A Step by Step Tool Kit for Local Governments to Go Solar

California Energy Commission’s New Solar Homes Partnership

California’s Incentive Program for New Residential Construction
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As part of Governor Schwarzenegger’s vision of one million solar roofs in California by 2016, the California Energy Commission’s New Solar Homes Partnership (NSHP) was created to encourage installations of solar-electric systems and energy efficiency features in new home construction statewide. The NSHP provides builders of energy efficient solar homes with financial incentives, marketing support, and other forms of encouragement.

We all benefit from energy efficient solar homes. By coupling energy efficiency with solar technology, a new energy efficient solar home can reduce a home’s utility bill by up to 60 percent. Solar power helps keep our air clean by reducing air pollution, and helps fight climate change by shrinking a home’s carbon footprint. Finally, energy efficient solar homes help avoid building costly new power plants that impact our environment and use natural resources.

Californians are becoming more aware of these benefits, and research released by the Energy Commission illustrates that in the face of rising energy costs, the demand for energy efficiency is high among new and potential homebuyers. In fact, survey results indicate that 74 percent of recent or prospective homebuyers believe homebuilders in the state should make rooftop solar electric systems a standard feature.

California is our nation’s leader in the development of clean technologies, renewable energy, and other policies establishing a new direction for energy use.

However to continue our aggressive solar and energy efficiency programs, and to build our green economy, we must work together. The success of our efforts depends on the support and commitment of leaders from all levels of government. Working from the top down, and the bottom up, will bring us to our goals the quickest.

This NSHP Municipal Tool Kit is one of the many ways the Energy Commission is working together with local governments across our state. The Tool Kit contains useful information on the NSHP, and an array of strategies that can be implemented on the local level to bring solar power and energy efficiency to the residents of your community.

Please review the enclosed Municipal Tool Kit and consider partnering with us as we encourage the construction of new, energy efficient solar homes in California. Your participation is the key in demonstrating firsthand the benefits of solar power and energy efficiency.
About the New Solar Homes Partnership
New Solar Homes Partnership

ABOUT THE NEW SOLAR HOMES PARTNERSHIP MUNICIPAL TOOL KIT

WHY THIS TOOL KIT HAS BEEN CREATED
The California Energy Commission, through the NSHP, created the Local Government Outreach Program to provide California municipalities with tools they can use to encourage local home builders to install solar electric photovoltaic (PV) systems on new, highly energy efficient homes. As part of this effort, the Energy Commission created this NSHP Municipal Tool Kit to provide municipalities with ideas and strategies that can be implemented by local jurisdictions to provide further encouragement, in addition to the existing NSHP incentives, for builders to “Go Solar.”

INSIDE THE TOOL KIT
This Tool Kit provides an array of strategies and options that local governments can implement to help encourage solar developments in their region. While some strategies require more resources than others, the Tool Kit provides a variety of options that can be tailored to meet the individual circumstances of each municipality. Some of these suggested strategies include: amending general plans, incentivizing energy efficiency measures and solar installations and educating local home builders about existing solar incentives.

This Tool Kit also contains an array of useful materials provided to support the implementation of the suggested strategies. These materials include: background information on the NSHP; supporting materials on the benefits of combining energy efficiency features with solar energy; suggested local municipal strategies for encouraging solar installation; a builder outreach brochure; a recognition certificate for builders; sample model ordinances; sample text for press materials; and available resources and contact information.

WHO SHOULD USE THIS TOOL KIT
The NSHP Municipal Tool Kit is intended for review and use by a variety of local municipal officials and staff, including local planners, building and safety officials, city managers, city attorneys and elected officials. Additionally, this Tool Kit can be widely distributed, as there are many ways local government can help encourage developers to install solar on new highly energy efficient homes, and opportunities to support this effort can arise in multiple municipal departments.
New Solar Homes Partnership

ABOUT THE NEW SOLAR HOMES PARTNERSHIP MUNICIPAL TOOL KIT

ABOUT THE NEW SOLAR HOMES PARTNERSHIP

A Partnership Interested in YOUR Success

The New Solar Homes Partnership (NSHP) is a component of the California Solar Initiative – a plan which moves the state toward a cleaner energy future and helps lower the cost of solar for builders and consumers.

The partnership provides financial incentives and marketing support to home builders, encouraging the construction of new, energy efficient solar homes that save homeowners money on their electric bills and help protect the environment. The goals of the NSHP are to create a self-sustaining market for solar homes and gain builder commitment to install solar energy systems on new homes as a standard feature for the home buyer. A new home that qualifies for the NSHP is at least 15 percent more efficient than the current building standards. The overall goal of the NSHP is to achieve 400 megawatts of new solar-produced electricity by the end of 2016.

NSHP INCENTIVES

• Direct financial rebates to help offset the cost of the solar installation;
• Marketing support through the statewide NSHP media campaign;
• Use of the California Sun Certified Energy Efficient Home logo in marketing materials;
• Information about and link to each NSHP community on GoSolarCalifornia.org;
• Access to Energy Commission expertise and local utility team support; and
• Access to new home-buyer research.
**About the NSHP Local Government Outreach Program**

The NSHP’s Local Government Outreach Program was established by the Energy Commission to encourage local governments to adopt incentives that help facilitate the integration of solar energy installations into new, energy efficient home developments. The core mission of the program is to develop, distribute, and promote the NSHP’s Municipal Tool Kit, and to further support target municipalities in their efforts to adopt the Tool Kit’s suggested strategies and programs. The program also provides local governments with tools, information, and resources that will aid municipalities in adopting their own energy efficiency and solar home policies and ordinances.

Additionally, the program has established partnerships with environmental, local government, and business organizations to both further distribute the program’s tools, and help build on the belief that stronger local ordinances can bring more energy efficient solar homes to California communities.

**About the California Solar Initiative**

In California, renewable energy is “the natural choice.” Harnessing the earth’s own inexhaustible energy – whether from the sun, wind, geothermal, or other renewable sources – can reduce our dependence on fossil fuels and provide clean, affordable electricity.

