

**SANDAG  
(SAN DIEGO ASSOCIATION  
OF GOVERNMENTS)  
SUSTAINABLE REGION  
PROGRAM TOOLKIT**

**CONSULTANT REPORT**

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# TABLE OF CONTENTS

|  |      |
|--|------|
| Executive Summary .....  | 1    |
| Introduction to Sustainable Region Program Steps.....                      | 3    |
| Step 1: Financing a Sustainable Region Program for Local Governments ..... | 5    |
| Step 2: Program Announcement from Agency to Local Government .....         | 9    |
| Step 3: Sustainable Region Program Questionnaire.....                      | 9    |
| Step 4: Guide to Forming an Energy Team .....                              | 9    |
| Step 5: Kickoff Meeting .....  | 11   |
| Step 6: Guide to Municipal Building Energy Assessments.....                | 11   |
| Step 7: Assessment Report Meeting .....                                    | 12   |
| Step 8: Funding Conservation Projects .....                                | 13   |
| Ratepayer Funding Sources .....  | 13   |
| Local Government Funding Sources .....                                     | 16   |
| Step 9: Recommendations Meeting .....                                      | 17   |
| Step 10: New Construction Considerations .....                             | 17   |
| Step 11: Policy Considerations .....                                       | 18   |
| Step 12: Presentation to City Council or Board.....                        | 21   |
| Appendix A: Program Participation Timeline .....                           | A-1  |
| Appendix B: Sustainable Region Program Templates .....                     | B-1  |
| I. Program Announcement from Agency to Local Government.....               | B-2  |
| II. Sustainable Region Program Questionnaire.....                          | B-3  |
| III. Preliminary Assessment Questions.....                                 | B-4  |
| IV. Kickoff Meeting Agenda.....  | B-5  |
| V. Energy Efficiency Opportunity Checklist .....                           | B-7  |
| VI. Energy Conservation Opportunities Table .....                          | B-10 |
| VII. Energy Conservation Opportunities Sample.....                         | B-11 |
| VIII. Sustainable Region Program Assessment Report Meeting Agenda .....    | B-12 |
| IX. Sustainable Region Program Assessment Report Meeting Summary .....     | B-13 |
| X. Recommendations Meeting Agenda.....                                     | B-15 |
| Appendix C: Links to Other Toolkits and Guides.....                        | C-1  |
| Appendix D: SAMPLE Local Government Energy Assessment Report .....         | D-1  |



## Abstract

Energy is a major operating cost for most local governments; it also is a cost that can be reduced through planning and the creation of standard practices. Through lessons learned from the Sustainable Region Program Pilot efforts of 2005 to 2008, SANDAG (San Diego Association of Governments) has developed the *Sustainable Region Program Toolkit* to help public agencies implement their own sustainable region programs with an emphasis on energy assessment tasks. This toolkit contains a template for completing twelve tasks necessary to develop a sustainable region program.

The toolkit is meant to assist local governments that have not completed significant management activities, do not have a full-time energy manager, have minimal current participation in energy efficiency programs, have funds available or have a willingness to finance energy projects, and have the staff capacity to manage projects. The toolkit further explores financing methods and legislation such as Assembly Bill 32, Senate Bill 375, and Assembly Bill 811.

**Keywords:** Energy, planning, toolkit, sustainable, financing, funding, AB 32, SB 375, AB 811, MPO, COG, Metropolitan Planning Organization, Council of Governments, SANDAG





## **Executive Summary**

The Sustainable Region Program (SRP) can help local governments within the San Diego Association of Governments (SANDAG) region and throughout the state to develop energy planning strategies for their municipal facilities. Through successful energy planning and implementation measures, local entities will be better stewards of limited energy resources while reducing operational costs.

SANDAG in partnership with the California Energy Commission has developed this Sustainable Region Program Toolkit as the companion implementation document to the Sustainable Region Program Action Plan. The SRP Toolkit is a set of tools to assist in the specific development and execution of the Sustainable Region Program. The 12-step implementation tasks include financing of an Sustainable Region Program, forming an energy team, and making presentations to the city council or board of supervisors.

Identifying all the energy elements and options, policies, and investments in the San Diego region will help position this part of the state to not only meet the energy and climate change goals of the day, but to begin the transformation in how to plan and move toward a cleaner environment that is emblematic of California. The SRP Toolkit will assist in that transformation.



# Introduction to Sustainable Region Program Steps

Energy is a major operating cost for most local governments; it also is a cost that can be reduced through planning and the creation of standard practices. Local governments can achieve lower energy costs without adversely affecting their staff or their ability to serve their constituents or ratepayers by following the practices outlined in the Sustainable Region Program (SRP).

SANDAG developed both the Sustainable Region Program Action Plan and the Toolkit as part of its contract with the [California Energy Commission](#) (Energy Commission). The SRP Toolkit was created as a resource to assist a public agency facilitator, like a metropolitan planning organization (MPO) or council of governments (COG), with implementing its own Sustainable Region Program. It is a set of “tools” to aid in the development and execution of the SRP, with an emphasis on energy assessment tasks that lead to the installation of energy-saving measures, actual cost savings, and greenhouse gas (GHG) reductions. The Sustainable Region Program supports state mandates for energy planning including California’s preferred loading order. The loading order gives highest priority to energy efficiency measures, followed by renewable energy systems, and clean distributed generation (like fuel cells and combined heat and power systems) that reduce demand on the utility grid. If a region’s resource needs or other requirements cannot be met through these measures, then new transmission or utility-scale fossil-fuel-based generation must be developed.

Twelve tasks and four appendices containing templates for completing tasks are included in this toolkit. Presented in order of implementation, they are:

- Step 1: Financing a Sustainable Region Program for Local Governments
- Step 2: Program Announcement From Agency to Local Government
- Step 3: Sustainable Region Program Questionnaire
- Step 4: Guide to Forming an Energy Team
- Step 5: Kickoff Meeting
- Step 6: Guide to Municipal Building Energy Assessments
- Step 7: Assessment Report Meeting
- Step 8: Funding Conservation Projects
- Step 9: Recommendations Meeting
- Step 10: New Construction Considerations
- Step 11: Policy Considerations
- Step 12: Presentation to City Council or Board
- Appendix A: Program Participation Timeline
- Appendix B: Sustainable Region Program Templates
- Appendix C: Links to Other Toolkits and Guides

## Appendix D: SAMPLE Local Government Energy Assessment Report

# **STEP 1:**

## **Financing a Sustainable Region Program for Local Governments**

Securing initial funding for the Sustainable Region Program is the first step to a successful program rollout. This SRP Toolkit uses the three methods of financing that SANDAG employed from 2004 to 2009 as examples. Step 8 details how local governments can obtain funding for conservation projects and planning.

This section is not intended to identify the myriad of federal, state, and local funding programs available to local governments; other organizations have released guides for this purpose. For example, the [Local Government Commission's Energy Funding website](#) (LGC) is a free on-line resource.

### **How a Regional Government Can Finance the SRP**

In its development, the [SANDAG Sustainable Region Program](#) has gone through three funding iterations. The authors' experience has led them to recommend the funding mechanism used for the final SRP iteration: a local government partnership with the local utility. Each program funding method is detailed below.

