyze the creation of brand-new sources of clean energy that would play a role in weaning the city off its reliance on polluting, coal-fired power plants.

The purpose of this executive summary is to examine the way in which such a program can be broadened to enable more Angelenos to take part, adding to overall solar capacity and providing environmental and financial benefits as widely as possible. The final study will be completed in June 2011 and made available online at www.labusinesscouncil.org.

Introduction: Solar FiT as a Policy Solution

In response to Los Angeles City Mayor Antonio Villaraigosa's call for over one gigawatt of solar development in the city, including a feed-in-tariff (FiT) program, researchers at UCLA and the Los Angeles Business Council have been working for over a year on design and policy recommendations for a solar FiT program. The economic benefits of lower energy costs will be clearly evident to rate payers. However, incentives to retrofit are less obvious to residential and commercial property owners. Building owners would be incentivized to earn a reasonable rate of return on their investment; the utility would receive additional sources of clean, renewable energy, particularly during peak periods; and the city as a whole would benefit from a cost-effective program, as well as huge sums of private investment and thousands of local jobs that would be created.

As a follow-up to two rigorous studies that examined the overall potential for a solar FiT in Los Angeles and specific design models that would be most effective, solar proponents sought to go a step further: to better understand the role of multi-family housing in creating a broad-based solar energy program. With this study, researchers from UCLA and USC seek to answer the following questions:

- *How much solar capacity can multi-family housing contribute and what incentives must we create to encourage solar development?*
- *Who lives in multi-family housing?*
- *Would solar investment in multi-family housing occur in economically distressed neighborhoods?*
- *What policies would most effectively promote solar in multi-family housing?*
- *What are some of the barriers to success, and how can they be overcome?*

As it turns out, there is tremendous capacity for multi-family housing to contribute to a broader solar energy program. And many of the residents in multi-family housing are on the lower end of the income scale. In fact, many of the rooftops with the greatest potential for solar power are found in economically depressed neighborhoods. And there are a number of policies that can effectively promote solar, by drawing on many of the same principles that would guide the broader solar program throughout the city.

Creating a well-designed multi-family component of a solar program has the following benefits:

- It has the potential to create job opportunities and stabilize distressed neighborhoods
- It can reduce the costs of operating multi-family housing by reducing the costs of common-area electricity and reduce or eliminate payments to utilities, allowing budget savings for tenant services.
- It can, if well-tailored, provide monetary benefits for low-income residents in the form of rebates or reduced energy costs
- It gives Angelenos greater opportunity to choose to live in a more sustainable manner, with a reduced carbon footprint
- And it contributes to a larger pool of clean, renewable energy that can power homes and businesses throughout the city

And these benefits contribute to the broader goals of a solar program for Los Angeles: supplying renewable energy at a reasonable cost, spurring private investment, creating thousands of new jobs, and reducing greenhouse gas emissions.

How can a solar energy program be designed to ensure that lower-income Angelenos – many of whom live in multi-family housing – will have an opportunity to participate? What sorts of benefits could accrue to lower-income Angelenos? What are some of the barriers to success, and how can they be overcome? For answers to these questions and more, please read on.

How much solar capacity can multi-family housing contribute and what incentives must we create to encourage solar development?

Based on past studies, we know that one megawatt (MW) of solar capacity is roughly sufficient to offset the energy needs of 100 homes. With that measurement in mind, we can look at the overall capacity that exists on rooftops in Los Angeles. If it were technically and economically feasible to build solar panels on every available rooftop, the following totals could be generated:

Commercial and Industrial:	2,218 MW
Single Family Homes:	1,752 MW
Multi-family Homes:	1,411 MW
Government/non-profit:	156 MW
TOTAL:	5,537 MW

It is important to note that these totals are strictly theoretical, as it is unlikely that solar panels will be installed on every Los Angeles rooftop in the near future. Yet they give a general sense of the total physical capacity for solar in the city. Roughly speaking, if every multi-family rooftop could be effectively covered with solar panels, they would have a capacity of 1.4 GW – sufficient to power 140,000 homes – or 8 percent of the city’s current energy needs.