As part of California’s efforts to increase renewable energy, in 2006 Governor Schwarzenegger signed Senate Bill 1 (SB1), the Million Solar Roofs Initiative, also known as the California Solar Initiative (CSI), which established three goals: (1) to install 3,000 megawatts (MW), or approximately one million solar roofs, of distributed solar PV capacity in California by the end of 2016; (2) to establish a self-sufficient solar industry in which solar energy systems are a viable mainstream option in ten years; and, (3) to place solar energy systems on 50 percent of new homes within 13 years. This effort is a bold step forward in moving the state toward a cleaner energy future and lowering the cost of solar energy systems for consumers.

With a ten-year commitment for solar incentives, and under legislative direction, California aims to build a self-sustaining solar industry with lower overall costs to consumers.

Governor Schwarzenegger also signed Assembly Bill 1470 (Huffman, 2007) that creates the Solar Water Heating and Efficiency Act of 2007. This bill gives the California Public Utilities Commission (CPUC) authority to create a $250 million program with the goal to install 200,000 solar water heating systems throughout California.
ABOUT THE CALIFORNIA ENERGY COMMISSION

Created by the Legislature in 1974, the California Energy Commission is the state’s primary energy policy and planning agency. The Energy Commission has six major responsibilities: forecasting future energy needs and keeping historical energy data; licensing thermal power plants 50 MW or larger; promoting energy efficiency through appliance and building standards; developing energy technologies and supporting renewable energy; conducting research, development and commercialization programs for new energy technologies; and planning for and directing the state’s response to an energy emergency.

CALIFORNIA: AN ENERGY POWERHOUSE

California is the world’s fifth largest consumer of energy, and ranks second in gasoline consumption behind only the whole United States. Today, California is a world leader in electricity created by renewable energy sources. The renewable energy industry can be credited with providing 30,000 jobs and generating $2 billion in tax revenues for the state. Directing how our state uses its energy has been the purpose of the Energy Commission for more than a quarter of a century.
What is an Energy Efficient Solar Home?

In California’s New Solar Homes Partnership, a solar home is a highly energy efficient home that uses photovoltaic (PV) solar energy modules to generate electricity from the sun. While the science to convert sunlight directly into electricity and solar thermal to generate hot water from the sun has been around for decades, in recent years both the technology and economics have improved for solar energy systems, and now these systems are becoming mainstream. Combining the energy production potential of solar with energy efficiency technologies allows homeowners to get more out of their solar power, saving them more money while reducing their carbon footprint.

Good for the Bottom line

Get paid for energy efficiency – Homes from builders participating in the NSHP are at least 15 percent more efficient than current state building standards, and builders are encouraged to achieve 30 percent greater efficiency.* California’s utilities may offer additional incentives to meet these efficiency levels. Moreover, if a particular PV system generates more electricity than the home needs in that moment, the utility company credits the homeowner’s account through a program called “Net Metering.”

Protect against rising energy costs – Energy efficiency and solar energy give homeowners more energy independence because they are better protected against rising energy costs. Solar homes generate power when electricity is the most expensive.

Further, solar homeowners can be assured that their solar system works because they are backed with a 10-year system warranty. A solar home with high energy efficiency features offers homeowners:

- Clean, renewable energy;
- Utility bill savings; and
- Protection against rising electricity costs in the future.

Earn tax credits – Solar homes also qualify for a federal income tax credit of up to 30 percent of the system’s cost through 2016. Energy efficiency measures may qualify the home for an additional $2,000 in federal tax credits. Learn more about these tax credits by visiting www.energystar.gov/taxcredits.

Good for the Environment – Best of all, buying an energy efficient solar home is one of the most significant personal actions one can take to cut air pollution and greenhouse gas emissions. PV systems not only help conserve precious energy resources for future generations, but also reduce California’s need to construct costly new power plants.

* Amended guidelines for Senate Bill 1 (Murray) were adopted at the December 3, 2008 Energy Commission Business Meeting. One of the key revisions will update the energy efficiency requirements for newly constructed buildings by defining the Tier I and Tier II levels. This will reflect the adopted 2008 Title 24 (Part 6) Building Energy Efficiency Standards for building permits submitted on or after January 1, 2010.
Local Strategies for Encouraging Solar Power
There are many ways local governments can help encourage home builders to build energy efficient solar homes. The following section highlights some of the most common and most effective strategies used by local governments, as well as some case studies documenting how other California jurisdictions have used these strategies successfully.

**STRATEGY ONE: General Plan Amendment Options**

While California’s energy efficiency and building code standards have helped the state achieve substantial energy and economic savings since they were adopted, they represent only a baseline standard for the state, and can be amended to meet additional local standards that go beyond state standards. Should the opportunity arise to make modifications to your general plan, consider adding some language that displays your jurisdiction’s commitment to building energy efficient solar homes. The following are examples of clauses that might be integrated into your municipality’s general plan language:

- The City/County shall adopt new building efficiency practices for commercial, industrial, and residential buildings to reduce energy consumption and promote the integration of alternative energy technologies.

- If the City/County finds that energy efficiency and alternative energy technologies (in addition to those required by the state) are cost effective for a proposed development, the City/County shall recommend such measures be integrated into the development.

- The City/County shall offer advice and technical assistance to developers of new projects on alternative energy technologies and strategies for maximizing the cost effectiveness of such technologies.

**SUGGESTED FIRST STEP:** Consider using the included model resolution available in the Implementation Support and Resources section below, to adopt the California Energy Commission’s NSHP Municipal Tool Kit as a city reference document.

- Within one year, the City/County shall implement one of the proposed incentives or programs suggested in the NSHP’s Municipal Tool Kit.

To learn more about the process of getting your local energy efficiency standards approved by the Energy Commission, or to view local ordinances from cities across the state which have adopted building codes and standards that exceed the 2005 Building Energy Efficiency Standards, visit [www.energy.ca.gov/title24/](http://www.energy.ca.gov/title24/).

"It would be great to receive local support in the form of financial incentives, entitlement and/or permit expediting. If more municipalities would join forces with the building community and work with us to streamline the process of delivering greener homes, more builders would adopt high performance housing and green building technologies."