#### **First Iteration (2005–2006): Pilot City**

The [SANDAG Energy Working Group](#) (EWG) requested that a pilot energy efficiency program be developed to assess the effectiveness of a comprehensive energy management approach for local governments. The SRP Pilot pooled existing California Public Utilities Commission (CPUC)-funded program resources from the [California Center for Sustainable Energy](#) (CCSE)<sup>1</sup> and [San Diego Gas & Electric](#) (SDG&E) to provide both technical and policy assistance to the SRP Pilot city. The intended result was to create a comprehensive energy management strategy, facilitate energy savings projects, and assist with optimization of current and potential city policies by creating a service to assist cities that had minimal participation in energy efficiency programs.

The SRP Pilot was able to succeed on a shoestring budget for three reasons:

1. A high level of interest and active participation from the selected city.
2. A strong desire from all parties involved to have the project succeed. In-kind support from the California Center for Sustainable Energy and SDG&E was provided to fill in any gaps in service not provided through existing CPUC-funded energy programs.

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1. CCSE was formerly called the San Diego Regional Energy Office.

3. A program facilitator capable of leveraging resources from multiple energy-saving programs to package them into one delivery mechanism for the city. The facilitator was familiar with the portfolio of energy programs and services available and had the ability to pull in the appropriate resources at the appropriate time. This required a high level of coordination behind the scenes.

Through a memorandum of understanding, SANDAG funded the California Center for Sustainable Energy to develop and implement the pilot in cooperation with SDG&E. The California Center for Sustainable Energy, in consultation with SDG&E and SANDAG staff, recommended to the Energy Working Group that the city of Carlsbad participate in the SRP Pilot. The Energy Working Group selected the city during its March 2005 monthly meeting, and the SRP Pilot began.

The city of Carlsbad was responsible for its own staff participation time. This consisted of time for four to six project meetings at key decision points, staff time to allow access to municipal buildings by outside technical staff, and time to prepare and present findings to City Council.

SANDAG staff time (under 5 percent of one staff person) was covered by its energy planning program. The pilot facilitator's time from the California Center for Sustainable Energy (approximately 30 percent of one staff person) also was covered by SANDAG. The facilitator served as the primary point of contact; coordinated efforts with the city, multiple SDG&E program staff, and multiple CCSE program staff; and developed the comprehensive plan provided to Carlsbad and the Energy Working Group. The SANDAG energy planning budget was funded through member agency dues and an annual contract with SDG&E.

The majority of technical assistance provided by the California Center for Sustainable Energy and SDG&E was covered by existing energy efficiency programs. A minimal amount of technical staff time was required for the SRP Pilot that was not covered by existing programs, and it was provided by the California Center for Sustainable Energy at a reduced rate to SANDAG.

## **Second Iteration (2007–2009) Pilot Expansion: Four More Cities**

In 2006, SANDAG sought funding to expand the SRP Pilot to two additional member cities. The existing energy budget remained constant, so there were insufficient funds to continue without external help. SANDAG entered into a two-year energy planning contract with the Energy Commission that would enable the SRP Pilot to expand. Interest letters were mailed to SANDAG member agencies in September 2007 and the cities of Poway and Solana Beach were selected to participate beginning in 2008.

With the goal of further leveraging the SANDAG and Energy Commission commitment to an SRP expansion, SDG&E offered staff and consultant support to assist two more local governments during this phase: the cities of Imperial Beach and Coronado.

In Fiscal Year 2008, SANDAG dedicated approximately 10 percent (or \$34,000) of its annual energy budget in staff and consultant time from the California Center for Sustainable Energy to the Sustainable Region Program, with the Energy Commission contract providing an additional

\$30,000 in annual funding. The SRP Pilot progressed well during this time. In Fiscal Year 2009, the SANDAG energy budget decreased to \$239,000, of which the Sustainable Region Program remained at 10 percent of the budget (or \$24,000) plus the approximately \$30,000 from the Energy Commission. The Fiscal Year 2009 budget and staff constraints caused some stop-and-start in delivery of services to each of the participating cities. To remedy these barriers, SANDAG sought a dedicated funding source for the Sustainable Region Program.

At the time of the final SRP Toolkit release in April 2009, efforts were completed at the cities of Solana Beach and Poway, 85 percent done in Imperial Beach, and 25 percent done in Coronado.

## **Third Iteration (2009–2011) Local Government Partnership With the Investor-Owned Utility**

In 2008, SANDAG applied to SDG&E for a local government partnership (LGP) contract to formalize the Sustainable Region Program. The local government partnerships are part of the public goods charge (PGC) funded programs regulated by the CPUC.

- The “public goods charge” is line item on ratepayer electric and gas bills.
- Part of the ratepayer-funded public goods charge goes to energy efficiency programs through each utility.
- Each utility develops an “energy efficiency program portfolio” that the CPUC approves.
  - Eighty percent of funds are for utility in-house programs and partnership programs.
  - Twenty percent is awarded to third parties to administer energy-saving programs.
- The portfolio of energy efficiency programs are to span January 1, 2009, through December 31, 2011.

SDG&E accepted the SANDAG local government partnership and has included it in its portfolio of energy programs filed with the CPUC for 2009–2011. The proposed program is expanded in scope, outreach, and budget. The proposed budget is \$1.7 million over three years and will cover several expenses not included in the SRP Pilots. The budget will cover at least two SANDAG staff members at 50 percent time, relevant SANDAG staff at lesser levels, and all engineering and technical services previously funded through other energy efficiency programs. The engineering component is expected to be one of if not the highest budget cost. The program will provide services to all SANDAG member agencies. The CPUC must still approve all energy program portfolios in the state and that process is significantly late. As of the writing of this report, the utilities refiled their portfolios to the CPUC in March 2009 with the expectation that the CPUC will make its decision before 2010.

## **Reasons to Apply for Local Government Partnership Funding**

Although the aforementioned near-term delays cause some program delivery issues, SANDAG believes that the long-term benefits of a local government partnership will outweigh any initial difficulties. One of the weaknesses identified in the SRP Pilots has been a sliding timeline for participation and products. This is in part due to the flexibility needed to work across departments at the local government level. It also is due to the lack of continuous resources (whether staff or financial) to maintain momentum at each city and participate in available energy efficiency programs. Since technical assistance on new construction and auditing existing buildings has been derived from existing programs funded by the public goods charge, delays can occur. Sometimes there is a wait list for energy programs and services in high demand, and the SRP Pilot participants must wait their turn. This then can create delays for subsequent steps in the timeline. Also, staff facilitation time has had to compete with other important projects, so the local government partnership funding will enable SANDAG to maintain dedicated facilitation time to keep the program on schedule.

## **Sustainable Region Program Need Established Through Pilots**

Through lessons learned from the SRP Pilot efforts in 2005–2008, the need for a program that enables local governments that have little or no energy expertise to participate in energy efficiency programs has been reinforced.

To some extent, a few cities in the San Diego region have access to local government partnership resources (for example, city of San Diego, city of Chula Vista, and county of San Diego). The SANDAG Partnership will provide a comprehensive and standardized approach to bringing energy-saving measures and plans to its member agencies. This will ensure an equitable approach to the opportunities that can be presented to local governments, as well as a deeper set of opportunities from which to create reliable energy savings. There is no such support for the jurisdictions at this time. The funding of this partnership will enable the partners to deliver significant energy savings that would not otherwise be captured. The partnership will provide training for these municipalities with an objective that some will be able to undertake their own programs in the future.