As it turns out, this capacity is spread throughout the city in a number of clusters of great potential. As it turns out, there is physical potential of between 59 and 130 MW of solar on multi-family housing in each of the city’s 15 council districts. At least six of these districts have capacities of between 75 and 100 MW, further indicating the even spread. The total number of multi-family sites is in excess of 100,000.

So, which of these sites can most easily be developed? The first consideration is size and shape: large, flat rooftops provide the most cost-effective solar power. Based on our analysis, the sites most ripe for development are those with a potential of 50 kW or more.

There are approximately 4,000 buildings in the City of Los Angeles that fall into this category, with a potential capacity of more than 300 MW. Given the economies of scale and the number of large, flat rooftops on multi-family buildings, this sector is likely to be the second most cost-effective market (after commercial and industrial) for solar in the city.

In short, it will be easier and less expensive to harness significant quantities of solar power from multi-family roofs than from single-family homes or smaller commercial rooftops. Thus, it is a tremendous market that can bring very significant solar capacity to Los Angeles.

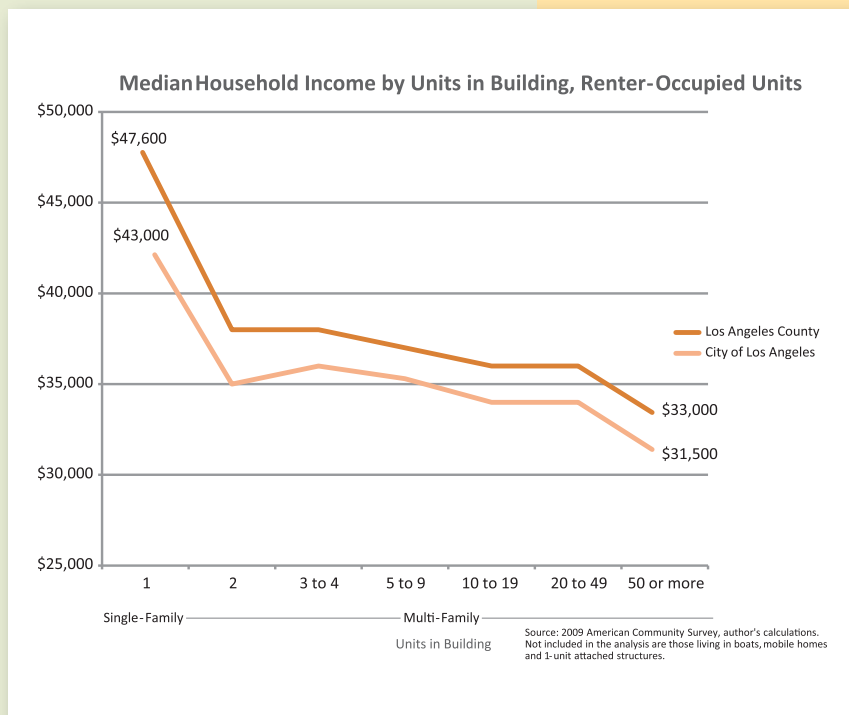
We estimate that about 300 megawatts of multi-family capacity could be built if property owners were adequately incentivized with a payment equivalent to 24-26 cents per kilowatt-hour. This is based on paying owners a reasonable rate of return while at the same time ensuring that the cost of power is not prohibitively high. 300 MW would be a significant contribution to the city's renewable energy portfolio, providing enough power to supply 30,000 homes of average size and need.

Our analysis finds that 24 to 26 cents is sufficient to incentivize broad participation in the multi-family market, paying building owners a reasonable rate of return, while also enabling the other benefits of solar as outlined throughout this report. The price paid is based primarily on two factors: the cost of solar installation and the cost of obtaining financing. These may vary over time. At present, however, it is clear that a rate of 24 to 26 cents per kilowatt-hour will generate sufficient participation and lead to the addition of 300 MW over the next five to 10 years.

Further, a 300 MW program would produce over 4,500 direct and indirect job-years in local professional services, construction, and ongoing system maintenance. Finally, it is worth noting that this payment can take either of two forms: a net-metering program, such as currently exists in the City of Los Angeles through the Solar Incentive Program, but with greater rates of return than are currently offered; or a solar FIT, such as has been proposed and which policy-makers are currently considering.