— Mark Fischer, CFO/Senior Vice President Grupe Homes
**STRATEGY TWO: Outreach & Education Options**

There are many ways local governments can encourage the integration of solar technologies into new home developments through outreach, communication, and education programs. These programs can be relatively inexpensive to implement, and can help increase awareness among local home builders of state and local incentives, as well as the environmental and economic benefits of solar and energy efficiency technologies.

The following section provides an assortment of different outreach and education programs which might be helpful to your community.

**COMMUNITY SOLAR EDUCATION**

Educating your community about the economic and environmental benefits of installing solar energy systems can help increase the consumer demand for such systems in your region. Education efforts should be focused on topics and issues such as the availability of state and federal incentives, the components of the permitting process, the beneficial environmental aspects, and the economic benefits (e.g., average costs, utility bill savings, calculating pay-back periods, etc.).

**Potential components of a Community Solar Education Program:**

- Print and provide a reference copy of the California Energy Commission’s “New Solar Homes Partnership Guidebook.” Display this document in or around the planning desk. You can view and download the New Solar Homes Partnership Guidebook, and other key NHSP documents here: [www.gosolarcalifornia.org/builders/index.html](http://www.gosolarcalifornia.org/builders/index.html).

- Print and provide copies of the “California Solar Initiative Consumer Guide.” Display copies for the community at the planning desk, and put a link to the document on your community’s website. You can view and download the CSI Consumer Guide, and other key CSI documents here: [www.gosolarcalifornia.org/documents/csi.html](http://www.gosolarcalifornia.org/documents/csi.html).

- Create a new sub-page on your community website to provide builders and homeowners with information and resources about energy efficiency, solar technologies and green buildings.

- Hold a “Solar Education Month,” during which the city hosts informal workshops and seminars on the benefits, uses and applications of solar energy. Ask staff to promote the month by announcing it on their email signature.
New Solar Homes Partnership

TECHNICAL & RESOURCE ASSISTANCE

Beyond providing general information on the environmental and economic benefits of solar, your community can benefit greatly from having access to technical assistance, reports, guidebooks, and resources concerning solar energy systems. This type of program can be implemented by providing builders with access to a solar and energy efficiency expert or liaison, by posting information and technical materials on the agency’s website, or simply by providing a brochure in the agency’s office.

Potential components of a Technical & Resource Assistance Program:

- Hold a “Go Solar” Workshop, and invite a local solar provider to present to local builders and community members on the process of integrating solar into the design and construction of new homes.

- Provide technical resources and documents for reference by home builders in your community at the planning desk or local library.

- Hire or select a member of the municipal staff to act as a “Renewable Energy Liaison,” who will be responsible for fielding inquiries and questions concerning energy efficient solar homes and incentives.


SOLAR BUILDER RECOGNITION PROGRAM

Recognition of a builder’s efforts to build environmentally responsible, energy efficient solar homes can provide a strong incentive to builders seeking to enhance a particular development’s image, appeal or visibility. Recognition can be achieved by acknowledging the builder’s efforts in newsletters, providing the builder with a plaque or certificate, or recognizing the builder’s efforts at a public meeting.

Potential components of a Solar Builder Recognition program:

- Print and provide a reference copy of the “NSHP Builder Outreach Kit” for home builders in your community. Display this document in or around the planning desk.

- Provide solar home builders in your community with a plaque or certificate recognizing them for their efforts in building more efficient and environmentally responsible homes in your community.

- Announce and recognize builders who integrate energy efficiency and solar technologies into new home developments via a community newsletter or website.

- Recommend that the City Council present a “Resolution of Recommendation” to home builders who build energy-efficient solar homes in your community.
**CASE STUDY: City of San Jose**

The City of San Jose has implemented an array of outreach and education strategies tailored towards encouraging the use of green building techniques, including the integration of solar energy technologies. The city’s outreach and education program integrates the following strategies:

- **Web Presence:** A dedicated micro-website on the city’s website with an array of resources on building green and energy efficient homes.

- **Brochure:** Two brochures with green building tips and links to additional resources for green building information. One brochure tailored to builders, and one brochure tailored to home owners.

- **E-mail Outreach:** A “green building” email list, to quickly and simply distribute new resources and announce relevant seminars or workshops.

- **Workshops:** Educational programs/workshops on an array of green building and energy efficiency issues. These programs are open to all residents.

- **Learn More:** You can learn more about the City of San Jose’s outreach and education program here: [www.sanjoseca.gov/esd/natural-energy-resources/greenbuilding.htm](http://www.sanjoseca.gov/esd/natural-energy-resources/greenbuilding.htm).

As cities, we need to do what we can to promote green practices in our communities and help implement the latest innovations that have come from the Clean Tech industry.

Through our Green Vision, San Jose is committed to building or retrofitting 50 million square feet of green buildings in our community over the next 15 years. With aggressive Green Building Policies, we have shown that environmentally friendly practices can make both social and financial sense.

— San Jose Mayor Chuck Reed
**New Solar Homes Partnership**

**STRATEGY THREE: INCENTIVE & REBATE OPTIONS**

**STRATEGY THREE: Incentive & Rebate Options**

While the NSHP offers builders many financial and non-financial incentives for building energy efficient solar homes, additional incentives provided by local governments can often times play an even more significant role in encouraging builders. In addition to making the development process quicker and less costly, local incentives help builders recognize the interest and expectations of the local community in assuring that new homes are energy efficient and equipped with solar.

**PERMIT STREAMLINING & PRIORITY FIELD INSPECTIONS**

Speeding up a development’s permitting process, or even providing guaranteed permitting or inspection timelines are additional strategies available to incentivize the integration of solar and energy efficiency features into a project. While builders may not gain any direct financial benefits from these programs, the indirect financial benefits of bringing a development to completion quicker, and the ability for the developer to move on to the next project sooner, can be significant.

**SUGGESTED FIRST STEP:** Consider implementing a “Solar Permitting Fee Holiday,” whereby fees for permitting solar energy systems are waived for a six to 12 month period. Then, after assessing the interest from the community, consider reducing the permitting fee for a longer period.