## **STEP 2: Program Announcement From Agency to Local Government**

The initial step in the process is to choose an interested and eligible local government to participate in the Sustainable Region Program. To gauge interest in completing the tasks of the program, the agency should send a letter to interested local governments that clearly describes the goals, benefits, and staffing obligations of the SRP. (For a sample announcement, see Appendix B: I. “Program Announcement From Agency to Local Government”).

## **STEP 3: Sustainable Region Program Questionnaire**

Because the Sustainable Region Program is designed to assist local governments that have not completed significant energy management activities, the selected local government should have:

- No full-time energy manager.
- Minimal current participation in energy efficiency programs.
- Available funds or willingness to finance energy projects.
- Staff capacity to manage projects.

The questionnaire is designed to elicit information from interested local governments so that the agency can assess candidates’ viability for participation in the SRP. (For a sample application questionnaire, see Appendix B, II. “Sustainable Region Program Questionnaire” and III. “Preliminary Assessment Questions.”)

## **STEP 4: Guide to Forming an Energy Team**

When a local government has been selected to participate in the Sustainable Region Program, the next step is to them form a local government energy team. This energy team should be comprised of the local government’s staff members whose future SRP tasks are described here.

### **Tasks of the Energy Team Leader (Initial and Main Contact)**

- Works with their local government’s staff to compile and disseminate instructions, correspondence, data, and so forth among all departments.

- Acts as liaison with the agency, contractors, and local government.
- Schedules first energy assessment with local government staff subsequent to identification of buildings with highest energy consumption, highest utility bill or by request. The contractors/engineers/utility staff can assist with this determination. (See Facilities/Engineering section.)

## **Tasks of the management/engineering member**

- Assists with identifying and defining (in writing) of specific goals for local government. This can be based on internal staff assessments or other local government best practice guides. The goals should address what the local government is looking for in terms of energy savings and/or other policy to improve local government functions. The agency or its contractor will be available to assist in this process. Goals should be based on a review of existing principles and practices in local government facilities (by technology and by staff), the priorities of top-level decision-makers, and interaction across departments.
- Once a written set of goals is established, works with the agency or its contractor to create a personalized checklist of potential problems/constraints that will help pinpoint where progress/savings/changes can be made.

## **Tasks of the facilities member**

- Allows for straightforward and productive facility energy assessments with access to facilities. Obtains the following data:
  - Meter-facility identifications for each meter and facility.
  - List of city buildings including consumption data, from highest to lowest.
  - List of any construction/building projects.
  - List of current energy projects and practices.
  - Contacts for building access, along with an identify of building hours, staff hours.

## **Tasks of the finance member**

- Reviews budgets for energy (electricity and natural gas).
- Identifies structures with high energy costs (potential high consumption). Reviews the rate or tariff structures to which the city is subject. This information will be reviewed by the agency or its contractor to ensure the city is on the most optimal utility rate schedule. The agency representative should start (or continue) a dialogue with the local government's utility account executive.

## Tasks of the planning member

- Identifies existing local government codes that mandate energy practices within the local government's general plan, and if applicable, its energy plan and codes and charters .
- Creates a list of current practices that promote or impede energy efficiency and conservation strategies and technologies (for example, energy consumption, building code, procurement, or other practices).

## STEP 5: Kickoff Meeting

After the energy team is formed, the agency representative should schedule an initial meeting to introduce the agency, local government, and contractor energy team members to each other and inform the energy team of first steps in the process to create a Sustainable Region Program. (For a sample kickoff meeting agenda, see Appendix B. IV. "Kickoff Meeting Agenda")

## STEP 6: Guide to Municipal Building Energy Assessments

At the initial meeting, energy team members should designate the appropriate facilities team member to work with the agency's energy engineer (or a contractor) on energy assessments. The energy engineer makes an assessment of the energy consumption at a site using currently installed systems to make recommendations for improvements to energy efficiency, conservation, GHG emission reductions and renewable potential, called energy conservation opportunities (ECO).

Several assessment types exist and each equips the energy team leader for different kinds of decision-making. Objectives of energy assessments are:

- Improved leverage of energy dollars spent.
- Maximum utility incentives.
- Short-, mid-, and long-term implementation options.
- Operating cost reduction.
- Enhanced staff or occupant comfort.
- Reduced equipment maintenance costs.

Preparing for assessments include securing access to the buildings as well as compiling adequate utility data for the engineer. Two years of utility usage data is recommended to facilitate an effective assessment. To retrieve this data, the energy engineer can either ask the energy team leader to acquire data that already is available (where applicable) or request access to the building's usage data. For example, in the SDG&E territory, the kWickview software system allows access to load profiles and interval data that are critical to evaluate which efficiency practices and tools will be most beneficial at the site level. (Information obtained by

Appendix B. II. “Sustainable Region Program Questionnaire” should be made available to the energy engineer.)

At the initial stage, a “checklist” assessment is often the appropriate tool. This assessment is a snapshot of potential buildings to determine which of them to examine further. The energy engineer identifies potential energy efficiency measures but does not provide project cost or savings estimates. This process can be helpful for the energy team’s early decision-making stages.

A more detailed level of assessment is a “preliminary assessment.” Here the energy engineer will include preliminary estimates of savings and the approximate costs of implementing the proposed energy efficiency measures. The information normally will be sufficiently well-developed for the building owner to decide whether to pursue a retrofit project.

The most detailed assessment is an “investment grade” assessment—the type of assessment you can literally “take to the bank.” It provides the most detailed and well-worked out assessment of costs and savings and has a high level of accuracy.

To maximize the efficiency and effectiveness of any energy assessment, the energy engineer must possess the appropriate checklists from which to base an investigation. (For a sample assessment checklist, see Appendix B. V. “Energy Efficiency Opportunity Checklist.”)

## **STEP 7: Assessment Report Meeting**

Following the energy assessments and the energy engineer’s compilation of an energy assessment report, agency staff should arrange for a follow-up meeting. (For a sample assessment report meeting agenda, see Appendix B. VIII. “Assessment Report Meeting Agenda.”) At this stage, the agency should invite the local utility account executive or energy efficiency programs manager to participate. This meeting gives the agency, energy engineer, utility representatives, and local government an opportunity to:

- Review the report together.
- Introduce utility representative into the process.
- Ask clarifying questions of the engineer.
- Determine next steps in the program.

(For sample energy assessment report and templates, see Appendix B. VI. “Energy Conservation Opportunities Table,” Appendix B. VII. “Energy Conservation Opportunities,” and Appendix D. “Energy Assessment Report.”)

Prior to the meeting, the agency representative should distribute copies of the completed energy assessment report to all attendees via e-mail. This step helps facilitate a comprehensive-yet-efficient discussion of the energy conservation opportunities identified by the energy engineer.

Following this meeting, the agency representative should create and distribute a summary of the meeting. While summaries are a helpful tool for each meeting, it is critical as a follow-up to this meeting so that the “Next Steps” discussed are on paper and clear to all participants. (For a sample meeting summary, see Appendix B. IX. “Assessment Report Meeting Summary.”)