Who lives in multi-family housing?

About 1.7 million people in Los Angeles live in multi-family housing – or, just under half of the city's population. Of these, 94 percent are renters and 6 percent are condo owners. While the households living in multi-family housing vary greatly, most are in middle and lower income brackets. The median household income in multi-family housing is about \$36,000 per year, compared to a median household income of \$71,800 for single family homes in the city. Among renters, the incomes are slightly lower. (See side chart.) Typically, as the number of units



Case Study: *Bonnie Brae Villages, Los Angeles, CA*

Bonnie Brae Village Apartments is a 92-unit community located in the Westlake neighborhood just west of downtown Los Angeles, and is an unusually complex project serving economically distressed seniors – more than 50 of whom are formerly homeless, and 40 of whom have mental illnesses.

Despite some challenging financial issues while under development, Bonnie Brae is now thriving – and generating power from nearly 67 kW of solar panels on its roof. Initial developer Enhanced Affordable Development made solar installations standard on its projects as early as 2004, recognizing the cost savings that could be generated by rooftop energy sources.

The solar panels at Bonnie Brae offset power usage from the common areas of the building – community rooms, hallways, stairwells and the like – that could drop the overall cost of managing the building. Residents are already subsidized by the Housing Authority of the City of Los Angeles, which covers utility deposits, and U.S. HUD, which helps to reduce individuals' energy costs.

An electrical contractor handled design, engineering, installation and coordination with LADWP on financing, interconnection and billing. One third of the cost of installation – more than \$150,000 – was paid directly to the contractor in the form of LADWP rebates.

Bonnie Brae's complex financing included loans from the city's affordable housing trust fund and the state's multi-family housing program, as well as bonds issued by the city. Affordable Living for the Aging, which assisted as the project moved toward completion, is in the process of taking over to become Bonnie Brae's managing general partner.

Bonnie Brae offers its residents training and classes in areas such as money management, nutrition and cooking. Given what's on the rooftop, it wouldn't be far-fetched to add a seminar on sustainable living, too.

in a residential building rises, the average income of families who live there falls. Further, these lower-income residents typically spend a greater percentage of their income on energy



costs and rent. Among those who live in multi-family housing are a wide range of workers, including nurses, firefighters, police officers, landscapers and more. And those who live in affordable housing units are among society's most vulnerable, including seniors, the poor, indigent and mentally ill.





Would solar investment in multi-family housing occur in economically distressed neighborhoods?

Given that the greatest solar potential lies with buildings that have large flat roofs – which in the case of residential housing tends to be larger multi-family buildings – it is definitely the case in Los Angeles that many areas with high solar potential are also communities in economic need.

Most of the solar potential as previously defined (50+ kW) exists in properties with five or more units. As has been noted, residents in these larger buildings tend to have lower incomes, particularly among renters. Given that many of the larger buildings are clustered together, there is great potential to install solar in neighborhoods with the greatest economic need.

Put another way, many low-income renters currently live in or near high-density, high-solar-potential neighborhoods. In fact, an overlay of high-solar-potential areas and economically distressed neighborhoods shows a great deal of confluence.





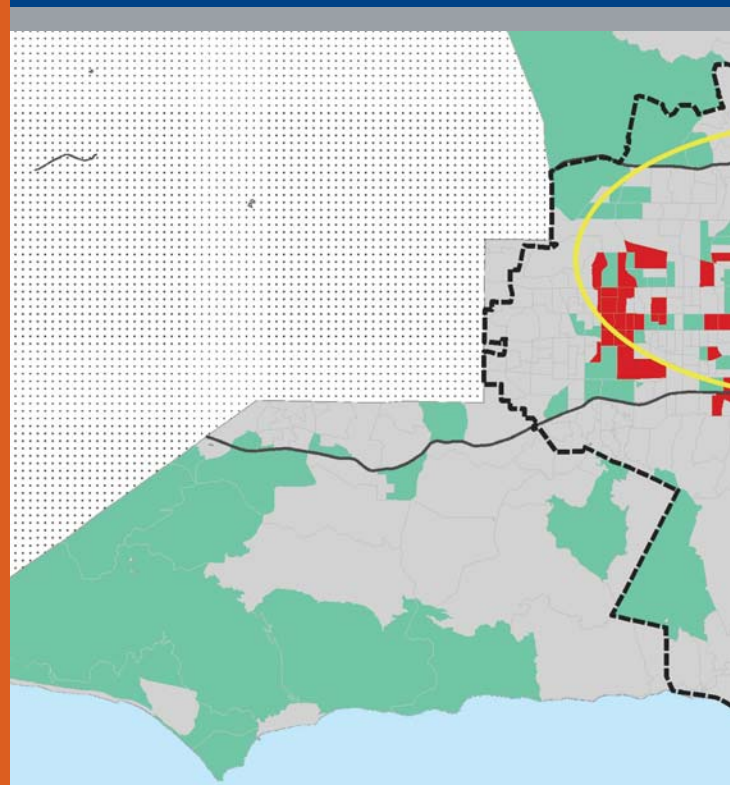
Case Study: *Carlton Court Apartments, Hollywood, CA*