**PERMIT FEE REDUCTIONS/WAIVERS**

To help incentivize the inclusion of energy efficiency and solar energy features in new homes, municipalities can provide home builders with permitting fee waivers or reductions for energy efficient solar homes. While fee reductions technically can be applied to any of the multiple permits required for new construction, most jurisdictions already employing this tactic apply the incentive directly to the cost of obtaining a solar installation permit.

**DEVELOPMENT BonUSES**

Density bonus ordinances are commonly used to allow developers to increase the number of units or square footage allowed on a piece of property if they agree to include certain amenities or features into a development. Density bonuses have historically been used to promote low income housing; however, they are increasingly being used to incentivize green building amenities.
CASE STUDY: SAN DIEGO COUNTY’S GREEN BUILDING INCENTIVE PROGRAM

San Diego County’s Green Building Incentive Program provides builders with a host of incentives for building energy efficient solar homes. Most directly, the county has a Photovoltaic (PV) System Incentive Program which provides for fee waivers for the building permit and plan check of residential PV systems. The county offers additional incentives for “green buildings,” including:

- **Permit Streamlining:** Expedited plan checks for builders who integrate solar and other energy efficiency features into new and remodeled residential and commercial building.

- **Fee Waiver:** Reduced building permit fees and plan check fees.

- **Learn More:** You can learn more about the County of San Diego’s outreach and education program here: [www.sdcounty.ca.gov/dplu/greenbuildings.html](http://www.sdcounty.ca.gov/dplu/greenbuildings.html).
CASE STUDY: COUNTY OF SAN BERNARDINO

Green County San Bernardino is a voluntary green building program aimed at encouraging residents, builders, and businesses to adopt more sustainable development practices. As part of the program, builders that build homes to meet the California Green Builder Standard are provided with an array of incentives, including:

- **Fee Waiver**: Permit fee waivers for the installation of solar systems.

- **Permit Streamlining**: Expedited plan checks, guaranteed timelines, priority field inspection services, incentives for improving energy use.

- **Priority Field Inspection Service**: If a shortage of available building inspectors for the daily work is experienced, priority is given to service the most critical inspection needs of the Green Building projects.

- **Guaranteed Timelines**: First plan check is guaranteed to occur within 30 working days of a complete submittal and all subsequent plan checks occur within 14 working days. All inspections are guaranteed to be provided on the following work day after the request is received.

- **County Recognition**: The green home or green community is featured on Green County San Bernardino’s website, and a county supervisor awards a certificate of recognition to the green builder based on the project’s district location.

- **Learn More**: You can learn more about the County of San Bernadino’s Green County outreach and education program here: [www.sbcounty.gov/greencountysb/builders/green_builder_program.htm](http://www.sbcounty.gov/greencountysb/builders/green_builder_program.htm).

The widely successful Green County program has helped spur the use of green technologies and building practices among residents, business owners and developers in San Bernardino County. By supporting green building practices, renewable energy, and other efforts, we are setting the course for sustainability and paving the way for responsible growth in our County.

— San Bernardino County Supervisor Paul Biane
**Strategy Four: Solar Energy Financing District**

An emerging strategy used by local governments to promote the integration of solar installations has been to provide residents with special loan opportunities to pay for the upfront costs of energy efficiency and solar energy system improvements. Essentially, the city or county provides the interested homeowner with a loan to pay for the upfront costs of purchasing and installing solar, and in return, the homeowners pay the loan back over 20 years as part of their property taxes.

**About AB 811**

The financing authorized by California State Assembly Bill 811 allows local agencies to enter into contractual assessments with private property owners to finance the installation of distributed generation renewable energy sources and energy efficiency improvements that are permanently fixed to real property. In terms of solar, AB 811 allows cities and counties to make a loan to property owners for the purchase and installation of solar energy systems on their property. Property owners then repay the loan through a contractual assessment on their property which is collected in concurrence with their property tax payments. If the home is ever sold, the loan then passes with the ownership of the home. By removing upfront cost barriers, this bill offers a unique opportunity to broadly increase the purchase and installation of distributed-generation renewable energy or energy efficiency improvements, and spur economic activity.

**Suggested First Steps:** Review and recommend the adoption of the attached resolution initiating the establishment of a city-wide Solar Energy Financing District.
Here are some of AB 811’s Key Requirements

• Public notice;

• A map showing the boundaries of the territory within which contractual assessments are proposed to be offered;

• A draft contract specifying the terms and conditions that would be agreed to by a property owner and the city;

• A statement of city policies concerning contractual assessments including all of the following:

  1. Identification of types of facilities, distributed generation renewable energy source, or energy efficiency improvements that may be financed through the use of contractual assessments;

  2. Identification of a city official authorized to enter into contractual assessment on behalf of the city;

  3. A maximum aggregate dollar amount of contractual assessments; and

  4. A method for setting requests from property owners for financing through contractual assessments in priority order in the event that requests appear likely to exceed the authorization amount.

• A plan for raising a capital amount required to pay for work performed pursuant to contractual assessments, including a statement of or method for determining the interest rate and time period during which contracting property owners would pay any assessment; whether the city will provide for any reserve funds or funds; and the apportionment of all or any portion of the costs incidental to financing, administration, and collection of the contractual assessment program the consenting property owners and the city; and

• A report on the results of the consultations with the county auditor-controller’s office regarding the additional fees that will be charged to the city for incorporating the proposed contractual assessments into the assessments of general taxes of the city on real property, and a plan for financing the payment of those fees.
CASE STUDY: City of Palm Desert

As part of the City of Palm Desert’s effort to reduce electric and natural gas energy consumption by 30 percent, the city established its Energy Independence Program. The main component of the program is a low interest loan program, which the city provides to homeowners for permanently fixed renewable energy and energy efficiency improvements on their property.

The loan is then paid back to the city as part of the homeowner’s standard tax bills, and requires no credit checks or other qualifications other than a property title to qualify.

“During the summer months, when temperatures regularly reach more than 100 degrees, Palm Desert residents can pay more than $1,000 a month for electricity. Our Energy Independence Program has empowered our residents to explore renewable energy sources and make meaningful changes for the environment as well as their own finances. It is far more inexpensive to save electricity than it is to buy it or produce it; this is something that elected officials, regulators and consumers have all begun to realize. We are on our way to making California energy independent.”