## **STEP 8: Funding Conservation Projects**

Identifying and maintaining reliable funding is essential to the long-term success of a Sustainable Region Program. Local governments have responded to this need for consistent funding in a variety of ways. Some energy programs depend heavily on outside support from state agencies or local utilities. Others rely on the local government’s own annual budgeting process. This can make the programs vulnerable to changes in perception of the importance of saving energy. Two mechanisms for funding projects include:

- Ratepayer funding sources.
- Local government funding sources.

### **Ratepayer Funding Sources**

#### *Public Goods Charge Funds: Local Government Partnerships*

Public goods charge (PGC) funds are regulated by the [California Public Utilities Commission](#). The public goods charge is a line item on ratepayer electric and gas bills that goes to funding energy efficiency and other programs through each utility across the state. There are several types of energy efficiency programs, including utility-run programs, third-party programs, and local government partnerships. Local and regional governments can apply for energy efficiency funds through a local government partnership with their utility.

In coordination with SANDAG’s Sustainable Region Program, SDG&E has proposed a supplemental funding opportunity for participating local governments. Once a plan to produce a Sustainable Region Program is approved by a city council or board of directors, the local

government can apply for mid-cycle partnership funds from the local investor-owned utility to initiate its program. For example, under the umbrella of local government partnerships, SDG&E has proposed to make available seed funding to municipalities that successfully complete SANDAG's Sustainable Region Program. This funding would enable a local government to undertake one or more energy projects identified through the SRP. The goal is to build the institutional knowledge at each local government and achieve energy savings. A similar partnership effort could be proposed with utilities across the state.

### ***State Energy Program Loans***

Some local governments also have benefited from state energy loans, usually provided at relatively favorable terms. The funds normally are used to support retrofit projects in departmental facilities. The [California Energy Commission's Energy Efficiency Financing Program](#) provides financing for schools, hospitals, and local governments through low-interest loans of up to \$3 million for feasibility studies and the installation of energy-saving measures. While the loan is made to the local government as a whole, internally each department using a portion of the funds may be made responsible for the debt and interest payments. The department may be required by the local government's financial officer to agree to make repayments without requesting an increase in their annual budget. In return, the department retains the savings from the reduction in its monthly energy bill, plus any maintenance savings derived from operating new, more efficient equipment.

### ***On-Utility Bill Financing***

On-bill financing programs can help customers purchase and install qualified energy efficiency measures. This can include municipalities that might otherwise not be able to act given capital constraints and administrative and time burdens. On-bill financing from SDG&E offers eligible customers zero-percent financing for qualifying energy-efficiency improvements. Ratepayers who participate in these programs typically are able to take part in other incentive programs as well, but at a reduced rate of incentive.

### ***Utility and Third-Party Administrator Rebate/Incentive Programs***

Through legislation passed by federal and state legislatures and implemented by California's regulatory agencies, municipalities are able to participate in energy conservation, efficiency, renewable energy, and demand response incentive and rebate programs. Municipalities also can take advantage of utility rate structures that support green energy practices.

The following types of incentive programs can be used to promote energy efficiency and renewable energy measures. Typically, there is a range of programs offering varying incentive levels and services depending on the customer's needs and issues. Although energy efficiency programs and their administrators vary throughout the state, California has one of the most progressive mandates to promote energy efficiency in the country. Therefore, all municipalities can benefit from the programs offered through their utility.

Energy efficiency and renewable energy incentive programs typically are defined by the market sector for which they serve (for example, residential, commercial, industrial, as well as new and existing infrastructure).

## ***Solar Programs***

Since the passage of Senate Bill 1 (Murray, Chapter 132, Statutes of 2006), the state of California has a mandate to install 3,000 megawatts (MW) of solar electricity within the state. SB 1 decrees that all energy corporations need to offer programs providing their ratepayers with incentives to install solar systems that offset their electricity load. Most utilities currently use one of the following types of incentives:

- *Performance-based incentive:* The administrator provides a bill reduction based on the production of electricity from the site.
- *Capacity-based incentive:* The administrator provides a one-time credit to the customer to offset a portion of the system installation costs.

## ***Energy-Efficient Technologies Incentive Programs***

Energy efficient technology installation programs offer incentive payments to install new, high-efficiency equipment or systems for non-residential customers, including municipalities. A project may consist of the retrofit of existing equipment or systems, or the installation of equipment associated with new added load. Software or engineering calculations are used to estimate the energy savings and incentive depending on the type of energy efficiency measure installed. Incentives are paid based on the quantity of kilowatt-hour (kWh) or therms saved by the installation of the new equipment or system.

## ***Nonresidential New Construction Programs***

New construction can benefit from a program that provides technical and financial aid in designing new facilities to the most cost-effective energy efficiency standards. These programs target municipalities among other ratepayers who are planning new buildings, including expansions, additions, and major remodels. The program also applies to selected design professionals who provide building plans and specialty consulting on energy or environmental quality.

## ***Nonresidential Educational/Incentive Programs***

Programs are available that use such tools as energy simulation modeling, life cycle cost analysis and long term operating cost reduction goals to educate, demonstrate, and encourage energy efficiency and demand reduction that goes beyond the Title 24 California Energy Code. These programs are also designed to work with other programs that provide more robust financial incentive for energy efficiency installations.

## **Local Government Funding Sources**

### ***Revolving Funds***

Revolving funds are internal pools of money designed to recycle a portion of energy cost savings from energy-efficiency improvements into capital for new projects. A local government can reinvest a certain percentage (or all) of its documented annual energy savings into a revolving fund that would provide capital for future energy efficiency projects or to fund the salary of an energy manager.

When the funded program is fully operational and dollar savings are accumulating, the money can be left in the energy account, used to repay the general fund, or shared with other departments within the local government. Funding for the Sustainable Region Program still must go through the local government's annual appropriation process, so program staff must continue to make sure that information on the success of the program is transmitted to the proper individual for the budget.

### ***One-Percent for Energy***

Some local governments have adopted a unique method of financing staff and individual energy projects, sometimes referred to as "one-percent for energy." The local government imposes a percentage surcharge on departmental energy bills. The money goes into a central fund to support an energy manager or to support energy efficiency projects.

### ***On-Tax Bill Financing (Assembly Bill 811)***

[California's Clean Energy Municipal Financing Law](#) (Assembly Bill 811, Levine, Chapter 159, Statutes of 2008) authorizes a legislative body to allow property owners to enter into contractual assessments to finance the installation of energy efficiency improvements and distributed generation, renewable energy sources at residential, commercial, industrial, or other real property sites. The capital required to pay for work may include funds available from any source, including the sale of bonds.

In March 2009, the [CityFIRST program](#) was announced by the [California Statewide Communities Development Authority](#) (California Communities). California Communities is a joint powers authority created by the [California League of Cities](#) and the [California Association of Counties](#), and CityFIRST is its statewide AB 811 clean energy financing program. California Communities has partnered with Renewable Funding, Royal Bank of Canada, the California Center for Sustainable Energy, and Ecomotion to offer this program to municipalities.

CityFIRST is a voluntary program that allows property owners to pay for the upfront costs of renewable and energy efficiency projects over 20 years as a line item on their property tax bills. If the property is subsequently sold, the repayment obligation remains on the property tax bill and transfers to the new owner.