At the busy corner of Hollywood and Western, a steady stream of transit riders emerge from the Metro station below. Amidst the honks and swerves of East Hollywood traffic, one just might notice Carlton Court Apartments – an affordable housing development that sits adjacent to the transit station.

What can't be seen from street level are the solar panels atop the Carlton Court Apartments – providing renewable energy to offset the common load of the first phase of this 121-unit development, the city's first attempt to create an affordable transit village. Developed by McCormack Baron Salazar (MBS) and Hollywood Community Housing Corporation (HCHC), Carlton Court Apartments houses more than 300 people, nearly half of whom have incomes of \$10,000 to \$20,000. The decision by MBS to use solar is an example of a for-profit development company making a sustainable choice driven by both the common good and the bottom line.

Through its in-house solar development and financing firm, Sunwheel Energy Partners, MBS has relied on a combination of funding sources, including the federal New Markets Tax Credits program. With additional financial support from the federal Solar Incentives Tax Credit and local solar incentives, Sunwheel installed the solar panel system nearly 10 years after the property formally opened. The project took advantage of the California Solar Initiative program, currently slated to run through 2016, which provides generous rebates that make a solar retrofit financially palatable.

As an LADWP customer, Carlton Court Apartments is eligible to offset only the common-area load, and not the electricity that powers residential units. Based on our findings, the common area load for Carlton Courts represents solar energy savings of about \$8,000 annually. Still, the solar panels will help to provide a source of clean, renewable power and have proven to be a cost-effective investment for MBS. Although they can't be seen from street level, those panels are showing the way to the future for multi-family development.