— City of Palm Desert Councilman Jim Ferguson

• Learn More: You can learn more about the City of Palm Desert’s Energy Independence Program here: www.cityofpalmdesert.org/Index.aspx?page=484.
**Strategy Five:** Local Green Building Program

Many local governments all around California have implemented ordinances mandating or recommending “Green Building” standards in new construction. These measures can increase energy efficiency, reduce greenhouse gas emissions, and decrease other harmful environmental impacts.

Green Building Programs generally consist of mandatory or recommended building requirements mixed with an assortment of incentive, education, and recognition programs (as outlined above). These programs generally attempt to persuade or mandate developers to use holistic and interdependent approaches towards integrating environmentally responsible designs and features into new developments. Many programs utilize third party design guidelines, such as Green Points, the US Green Building Council’s LEED or the National Association of Home Builder’s National Green Building Program.

A Vehicle for Promoting Solar Power and Energy Efficiency

Most Green Building Programs are relatively broad in scope, and focus on more than renewable and energy efficiency technologies alone. Still, they provide an important vehicle for encouraging solar power, and they are often heavily weighted to focus on energy efficiency and alternative energy technologies.

The California Green Building Standards Code, for example, is specifically designed to operate in conjunction with the NSHP by recommending that buildings meet the NSHP’s energy efficiency requirement, which is 15 percent more energy efficient than Title 24 requirements.

Green Building Programs often work best at encouraging developers to meet or exceed the standard building codes when paired with an incentive. While there are many different types of incentives that can be used, cities commonly use incentives in the form of rebates or reimbursements, or preferential treatment such as expedited permit review, expedited inspections, or even permit variances such as increased floor-area-ratio or unit density.

To learn more about the process of getting your local energy efficiency standards approved by the Energy Commission, or to view local ordinances from cities across the state which have adopted building codes and standards that exceed the 2005 Building Energy Efficiency Standards, visit www.energy.ca.gov/title24/2005standards/ordinances_exceeding_2005_building_standards.html.
CASE STUDY: CITY OF SAN RAFAEL

The City of San Rafael in Northern California requires all new home developments and major additions to achieve at least 60 points on the Green Points rating system. Further, new single-family homes which exceed 3,500 square feet of conditioned space must meet Title 24 energy efficiency requirements under the California Building Code for a home equal to 3,500 square feet. This means that the larger the home, the greater the energy efficiency requirements.

The city also provides a number of incentives for green projects as well. For residential projects that achieve at least 100 “Green Points,” the city provides:

- **Permit Streamlining**: Expedited building permit plan check.
- **Certification Rebate**: Reimbursement for the cost of the Green Point Rater services.
- **Recognition**: City provides a plaque signifying the project has met the city’s Green Building requirements, and lists the green projects on the city’s web site.
- **Marketing**: City provides builders with a City Green Building logo for use on construction signage.
- **Promotions**: Lists green building on the city’s website.

**Learn More**: You can learn more about the City of San Rafael’s Green Building Programs here: www.cityofsanrafael.org/Government/Community_Development/Planning/Green_Building.htm.

“There has been great support for this program among residents, contractors and architects. The Green Point Rated program with the use of third party raters makes implementation very easy for smaller jurisdictions.”

— City of San Rafael Community Development Director Bob Brown
There are many Green Building Standards available for local jurisdictions to adopt for a variety of purposes.

**Leadership in Energy and Environmental Design (LEED)**

[Website](http://www.usgbc.org)

**California Green Building Standards Code (Recommended)**

[Website](http://www.bsc.ca.gov)

For a comprehensive review of green building standards and incentives adopted by California cities and counties, see the Attorney General’s report, entitled *Local Government Green Building Ordinances in California*:

California Air Resources Board Tool Kit to Achieve Green House Gas Emission Reductions

The Air Resources Board in partnership with other state government agencies, universities and nonprofit organizations created the Local Government Toolkit as a one stop shop to help cities and counties save money and protect the climate. Available through CoolCalifornia.org, the purpose of the toolkit is to identify cost saving actions, financial resources, and case studies to assist local governments with achieving greenhouse gas emission reductions. The kit can be downloaded for free at any time here: www.coolcalifornia.org/local-government.

U.S. Department of Energy Tool Kit to Build Sustainable Local Solar Markets

The U.S. Department of Energy developed Solar Powering Your Community: A Guide for Local Governments, as a resource to assist local governments and stakeholders in building sustainable local solar markets. The guide introduces a range of policy and program options that have been successfully field tested in cities around the country. This comprehensive guide is the result of research on best practices gathered from 25 Solar America Cities and other leading solar communities. The guide is intended to provide local governments across the U.S. the information necessary to accelerate solar energy adoption. Access the guide at: www.solaramericacities.energy.gov/GuideForLocalGovernments.aspx.
Implementation Support
**New Solar Homes Partnership**

**IMPLEMENTATION SUPPORT AND RESOURCES**

**GETTING STARTED**

The NSHP Municipal Tool Kit was developed to help you and your city or county provide benefits for your residents by encouraging local home builders and developers to install solar electric photovoltaic systems on new energy efficient homes.

The Tool Kit contains many different strategies and options. There are also many different ways to use the Tool Kit. Here are some ideas on how to get started.

**SHARE THE TOOL KIT:** After reviewing the NSHP Municipal Tool Kit, consider who else in your jurisdiction should read it. Forward the Tool Kit to your colleagues and community leaders. Ask for reactions.

**BEGIN A PRELIMINARY DIALOGUE:** After reviewing the NSHP Municipal Tool Kit, consider holding a meeting with your colleagues to discuss the Tool Kit and which ideas could work in your city or county. Consider including elected officials, appointed city officials such as members of your planning committee or commission, and other community leaders.

**CONDUCT A WORKSHOP:** Prior to a council meeting, consider holding a workshop for your council members. Present an overview of the Tool Kit and allow your city council to discuss the content.