The on-property-tax-bill funding mechanism is designed to overcome a significant barrier to pursuing major energy efficiency upgrades and clean renewable generation: high up-front costs or initial project capital outlay versus the lifecycle cost/benefit. Municipal programs are being pursued by the cities of Berkeley and Palm Desert.

### ***Power Purchase Agreements***

As well as receiving incentives for the installation of solar, new and creative ownership structures are paving the way for increased penetration of solar with municipalities and other solar customers. The power purchase agreement option allows municipalities to install solar panels owned by a third party at their facilities. The third party then charges the municipality for the electricity used at a rate lower than would be charge to receive electricity from the utility. Using this funding option, municipalities avoid the up-front cost of the solar installation and reap the benefits of the installation which include zero emission electricity and lower electricity bills.

## **STEP 9: Recommendations Meeting**

At the recommendations meeting, the energy team leader should facilitate a review of the local government's preferred action items and its needs. (For an agenda, see Appendix B. X. "Recommendations Meeting Agenda.") These recommendations should be discussed with the attending utility representative to determine what incentive programs and utility assistance is available to help implement the items.

## **STEP 10: New Construction Considerations**

Many local governments own and occupy their buildings. As such, they have both the opportunity to influence a building's performance during the design and construction phase and the incentive to minimize its long-term operating costs. There are a number of steps that can be taken to ensure a new facility is built to the highest standards of performance. For example, when selecting the architect and engineering team, the energy team should ensure that the candidates have experience with the design of energy-efficient buildings. In addition, the designers should guarantee the use of technologies and practices that will create the most efficient operating facility possible. At the end of the design phase, the energy team must verify that operating efficiency is not "value engineered" out of the project if unexpected budget constraints require cost cutting. In other words, the agency and local government should make every effort to emphasize the increased value of energy efficient technologies in the design and installation phases.

[Title 24](#), California's state energy building code, requires energy-efficient construction standards in new buildings. Local governments should consider enacting policies to require that their new facilities be designed to exceed the state code requirements and take advantage of incentive programs designed to encourage higher performance. Title 24 focuses on the energy performance of a building. To further enhance long-term building energy performance, agencies should consider adopting a whole-building performance approach that considers other design and operating factors for a new facility in addition to energy. One approach is to require [LEED certification](#) (Leadership in Energy and Environmental Design, administered by the [U.S. Green Building Council](#)), which mandates third-party certification of a building's economic and environmental performance. Another standard specifically related to efficiency is the Energy Star® certification process. Other programs like Build It Green also emphasize energy efficiency measures in buildings.

The cities of San Diego, Seattle, and Portland, Oregon, for example, have adopted LEED criteria for their new buildings. If a local government leases or rents its buildings, involved energy team members must be sure to name energy efficiency as one of the selection criteria when reviewing potential properties and find sellers (and owners) open to negotiating energy efficiency upgrades to the facility.

A discussion of new construction should be included within each meeting and be facilitated by the agency representative. Discussion points are:

- New building plans, including timeline, budgets.
- Detailed description or plan for building as currently proposed.
- Contact information.

## **STEP 11: Policy Considerations**

California energy laws have a great effect on land use planning, since the majority of greenhouse gas emissions in California are the result of infrastructure and development decisions. Based on state and local policies, local governments should consider:

- How to build buildings and how to retrofit existing buildings.
- Where to locate buildings.
- The quality and types of infrastructure required to serve these buildings.
- Compatibility with the Regional Comprehensive Plan or Blueprint plan that considers the interrelationship of jobs, housing, population, and transportation choices.

## **The Energy and Climate Change Connection**

The state's largest contributors to greenhouse gas emissions are on-road transportation, electricity use, and natural gas use. The way local governments plan for transportation and land use, ranging from general plans to council policies to internal soft policies and local energy usage, all have significant impacts on a local government's energy use choices and related greenhouse gas emissions. Therefore, reducing greenhouse gases is achieved primarily from modifying energy choices and use.

[Assembly Bill 32](#), "The Global Warming Solutions Act of 2006," is a California law that commits the state to reducing greenhouse gas emissions to 1990 levels by 2020. [Senate Bill 375](#) (Steinberg, Chapter 728, Statutes of 2008) was signed into law by Governor Schwarzenegger on September 30, 2008, and requires the [California Air Resources Board](#) (ARB) to establish regional GHG reduction targets for agencies. SB 375 calls for the integration of regional transportation planning, regional housing needs assessment planning, and greenhouse gas planning while streamlining aspects of California Environmental Quality Act (CEQA). [Assembly Bill 811](#) (Levine, Chapter 159, Statutes of 2008), related to tax bill financing of energy efficiency and renewable energy projects, was signed by the Governor in July 2008. It authorizes California cities and counties to designate areas within which city officials and willing property owners may enter into contractual assessments to finance the installation of distributed generation renewable energy sources and energy efficiency improvements.

## Climate Change and Local Governments

Most California local governments have been charged with combating greenhouse gases and the resulting climate change with the passage of AB 32 and successive state policies and legislation. The California Attorney General has assumed a role in assisting local governments to implement these state legislative actions through local general plans and building codes and standards for increased energy efficiency. The Attorney General's office holds that local governments are required under CEQA to provide policies, actions, and mitigation measures that combat GHG and climate change. For example, in a letter dated June 11, 2007, to the city of San Diego, the state's position regarding a city's responsibility towards mitigation for climate change, global warming and greenhouse gas emissions per AB 32 is stated: "The city as lead agency is required under CEQA to adopt all feasible alternatives and mitigation measures." (Goldberg, 2007) To this end the Attorney General is assisting local governments with suggested policies, educational resources, and review of draft documents as they pertain to the reduction or elimination of greenhouse gases and climate change in compliance with CEQA.

## How Will AB 32 Be Implemented?

The California Air Resources Board is the lead agency for implementing AB 32. The key elements on which ARB will focus are:

- Expansion and strengthening of energy efficiency programs and building and appliance standards.
- Expansion of the Renewables Portfolio Standard to 33 percent.
- Expansion of renewable energy to include "placing solar arrays and solar water heaters on houses throughout California and an increase in building standards for energy efficiency."

Currently, ARB is developing a toolkit of recommended measures and best practices for local governments and small businesses to reduce their GHG emissions. Some proposed measures include adoption of some of the following changes:

- Increased energy efficiency.
- Green building designs.
- Cool community practices.
- Increased water conservation.
- Added renewable energy generation.
- Climate-friendly procurement of goods and services.

## How Will SB 375 Be Implemented?

The law authorizes the Air Resources Board to set regional GHG emissions reductions targets for regions of the state. It requires agencies to create sustainable communities strategies (SCS) as part of their regional transportation plan (RTP). Sustainable communities strategies must show

if a region will meet its GHG reduction target given current its projected financial means and constraints or if an alternative planning strategy (APS) that is not financially constrained will have to be developed in order for the region to meet its goals. The alternative planning strategy would be prepared if the region has to make different assumptions about how the region will meet its emissions target. SB 375 also will link the Regional Housing Needs Assessment (RHNA) process to the sustainable communities strategy process. SB 375 creates CEQA exemptions and other streamlining provisions for housing projects located near transit and in areas targeted by the “SCS” when it can be demonstrated that the greenhouse gas targets can be reached.