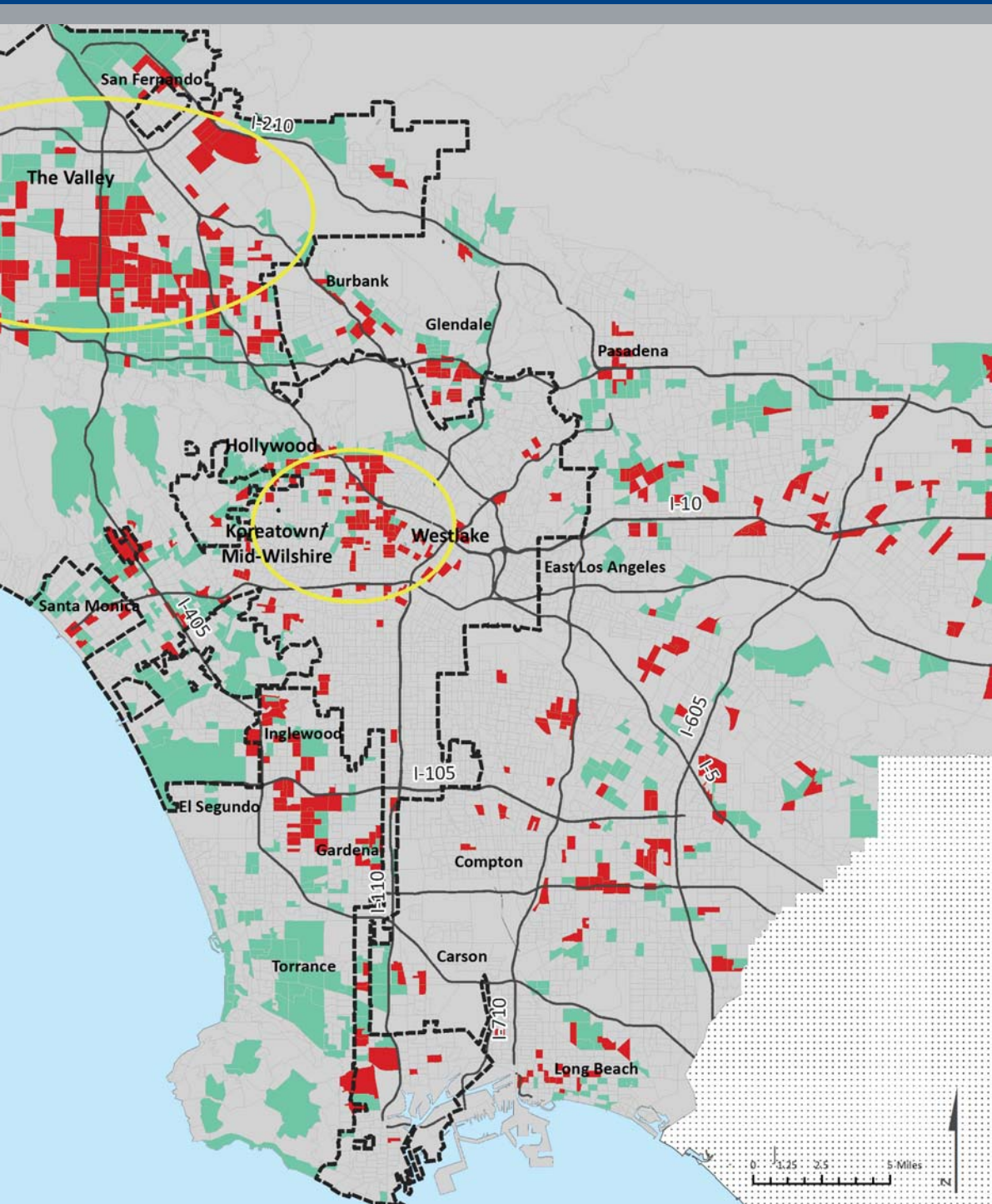


Multi-Family Residential: Rooftop Solar + Equity Potential by Census Block Group

- Solar + Equity Potential High
- Solar Potential High
- Solar Potential Low
- City of Los Angeles

High solar potential areas are those block groups with 3 or more 50+ kW buildings per block group; high equity potential areas are those with more than 25% of the population below 150% of the Federal Poverty Level.

The map Above identifies where both significant rooftop solar development potential and low-income populations live. Our definitions are as follows: for the former, where there exists a cluster of three or more buildings with 50 kW of potential and, for the latter, where greater than 25 percent of the population lives below 150 percent of the Federal Poverty Level. As shown



Data sources: UCLA Luskin Center (Solar potential); City of Los Angeles (Parcel shapefile); U.S. Census (Tiger Line shapefiles, 2000; ACS, 2005-2009)

in the map, shaded in red are those areas with both solar and equity potential, which emerge most strongly near Hollywood, Westlake and Koreatown, and across large sections of the San Fernando Valley. In green are those areas with high solar potential, but also more affluence.

Thus, by targeting economically distressed areas with significant solar potential, a multi-family solar program can serve many low-income residents and, if properly designed, can also benefit those residents in a number of ways. The next section will address some of these benefits.

What policies would most effectively promote solar in multi-family housing?

From a policy perspective, the fundamental question is: How can the city effectively promote the development of solar capacity on multi-family rooftops in Los Angeles? The question has been explored in depth in UCLA's previous studies on the solar FiT, primarily examining the ways in which building owners can be appropriately incentivized to invest in solar panels, thus creating a new, renewable source of energy, while also ensuring that city ratepayers are protected from undue rate increases.

In looking at multi-family housing, the key factors are the installation cost of solar panels; the rate paid to the building owner per kilowatt-hour generated; and the tax incentives available to subsidize the installation of panels. It is important to note that there are three distinct sectors within the multi-family category. Each has its own unique scenario, in terms of incentives and tax advantages, and therefore each requires different policy options. The three sectors are: small residential apartments (4 units or fewer), commercial rentals (5+ units) and condos.