**ADOPT A RESOLUTION ASKING FOR STAFF RECOMMENDATIONS:** Introduce a council resolution that instructs city staff to review the NSHP Municipal Tool Kit and report back to the city council with recommendations on which strategies might best suit your jurisdiction. A sample resolution is contained in the appendix.

**CONTACT OTHER CITIES:** The Tool Kit includes case studies with contact information that describe how other cities have taken on this issue. Connect with the contacts to learn more about their activities to get their advice on how you should proceed.

**GET HELP FROM PARTNERS:** There are many government and non-profit organizations in California that are eager to help local government with strategies and options like those recommended in the Tool Kit. A list of potential partners is provided. They are familiar with the NSHP Municipal Tool Kit and are ready to work to you to help you achieve your community’s goals.
Beyond Photovoltaics
Photovoltaics work best when they are used on energy efficient homes. When used in combination with other renewable and energy efficiency technologies, home owners can substantially reduce their environmental footprint and utility bills. In addition to supporting the integration of electricity producing photovoltaics onto new homes, the Energy Commission is actively working to support other renewable technologies and energy saving development strategies. Here are some of the other programs:

Solar Water Heating
In California’s mildest climates water heating energy use may equal the combined energy needed for space heating and space cooling. A solar water heating system can contribute 30 to 80 percent of the energy needed for residential water heating (depending on the design of the solar water heating system). The contribution of a solar water heating system can be claimed as credit toward compliance with the Title 24 Building Energy Efficiency Standards and also for qualification for the New Solar Homes Partnership or other incentives programs that require specified savings beyond the standards. You can learn more about solar water heating here: www.gosolarcalifornia.org/builders/solar_water_heating.html.

Passive Solar Design
Homes constructed as passive solar design use the natural movement of heat and air to maintain comfortable temperatures, operating with little or no mechanical assistance. It’s called passive solar because the design of the home maximizes the benefits it receives from the sun with standard construction features. Passive solar takes advantage of local breezes and landscape features such as shade trees and windbreaks, and uses a simple system to collect and store solar energy with no switches or controls. You can learn more about passive solar design here: www.consumerenergycenter.org/home/construction/solardesign/index.html.

Small Wind
Small wind turbines can be used to generate electricity for a home or small business. The Energy Commission’s Emerging Renewables Program provides rebates to consumers who install qualifying renewable energy systems (small wind systems under 50kw and fuel cell systems using renewable energy sources) on their property. Your financial incentive may vary according to the system size, technology, and installation method. You can learn more about small wind and the small wind rebate program here: www.consumerenergycenter.org/renewables/wind/home-systems.html.
Cool Roofs
Cool Roofs are roofs consisting of materials that very effectively reflect the sun’s energy away from the roof surface. Cool Roof materials for low-slope roofs are mainly bright white in color, although non-white colors are starting to become available for sloped roof applications. Cool Roofs must also have high emissivity, allowing them to emit infrared energy. Cool Roofs reduce the roof surface temperature by up to 100 degrees Fahrenheit, thereby reducing the heat transferred into the building below. This helps to reduce energy costs (by keeping attics and ducts cooler), improve occupant comfort, cut maintenance costs, increase the life cycle of the roof, and reduce urban heat islands along with associated smog.

You can learn more about Cool Roofs here: www.consumerenergycenter.org/coolroof/.
Model Ordinances & Resolutions
The following section includes the model ordinances and resolution referenced above in the “Strategies” Section. Please review them, and consider using the text as is, or in a modified form, to pass similar ordinances in your jurisdiction.

Model Ordinance #1 – Fee Waiver for Residential Solar Installations

ORDINANCE NO. _______

AN ORDINANCE OF THE CITY OF ________________, TEMPORARILY SUSPENDING RESIDENTIAL SOLAR ENERGY SYSTEM PERMIT FEES AS FOUND IN _________ OF THE __________ MUNICIPAL CODE.

The City Council of the City of _______ does ordain as follows:

SECTION 1. PURPOSE. The purpose of this ordinance is to suspend for the 2009 – 2012 calendar years those provisions of _________of the City of ____________ Municipal Code related to residential photovoltaic and solar thermal system permit fees.

SECTION 2. SUSPENSION All provisions related to residential photovoltaic and thermal solar system permit fees found in _________ are suspended for the 2009 – 2012 calendar years.

SECTION 3. SEVERABILITY If any section, subdivision, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall not be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

SECTION 4. EFFECTIVE DATE AND NOTICE. This ordinance shall take effect thirty (30) days after its adoption. Within fifteen (15) days of its adoption, this ordinance shall be published at least once in a newspaper of general circulation published and circulated in the City of ________________.

PASSED AND ADOPTED by the City Council of the _________ this ___ day of ____ 20__ by the following roll call vote:

AYES: _____________ NOES: _____________ ABSENT: _____________ ABSTAIN: _____________

___________________________________ (Name), Mayor

ATTEST: ___________________________

(Name), City Clerk
Model Ordinance #2 – Solar Energy Education Program

ORDINANCE NO. ________

AN ORDINANCE OF THE CITY OF ________________, DIRECTING COMMUNITY DEVELOPMENT DEPARTMENT TO DEVELOP AND MAINTAIN A BUILDERS EDUCATION PROGRAM ON SOLAR ENERGY.

The City Council of the City of _________, does ordain as follows:

SECTION 1. PURPOSE

The purpose of this ordinance is to direct _____________ to adopt an education program to inform local builders and developers on the benefits and incentives associated with integrating solar energy technologies into new residential developments. The program shall be maintained through the 2009 – 2012 calendar years, and shall seek to encourage local builders and developers to install photovoltaic and solar thermal energy systems on new developments.

SECTION 2. DESIGNATION OF RESPONSIBILITY

The program shall be administered by the City of _________’s __________ department, which shall be responsible for:

1. Designing and selecting the appropriate education activities, strategies and promotional materials;
2. Marketing the program to the community by any reasonably effective means, including but not limited to; press releases, television advertising, or advertising in electronic or print mailers;
3. Writing policies and procedures for staff implementation of the Solar Outreach and Education program.