SB 375 preserves local land use authority. There is explicit language that states that a sustainable communities strategy will not supersede or interfere with local land use plans. CEQA streamlining and exemptions will be available to certain development projects that promote compact development. Specifically, projects that conform to the SCS or that are designated “transit priority projects” are available for CEQA exemptions. These projects are residential projects that are located near transit and meet certain density and floor area ratio requirements.

The Air Resources Board likely will base its targets and recommendations on areas that can achieve the greatest reductions for the lowest cost. ARB is required to set its regional emission targets by September 30, 2010, and Metropolitan Planning Organizations will be required to include their sustainable communities strategy or alternative planning strategy in the next regional transportation plan following the setting of targets.

## **How Will AB 811 Be Implemented?**

AB 811 will address climate change through energy conservation efforts by authorizing local governments to provide up-front financing to property owners to install solar or other renewable energy-generating devices or to make energy efficiency improvements to their properties. The local government would provide the up-front funds for the project, and the property owners pay an annual assessment until those funds, plus interest, are repaid. An underlying purpose is to create a means by which a project that provides both a public benefit and an incidental benefit to particular property owners can be financed without imposing the cost on property owners in other parts of the city who derive no benefit. The CityFIRST program by California Communities, Renewable Funding, Royal Bank of Canada, the California Center for Sustainable Energy, and Ecomotion is a statewide AB 811 clean energy financing program for municipalities and is further detailed in Step 8, Funding Conservation Projects.

In conjunction with or independent of state and federal laws, local policy statements can influence decisions within a local government. To make the benefits of energy investments more apparent, the policy component may include a review and proposal of energy efficiency and greenhouse gas-reducing measure amendments to the general plan, city ordinances, the city charter, and other local government documents to fulfill local environmental or energy strategic goals. This review should culminate in the creation of energy-saving measures for existing buildings and new construction as well as policy measures that local governments can adopt based on legislative and regulatory mandates like those described below and others specific to the region.

## **STEP 12:**

### **Presentation to City Council or Board**

Once a local government energy plan is completed with the above components addressed, the Metropolitan Planning Organization should work with the local government staff to prepare the necessary staff reports and/or a presentation for the city council or board. The leadership should be given a high level briefing of the project and asked to approve or endorse associated energy goals and projects.



# APPENDIX A:

## Program Participation Timeline

Activities within the program will progress at different paces as best fit local government and program needs. The initial focus should be on identification and assessment existing buildings in which energy-saving measures could be realized. Other components, new construction and policy measures, should follow. The following table provides a possible timeline for local government action.

**Sustainable Region Program Timeline**

| Sustainable Region Program       |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
|----------------------------------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| Task                             | Month 1 |   |   |   | Month 2 |   |   |   | Month 3 |   |   |   | Month 4 |   |   |   | Month 5 |   |   |   | Month 6 |   |   |   |
|                                  | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |
| MPO contacts Municipalities      | █       | █ |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Municipalities Apply for SRP     |         | █ | █ | █ | █       | █ | █ | █ |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| MPO/municipality Kickoff Meeting |         |   |   |   |         | █ | █ | █ | █       |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| MPO Conducts Energy Assessments  |         |   |   |   |         |   |   |   | █       | █ | █ | █ | █       |   |   |   |         |   |   |   |         |   |   |   |
| MPO Creates Assessment Reports   |         |   |   |   |         |   |   |   |         |   |   |   |         | █ | █ | █ | █       |   |   |   |         |   |   |   |
| Assesment Report Meetings        |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         | █ | █ | █ | █       |   |   |   |
| Recommendations Meetings         |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         | █ | █ | █ |

Source: SANDAG



# **APPENDIX B:**

## **Sustainable Region Program Templates**

- I. Program Announcement From Agency to Local Government
- II. Sustainable Region Program Questionnaire
- III. Preliminary Assessment Questions
- IV. Kickoff Meeting Agenda
- V. Energy Efficiency Opportunity Checklist
- VI. Energy Conservation Opportunities (ECOs) Table
- VII. Energy Conservation Opportunities (ECOs) Sample
- VIII. Sustainable Region Program Assessment Report Meeting Agenda
- IX. Sustainable Region Program Assessment Report Meeting Summary
- X. Recommendations Meeting Agenda

# I. Program Announcement From Agency to Local Government

DATE

Dear **LOCAL GOVERNMENT REPRESENTATIVE**:

SUBJECT: Invitation to Take Part in **AGENCY**'s Sustainable Region Program

We are writing to inform you of a unique opportunity to participate in the expansion of an energy-saving pilot program for local governments sponsored by the **AGENCY**. The **AGENCY** will provide technical and policy support to a local government to develop an energy management plan, assess energy needs, conduct assessments of city facilities, assist in developing projects, and identify appropriate rebate and financing programs. Energy efficiency and conservation projects generally pay for themselves in three to five years. The main goal of this effort is to help local governments that have not performed significant energy management to complete energy projects and reduce their operating costs.

The **AGENCY** hopes that the Sustainable Region Program will develop new program delivery mechanisms for local governments to take advantage of regional energy saving programs.

The **AGENCY** will select a city based upon the following criteria:

- No full-time energy manager
- Minimal current participation in energy efficiency programs
- Available funds or willingness to finance energy projects
- Staff capacity to manage projects

If you are interested in being considered for this innovative Program, please contact **CONTACT NAME, E-MAIL, and PHONE NUMBER** by **DATE**.

Thank you for your interest in this program.

Sincerely,

## II. Sustainable Region Program Questionnaire

Thank you for your interest in participating in **AGENCY's** Sustainable Region Program (SRP), which in **YEAR** will provide **XXX** local governments in **AGENCY** region with services and resources for significantly improving the energy performance of their facilities. The selection process consists of analysis of your responses to the following questionnaire that will provide **AGENCY** with better information on your local government's involvement and interest in energy efficiency.

Please complete the questionnaire and return to **AGENCY** by **DATE**. Applicants will be notified whether they were selected for the SRP in **DATE**. Questions may be directed to **AGENCY REPRESENTATIVE** at **E-MAIL ADDRESS** and **PHONE NUMBER**. Your completed questionnaire should be submitted to her/his email address no later than close of business, **DATE**.

- 
1. Please describe your government's participation in any existing energy efficiency programs.
  2. Please describe how any current energy efficiency programs or projects are staffed and financed.
  3. Please describe how potential energy efficiency projects identified in the recommendations of the SRP might be staffed and financed.
  4. Please briefly describe the nature of your government's interest in and commitment to energy management.
  5. Please provide the total square footage of local government facilities and data on your energy consumption. Energy data should be provided to the finest level of detail available, such as by building, by department, or cumulatively for all facilities. Provide kilowatt-hour (kWh) for annual electricity consumption and British thermal unit (BTU) for annual natural gas consumption.

### III. Preliminary Assessment Questions

1. Total Number of Facilities/Buildings:
  - a. Number of Electric Accounts for These Buildings:
  - b. Number of Natural Gas Accounts for These Buildings:
2. Have you conducted a government-wide energy intensity study (e.g., kWh/sq ft) to determine your highest energy users? If yes, please provide **AGENCY** a copy.
3. Brief summary of recent energy improvement projects (last 1 year):
  - a. Completed projects (attach if necessary):
  - b. Pending projects (attach if necessary):
4. How many energy assessments have you conducted in the past three years? Please provide **AGENCY** a copy of assessment reports.
5. Do any of your facilities use an energy management system (EMS)?
  - a. How many?
  - b. What type of EMS do they use?
6. Who is involved in energy project planning and implementation in your government?
7. Do you have an energy management team? (Yes/No) If yes, who is on the team?
8. Do you have a comprehensive energy management plan? (Yes/No) If yes, please provide **AGENCY** a copy of the Plan.
9. Do you have an education program for government personnel? (Yes/No)
10. Do you have a newsletter for personnel? (Yes/No)
11. How do you track energy costs/usage?