Fortunately, in the case of commercial rentals, which tend to have the most available rooftop space, there are generous incentives made available by the federal government. For apartments of 5 or more units, both an investment tax credit and standard depreciation would apply. These factors significantly defray the cost of investment, and thus lower the rate that must be paid by the utility for energy.

Apartments (5+ units) FIT with ITC & MACR

Rate of Return (Apartment / Commercial) ITC + Depreciation 50kW System					
		Install Cost (\$ / W)			
		2.50	3.50	4.50	5.50
FIT Rate (\$ / kW)	0.15	7.5%	7.0%	6.7%	6.4%
	0.20	8.2%	7.6%	7.2%	6.9%
	0.25	8.9%	8.1%	7.6%	7.3%
	0.30	9.4%	8.6%	8.0%	7.6%

FiT (Feed-in Tariff); ITC (Investment Tax Credit); MACR (Modified Accelerated Cost Recovery System) depreciation credits



Our analysis indicates that:

- Paying a rate of 24 to 26 cents per kilowatt-hour would be sufficient to attract a significant number of property owners.
- A 50 kW system installed at \$4.50 per watt would produce an 7.6 percent return for the property owner, if the property owner is paid 25 cents per kWh.
- This rate could be in the form of a direct payment, as in the case of a FiT, or a combination of payment and rebates, such as with net-metering.
- In fact, based on an analysis of expected demand, we estimate that 300 MW of capacity could be generated in the next 5 to 10 years.

A well-designed multi-family solar program offers numerous benefits to ratepayers and the general public alike. Such a program would:

- Contribute to a larger pool of clean, renewable energy for homes and businesses.
- A 300 MW program would produce over direct and indirect 4,500 job-years, based on the latest data.
- It can reduce the costs of operating multi-family housing by reducing the costs of common area electricity and reduce or eliminate payments to utilities, allowing budget savings for tenant services.
- Give more Angelenos the opportunity to live in a more sustainable manner with a reduced footprint.
- A 300 MW program could reduce about 6.7 million tons equivalent of CO₂ by replacing coal and 4.1 million tons equivalent of CO₂ by replacing natural gas. This is comparable to removing between 69,000 to 112,000 cars from the roads over ten years.



What are some of the barriers to success, and how can they be overcome?

As with any major policy undertaking, there are a number of potential barriers which must be examined to ensure that a program is well-designed and likely to succeed. The most significant barriers include the current lack of significant local incentives, as discussed above; the difficulty in channeling benefits directly to tenants; and the challenge of ensuring that job-creation benefits remain in the local community.

A closer examination of each of these barriers follows:

Barrier #1: Local solar incentives are declining, and there is currently no solar FiT in Los Angeles

As noted above, an effective payment of 24-26 cents per kilowatt-hour will be necessary to adequately incentivize participation. This incentive can take the form of net metering (payment combined with rebate) or a FiT. Currently, net metering rebates are declining and the solar incentive program is oversubscribed, while a FiT has not yet been enacted.

Policy makers can easily determine that the benefits of a robust incentive program offset its modest costs, and that the solar FiT is an important policy solution for reasons outlined in this and previous studies. To enact these programs, they must prioritize solar and budget accordingly. As a result of our initial studies

and the Mayor's commitment, the LADWP has proposed a minimum of 150 MW of FiT in the 2011 Integrated Resources Plan.

Barrier #2: It is difficult to channel benefits from a solar program directly to tenants

While building owners will benefit directly from reduced energy costs (or direct payments, in the case of a FiT), there are no easy mechanisms to ensure that benefits flow through directly to tenants. We have discussed some of the ways in which these benefits can be passed on. One possibility would be to require that building owners participating in a solar energy program also participate in energy efficiency programs that would directly benefit residents in the form of rebates or reduced utility costs.

These cost savings may eventually result in lower rent levels as well. For affordable housing units, where residents' rent levels are often fixed, it may be possible to create an energy savings account to fund improvements to housing amenities and improved services for residents.