SECTION 3: COMPONENTS OF OUTREACH AND TRAINING PROGRAM

The _________ department shall be responsible for performing the following activities:

(a) Workshops: Conduct at least one training and information workshop per year for the purpose of educating potential program participants about solar energy installations, technologies, and the benefits of building energy efficient solar homes.

(b) Public Education: Provide educational and training materials which help inform developers and the community about the benefits of photovoltaic and solar thermal technologies, and incentive programs available to help curb the costs associated with installation. Distribute these materials by utilizing all of the following avenues: (1) dedicated page on the city’s website; (2) providing informational brochures at the Building and Safety and Planning Desks (such as the NSHP builder outreach brochure); and, (3) highlighting photovoltaic technologies in the city newsletter.

(c) Recognition: Recognize developers/builders who install photovoltaic or solar thermal energy systems in new home developments by performing the following: (1) recognizing the developer/builder in the city newsletter and website; and, (2) presenting the developer/builder a “Go Solar California Excellence in Solar Construction” certificate of recognition during council meetings.

PASSED AND ADOPTED by the City Council of the _________ this ___ day of ____ 20__ by the following roll call vote:

AYES: _____________  NOES: _____________  ABSENT: _____________  ABSTAIN: _____________

___________________________________
(Name), Mayor

ATTEST: _____________________________
(Name), City Clerk

SECTION 3. SEVERABILITY

If any section, subdivision, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall not be deemed a separate, district and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

SECTION 4. EFFECTIVE DATE AND NOTICE

This ordinance shall take effect sixty (60) days after its adoption. Within fifteen (15) days of its adoption, this ordinance shall be published at least once in a newspaper of general circulation published and circulated in the City of _____________.

GoSolarCalifornia.org
Model Resolution #1 – Tool Kit Adoption

RESOLUTION NO.________

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ________________ ADOPTING THE CALIFORNIA ENERGY COMMISSION’S NEW SOLAR HOMES PARTNERSHIP’S (NSHP) MUNICIPAL TOOLKIT AS A CITY REFERENCE DOCUMENT.

WHEREAS, the City of ___________’s General Plan sets forth goals for preserving and improving the City’s natural and built environment, protecting the health of its residents and visitors, and fostering its economy; and

WHEREAS, energy efficiency, solar thermal, and photovoltaic installations provide homeowners with reliable and clean energy, which helps homeowners benefit financially, while reducing greenhouse gas emissions and local reliance on imported energy; and

WHEREAS, encouraging the adoption of energy efficiency, solar thermal, and photovoltaic systems will help create green-collar jobs both locally and regionally, and will help make these technologies less expensive and more accessible by supporting the solar energy industries globally; and

WHEREAS, the State of California’s Solar Initiative has made it a statewide goal of achieving the development of 3000 megawatts of new solar produced electricity by 2016; and

WHEREAS, under this initiative, the California Energy Commission’s New Solar Homes Partnership has developed a Municipal Tool Kit designed specifically to support local governments in adopting strategies which encourage energy efficiency, solar thermal, and photovoltaic installations on new homes; and

WHEREAS, a number of cities and counties throughout California have adopted similar strategies; and

WHEREAS, the adoption of the California Energy Commission’s NSHP Municipal Tool Kit as a reference document would not constitute a “project” within the meaning of the California Environmental Quality Act (“CEQA”); and

NOW THEREFORE, BE IT RESOLVED, that private residential developers should be encouraged to install energy efficiency, solar thermal, and photovoltaic systems in their new home developments whenever feasible; and

NOW THEREFORE, BE IT FURTHER RESOLVED, that the City Council of the City of __________ adopts the California Energy Commission’s NSHP Municipal Tool Kit, as they may be amended from time to time, as a City reference document and directs City staff to explore incentives to encourage developers of new residential develop to include energy efficiency, solar thermal, and photovoltaic systems in the construction projects within the City.

ADOPTED BY THE FOLLOWING VOTE:

AYES: ______________ NOES: ___________

ABSENT: ______________
Model Resolution #2 – Solar Energy Financing District

RESOLUTION NO._______

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ____________ DIRECTING THE CITY MANAGER TO PROCEED WITH ESTABLISHING A CITY-WIDE SOLAR ENERGY FINANCING DISTRICT

RESOLVED, by the City Council (the “Council”) of the City of ____________ (the “City”), State of California that

WHEREAS, the City of ____________ ’s General Plan sets forth goals for preserving and improving the City’s natural and built environment, protecting the health of its residents and visitors, and fostering its economy; and

WHEREAS, energy efficiency, solar thermal, and photovoltaic technologies provide homeowners with reliable and clean energy, which helps homeowners benefit financially, while reducing greenhouse gas emissions and local reliance on imported energy; and

WHEREAS, the State of California’s California Solar Initiative has made it a statewide goal of achieving the development of 3000 megawatts of new solar produced electricity by 2016; and

WHEREAS, the Mello-Roos Community Facilities Act of 1982 authorizes local agencies to establish a special tax district and to act as a legislative body for a special tax district; and

WHEREAS, the California State Assembly Bill 811 became effective on July 21, 2008, allowing local agencies to enter into contractual assessments with private property owners in order to finance renewable energy improvements; and

WHEREAS, other cities in the State of California have successfully created Sustainable Energy Financing Districts which encourage their residents to install solar energy improvements; and

WHEREAS, the California Energy Commission has provided the City with extensive background materials on the benefits and process of establishing a Sustainable Energy Financing District in their New Solar Homes Municipal Tool Kit; and

WHEREAS, the Council desires to establish a similar Sustainable Energy Financing District in the City of ________________.

NOW THEREFORE, BE IT RESOLVED, that the City of ____________ shall begin the process of investigating opportunities to establish a Solar Energy Financing District; and

NOW THEREFORE, BE IT FURTHER RESOLVED, that the Council of the City of ____________ directs the City Manager to proceed with the establishment of a city-wide special Solar Energy Tax District in order to finance and refinance the acquisition, installation of solar energy installations to or on real property and in buildings, whether such real property or buildings are privately or publicly owned.

NOW THEREFORE, BE IT FURTHER RESOLVED, that the City Manager shall prepare a Resolution of Intention to Establish a Solar Energy Financing District and deliver it to the Council for vote.