### IV. Kickoff Meeting Agenda

Sustainable Region Program Kickoff Meeting

Date and Location

1. Introduce Key Staff and Local Government Representatives

**Project Administrator (Agency)**

**Engineer (Agency or Contractor)**

Name

Name

Address

Address

Phone

Phone

E-mail

E-mail

---

**Energy Team Leader**

Name

Address

Phone

E-mail

2. Introduce Representatives to Sustainable Region Mission

Program agency representative will explain the SRP Concept and Program Goals.

3. Discuss Local Government Needs

Local government representatives will have the opportunity to raise current and potential issues with local government infrastructure, policy, funding mechanisms, process, staff, etc.

4. Identify Energy Team Members for Local Government

Agency representative will discuss the local government's decision process in choosing the following Energy Team members:

Energy Team Leader

Local government management office staff

Facilities manager / specialist

Finance department representative

Engineering department representative

Planning department specialist

5. Next Steps

Set dates for follow-up meetings. Local government staff should review current practices and plans to prepare for these meetings detailing the following issues:

- Energy assessments
- ECOs recommendations
- New Construction (as applicable)
- New building plans, including timeline, budgets
- Detailed description or plan for building as currently proposed

- Contact information
- Policy Considerations

Local government review of existing General Plan, Energy Plan (as applicable), municipal charter and other energy policy documents.

## V. Energy Efficiency Opportunity Checklist

|  | Yes/<br>No | Notes (Current Model, Year, Size) |
|--|------------|-----------------------------------|
| <b>Heating, Ventilation and Air Conditioning (HVAC)</b>      |            |                                   |
| Air Conditioning Unit Replacement                            |            |                                   |
| Variable Speed Drive – Fan                                   |            |                                   |
| Variable Speed Drive – Pump                                  |            |                                   |
| High-Efficiency Packaged Direct-Expansion (DX) Unit          |            |                                   |
| High-Efficiency Packaged Heat Pump                           |            |                                   |
| Constant Volume (CV) to Variable Air Volume (VAV) Conversion |            |                                   |
| Use Evaporative Cooling                                      |            |                                   |
| Indirect Evaporative Cooling                                 |            |                                   |
| Demand-based Ventilation                                     |            |                                   |
| High Efficiency Boiler                                       |            |                                   |
| Economizer Cycle   |            |                                   |
| High-Efficiency Motor Retrofit                               |            |                                   |
| Multi-Speed Motor Retrofit                                   |            |                                   |
| High Efficiency Compressor                                   |            |                                   |
| High Efficiency Chiller                                      |            |                                   |
| Cooling Tower Fan Pony Motor                                 |            |                                   |
| Fume Hood Airflow Reduction                                  |            |                                   |
| Attic Exhaust Fans   |            |                                   |
| Add/Increase Duct Insulation                                 |            |                                   |
| Low Pressure Drop Filters                                    |            |                                   |
| Reduce Overventilation                                       |            |                                   |
| Steam Trap Optimization                                      |            |                                   |
| Add Low Load Boiler  |            |                                   |
| Thermal Energy Storage                                       |            |                                   |
| Ceiling Fans   |            |                                   |
| Electronically Commutated Motor (ECM) Fan Motor Upgrade      |            |                                   |
| <b>Lighting</b>  |            |                                   |
| Fluorescent Lamp Retrofit                                    |            |                                   |
| Electronic Ballast Upgrade                                   |            |                                   |
| Incandescent Lamp Replacement                                |            |                                   |
| Metal Halide to CFL Retrofit                                 |            |                                   |
| Fluorescent Delamping  |            |                                   |
| Light-Emitting Diode (LED) Exit Lighting                     |            |                                   |
| High Efficiency Signage                                      |            |                                   |
| <b>Controls</b>  |            |                                   |
| Programmable Thermostats                                     |            |                                   |
| Equipment Timeclock  |            |                                   |

|  | Yes/<br>No | Notes (Current Model, Year, Size) |
|--|------------|-----------------------------------|
| Energy Management System (EMS)             |            |                                   |
| Selective Switching                        |            |                                   |
| <b>Controls (cont.)</b>                    |            |                                   |
| Hydronic Temperature Reset                 |            |                                   |
| Temperature Setback                        |            |                                   |
| Duty Cycling – Unoccupied                  |            |                                   |
| Boiler Outside Air (OSA) Temperature Reset |            |                                   |
| Add Occupancy Sensors                      |            |                                   |
| Daylighting                                |            |                                   |
| Vending Machine                            |            |                                   |
| Charging Stations                          |            |                                   |
| Demand Limiting Controller                 |            |                                   |
| <b>Process</b>                             |            |                                   |
| Office Equipment Sleep Mode                |            |                                   |
| Kiln/Oven Upgrade                          |            |                                   |
| <b>Other</b>                               |            |                                   |
| Gas Water Heater Upgrade                   |            |                                   |
| Electric Water Heater Upgrade              |            |                                   |
| Cooking Appliances Conversion              |            |                                   |
| Cooking Appliances Upgrade                 |            |                                   |
| Add Window Film                            |            |                                   |
| Install/Add Roof/Wall Insulation           |            |                                   |
| Refrigeration                              |            |                                   |
| Light Colored Roof Surface                 |            |                                   |
| Passive Solar Heating                      |            |                                   |
| Window Replacement                         |            |                                   |
| Roller/Blinds/Draperies Shading            |            |                                   |
| Infiltration Reduction                     |            |                                   |
| Vestibule Air Lock                         |            |                                   |
| Compressed Air Reduction                   |            |                                   |
| Process Vacuum Reduction                   |            |                                   |
| Low Flow Plumbing Fixtures                 |            |                                   |
| High Efficiency Transformers               |            |                                   |
| Power Factor Correction                    |            |                                   |
| Optimize Defrost Control                   |            |                                   |
| Increase Refrigeration Insulation          |            |                                   |
| Refrigeration Space Doors/Curtains         |            |                                   |
| Compressor Floating Head Pressure Control  |            |                                   |
| Pool Dehumidification Heat Recovery        |            |                                   |
| Pool Cover                                 |            |                                   |

|                       | Yes/<br>No | Notes (Current Model, Year, Size) |
|-----------------------|------------|-----------------------------------|
| Elevator Optimization |            |                                   |
| Add Skylights         |            |                                   |