Through the installation of solar panels on its rooftop, LA Housing Partnership's (LAHP) Seven Maples, an affordable senior living development in MacArthur Park has offset utility costs throughout the building, allowing costs savings to be directed to tenant services. Mary Silverstein, the Executive Director of LAHP states, "The beauty of the solar panels is that they offset our costs so much so that we pay nothing for utilities, allowing us to funnel those savings into our resident programs, providing computers, education programs and activities for the community."



“*The beauty of the solar panels is that they offset our costs so much so that we pay nothing for utilities, allowing us to funnel those savings into our resident programs, providing computers, education programs and activities for the community.*”

— **Mary Silverstein**, Executive Director, Los Angeles Housing Partnership (LAHP) in reference to LAHP's Seven Maples Senior Housing Development

Barrier #3: It is a challenge to ensure that job creation benefits accrue to local residents, particularly in economically distressed areas

A number of policy solutions could be implemented to ensure that the economic and employment benefits created by a solar energy program remain in the local area. A local labor requirement could ensure that work associated with installation goes to area businesses; DWP could use socioeconomic data to target its projects in economically distressed neighborhoods, as discussed earlier; and job training programs could be expanded in neighborhoods where multi-family solar installations are located.

While this list of potential barriers and remedies is not exhaustive, it gives a sense of some of the major challenges and policy solutions available to city leaders. We believe that a thoughtful policy debate will lead to a well-crafted program with great benefit both to targeted neighborhoods and to the city as a whole.

Conclusion

With city leaders prepared to embark on a meaningful solar energy program, Los Angeles has the opportunity to ensure the broadest possible participation and benefits. By creating a robust multi-family component of the solar program, city leaders will serve many policy goals. Such a program would magnify the region's solar-energy potential; contribute significantly to economic development in the form of investment and jobs, largely in distressed neighborhoods; and give lower-income Angelenos, many of whom do not have the same luxuries of choice as upper-income residents, the opportunity to participate in major environmental solutions.

Our primary policy recommendation is that the City of Los Angeles create a FiT, or increase the net-metering program for multi-family buildings with an effective payment of 24 to 26 cents per kilowatt-hour that includes the following elements:

- An energy efficiency tie-in that would allow residents to benefit from rebates or reduced utility costs
- Local job-training programs that would enable more of these residents to be trained for the numerous manufacturing, installation and other jobs that will be created

Through a well-designed program, city leaders can ensure that tangible benefits reach residents in the form of rebates, lower utility rates and possibly lower rent levels. In all, a robust multi-family component is a key part of a solar energy program for Los Angeles and stands to benefit many of its residents.

L.A. Housing Department Gateway 2 Green

Among the many ways in which L.A. is moving to achieve energy efficiency is a new program by the L.A. Housing Department (LAHD) called Gateway 2 Green, which will allow existing LAHD inspectors to perform gateway energy assessments at all of the city's 100,000 multi-family rental properties on a continuing four-year cycle. This program will provide property owners with detailed information about their water and energy use in order to suggest retrofit work that conserves resources and lowers costs. As a result, the program will also create new jobs for energy and water efficiency assessment professionals and construction trade workers.

The LAHD anticipates the program will lead multi-family property owners to make significant investments to increase the efficiency of their buildings. After learning about their current energy and resource consumption and the potential savings offered by improved efficiency, building owners are likely to invest in full building sustainability audits, building retrofits, and enhanced energy-saving and water-saving appliances.

For more information, visit <https://lahd.lacity.org/lahdinternet/>.

Photo Credits

Cover Upper Right Side - Angela Means, Angela Means Photography

Cover Large - Carlton Court. McCormack Baron Salazar
Pages 8-9 - Bonnie Brae Villages. Angela Means, Angela Means Photography

Page 10 - Carlton Court. McCormack Baron Salazar

Page 13 - Carlton Court. Sunwheel Energy Partners

Page 14 - Angela Means, Angela Means Photography

LABC | Institute
Los Angeles Business Council

2029 Century Park East
Suite 1240
Los Angeles, CA 90067
310.226.7460



Los Angeles Multifamily Hub
611 W. Sixth Street, Suite 800
Los Angeles, CA 90017
213.894.8000

www.labusinesscouncil.org