ADOPTED BY THE FOLLOWING VOTE:
AYES: ____________ NOES: ____________ ABSENT: ____________
New Solar Homes Partnership

CUSTOMIZED NSHP BUILDER OUTREACH BROCHURE AVAILABLE FOR DOWNLOAD

Tri-fold Brochure Interior

Tri-fold Brochure Exterior
Sample Builder Recognition Press Release

For Immediate Release: Month Date, 2009
Media Contact: First Last, Your Dept. – xxx-xxx-xxxx
First Last, California Energy
Commission - 916-654-4989

[Builder] Extends [City Name]’s Commitment to Go Solar with New
[Community Name] Community.[City Name] Applauds [Builder] for
Joining Its Effort to Make New, Energy-Efficient, Solar Homes Available to Its Residents

Your City, California – The City of [Name] today recognized [Builder] and the New Solar Homes Partnership (NSHP) for helping [city] take an important step in its commitment to greener building and harnessing the sun’s energy to power new buildings throughout the city. Upon completion, [Builder]’s [Community Name] will add [#] new, energy efficient solar homes with approximately [x] megawatts of solar capacity to the area. [Community name] is slated to open on [date].

“We’re pleased that [builder], with support from the New Solar Homes Partnership, is making it possible for our residents to take advantage of our most abundant natural resource,” said [Elected official X]. “The new [Name] community represents an important step in [City]’s commitment to green building practices and preserving our natural resources.”

Already, the city…[Paragraph about the city’s solar efforts/incentives/network of residential, commercial and municipally-owned solar systems and/or green buildings.]

[Builder]’s [name of community] is part of the California Energy Commission’s New Solar Homes Partnership and will feature [include energy efficiency level, solar specs and any other green/energy efficient features]. It will also offer [city] homeowners the chance to save up to 60 percent on their utility bill and help reduce their home’s carbon footprint.

[Builder] will break ground in [Month Year] on [community name].

[Insert quote from builder representative about why they chose the city as location.]

“Together the NSHP [builder], and City of [X] are helping move California closer to its goal of creating a self-sustaining market for solar homes,” said California Energy Commission Chairman Karen Douglas. “The program’s success is dependent on partnerships like the one between [City] and [Builder] who recognize the benefits of offering solar energy systems on new homes as a standard feature for the home buyer.”

About [Builder]
[Insert brief paragraph here.]

About the New Solar Homes Partnership
Launched in January 2007, the New Solar Homes Partnership (NSHP) is a component of the California Solar Initiative, signed into law in 2006 under Senate Bill 1 (Murray) to implement Governor Schwarzenegger’s $3.3 billion, Million Solar Roofs Program.

The NSHP provides financial incentives and marketing support to home builders, encouraging the construction of new, energy efficient solar homes that save homeowners money on their electric bills and helps protect the environment. The goals of the NSHP are to create a self-sustaining market for solar homes and gain builder commitment to install solar energy systems on new homes as a standard feature for the home buyer. A new home that qualifies for the New Solar Homes Partnership is at least 15 percent more efficient than the current building standards. The overall goal of the NSHP is to achieve 400 megawatts of new solar-produced electricity by the end of 2016.

About [City XX]
[Insert brief paragraph here.]
New Solar Homes Partnership

SOLAR BUILDER RECOGNITION AWARD

Solar Builder Recognition Award

THIS CERTIFICATE IS PRESENTED TO

[SOLAR BUILDER NAME]

FOR INTEGRATING SOLAR INTO THEIR NEW ENERGY EFFICIENT HOMES

CITY OF [INSERT]

Mayor of City X ___________________________ Date

Planning Director of City X ___________________________ Date

GoSolarCalifornia.org
SAMPLE MESSAGING

Whatever strategy or program you decide to use in your jurisdiction, it is important to be vocal and open about your commitment towards encouraging and supporting solar energy. Feel free to use the following text for any of your city materials, including web site, brochures, or newsletters, however you see fit.

SOLAR IS IMPORTANT TO OUR COMMUNITY.

As part of Governor Arnold Schwarzenegger’s $3.3 billion California Solar Initiative, California has set a goal to create 3,000 megawatts of new, solar-produced electricity, while the Solar Water Heating and Efficiency Act of 2007 set a goal to install 200,000 solar water heating systems by the end of 2016 – moving the state toward a cleaner energy future and helping lower the cost of solar electric systems for consumers. We want our community to be a leader in preserving the environment by using fewer natural resources and producing less greenhouse gases than other communities. We are embracing the New Solar Homes Partnership (NSHP) in our community; and we are providing a bevy of resources to facilitate solar installation for new home builders.

OUR LOCAL PROGRAMS ARE IMPORTANT, AND ARE AN IMPORTANT STEP TOWARDS BRINGING RENEWABLE ENERGY TO OUR COMMUNITIES.

Through our effort to protect the environment and the quality of life for our residents, we are encouraging homeowners and developers to build using environmentally sound practices. To support this process, we have established incentive programs, policies, ordinances, and guidelines to promote green sustainable building practices.

THE STATE’S PROGRAMS ARE VALUABLE AND BUILDERS SHOULD USE THEM.

In addition to the local resources we are offering, the NSHP provides financial incentives and other support to builders for installing eligible solar photovoltaic (PV) systems on new residential buildings that receive electricity from investor-owned utilities. Along with the financial incentives, the NSHP will provide non-financial support services, offering marketing and technical assistance to builders, and training to building officials and salespeople. Participating builders report that new solar homes sell twice as fast as their competitors who do not offer energy efficient solar homes to consumers, making this a winning program for the builder, the consumer and our environment.
**Solar Organizations**

2. California Solar Center: www.californiasolarcenter.org
4. California Solar Energy Industries Association:
   www.calseia.org
5. Center for Sustainable Energy, California: www.energycenter.org

**Local Government Resources**

1. ICLEI – Local Governments for Sustainability: www.iclei.org
2. League of California Cities: www.cacities.org
3. California State Association of Counties: www.csac.counties.org
5. National Association of Local Governments Environmental Professionals: www.nalgep.org