## VI. Energy Conservation Opportunities Table

| Energy Opportunity      |                                   | Notes | Est. Annual Electrical Savings (kWh) | Est. CO2 Equivalent Reduction (lbs) | Peak Demand Reduction (kW) | Est. Annual Gas Savings | Est. Annual Cost Savings (\$) | Est. Implementation Cost (\$) | Utility Incentive (\$) |
|-------------------------|-----------------------------------|-------|--------------------------------------|-------------------------------------|----------------------------|-------------------------|-------------------------------|-------------------------------|------------------------|
| Municipal Building Name |                                   |       |                                      |                                     |                            |                         |                               |                               |                        |
| 1                       | Sample Opportunity                |       |                                      |                                     |                            |                         |                               |                               |                        |
| 2                       | Sample Opportunity                |       |                                      |                                     |                            |                         |                               |                               |                        |
| 3                       | Sample Opportunity                |       |                                      |                                     |                            |                         |                               |                               |                        |
| 4a                      | Sample Opportunity                |       |                                      |                                     |                            |                         |                               |                               |                        |
| 4b                      | Sample Opportunity                |       |                                      |                                     |                            |                         |                               |                               |                        |
| 5                       | Sample Opportunity                |       |                                      |                                     |                            |                         |                               |                               |                        |
| 6                       | Sample Opportunity                |       |                                      |                                     |                            |                         |                               |                               |                        |
| 7                       | Sample Opportunity                |       |                                      |                                     |                            |                         |                               |                               |                        |
| 8                       | Sample Opportunity                |       |                                      |                                     |                            |                         |                               |                               |                        |
|                         | <i>Subtotal</i>                   |       |                                      |                                     |                            |                         |                               |                               |                        |
|                         | Totals                            |       |                                      |                                     |                            |                         |                               |                               |                        |
| Additional Measures     |                                   |       |                                      |                                     |                            |                         |                               |                               |                        |
| 9                       | Sample Renewable Opportunity      |       |                                      |                                     |                            |                         |                               |                               |                        |
| 10                      | Sample Green Building Opportunity |       |                                      |                                     |                            |                         |                               |                               |                        |

## VII. Energy Conservation Opportunities (ECO) Sample

### ECO No. 1 Retrofit Outdoor Down Lights



#### *Recommended Action*

Retrofit 50-watt outdoor Metal Halide Down lights with 15-watt compact fluorescent lamp (CFL) down lights.

|                                      |   |                      |
|--------------------------------------|---|----------------------|
| Estimated Energy Savings             | = | 1,722 kWh/yr         |
| Estimated Demand Savings             | = | 0.4 kW               |
| <b>Estimated Energy Cost Savings</b> | = | <b>\$257/yr</b>      |
| Estimated Implementation Cost        | = | \$154 (after rebate) |
| Simple Payback Period                | = | 7 months             |
| Return on Investment (ROI)           | = | 166.7%               |

#### *Background*

There are twelve (12) 50-watt Metal Halide Down lights illuminating the exterior of the auditorium. The existing lamp in each fixture may be a candidate for direct replacement with a 15-watt CFL lamp.

# VIII. Sustainable Region Program Assessment Report Meeting Agenda

## Sustainable Region Program Assessment Report Meeting

Date

Location

Time

### 1. Welcome and Introductions

The Agency representative re-introduces the energy engineer, Energy Team staff, and utility staff

### 2. Energy Assessment Report

The energy engineer will review each Energy Conservation Opportunity listed in the Energy Assessment Report (see Appendix D, "Energy Assessment Report"). This document includes detailed tables of energy savings, cost savings, costs for implementation of strategies, and by payback period.

The utility representative will give an initial assessment of any potential money saving programs available to the local government when considering installation of ECOs projects.

### 3. Financing Conservation Projects

### 4. New Construction and Policy Considerations

The Agency representative will lead a discussion on the following items:

- Continue policy / code / regulation issues that may be addressed with Agency representatives
- Plans for new construction, if any, over the next five years, so that the Agency representative may begin study of potential for greening of those buildings

### 5. Next Steps

The purpose of follow-up meetings will be to:

- Prioritize ECOs action items for projects the Energy Team has identified as feasible
- Review Agency representative recommendations for new construction
- Review Agency representative recommendations for policy

# **IX. Sustainable Region Program Assessment Report Meeting Summary**

## **Sustainable Regions Program Assessment Report Meetings Summary**

Date

Attendees

The Agency representative met with local government staff to discuss the outcome of the building energy assessments conducted in DATE. Prior to this meeting, the AGENCY representatives conducted energy assessments of 13 facilities to identify potential energy savings from energy efficiency, demand response, and renewable energy strategies and options.

### *Agency representatives*

Project Manager

Energy Engineer

### *Local Government representatives*

Energy Team Leader

Facilities representative

Finance representative

Administrative representative

### **Summary**

This meeting began with re-introductions to refresh staff on the engineer and Energy Team Leader. The Agency representative advised the attendees about the purpose of the meetings, which was to review each of the local government's energy efficiency and renewable energy assessments with the engineers/facility staff. The energy engineer gave a description of the data contained in the introduction to the assessment report folders (provided to the local government staff by the agency representative in paper form and through e-mail prior to the meeting). This document included detailed tables of energy savings, cost savings, costs for implementation of strategies and by payback period. The energy engineer then elaborated on the intricacies of each facility's assessment and the Energy Conservation Opportunities (ECOs) associated with each.

### **Next steps**

After each local government energy team has had the opportunity to digest the information disseminated at these meetings, the agency representative will schedule follow-up meetings. The purpose of the follow-up meetings will be to:

- Prioritize ECOs action items for projects that each Energy Team has identified as feasible
- Discuss policy/code/regulation issues that may be addressed with agency representatives

- Plans for new construction, if any, over the next five years, so that the agency representative may begin study of potential for greening of those buildings
- Provide answers to data request posed at meetings, specifically inclusion of incremental cost estimates for some ECOs, potential for newer technologies

## **X. Recommendations Meeting Agenda**

### **Sustainable Region Program Recommendations Meeting**

Date

Location

#### **Introductions and Opening Remarks**

The agency representative will open the meeting to re-introduce parties to each other.

#### **Review of Energy Conservation Opportunities (ECOs)**

The Agency representative and/or energy engineer will briefly review the ECOs contained in workbooks previously distributed to the local government staff.

#### **Discussion of Local Government's Preferred ECOs**

The Energy Team Leader will lead a discussion with the energy engineer and AGENCY representative to relay which ECOs best suit the local government's needs

Short-term (within 12 months)

Mid-term (1 to 4 years)

Long-term (5-plus years)

#### **Discussion of Any Local Government New Construction Plans**

The agency representative will discuss any new construction plans and recommendations with the agency (\*following the instructions in the Toolkit "New Construction" section).

#### **Next steps**

The agency representative will arrange meeting with Energy Team Leader to present final report including ECOs, new construction, and policy recommendations.



# APPENDIX C:

## Links to Other Toolkits and Guides

Several local governments, agencies, and communities have developed toolkits and guides to suit their unique needs. The following is a partial list of links to toolkits that can be of benefit to an agency during development of its Sustainable Region Program. Links already provided in the Sustainable Region Program Action Plan and SRP Toolkit have not been duplicated.

- [City of Chula Vista “Mission Green” Initiatives](#)
- [City of San Diego Sustainable Community Program](#)
- [County of San Diego’s Green Business Program](#)
- [Madison Wisconsin Sustainability Toolkit](#)
- [Energy Star Guidelines for Energy Management Overview](#)
- [Energy Efficiency Policy Toolkit](#)
- [NHHP Step by Step Toolkit](#)
- [Solar Powering Your Community: A Guide for Local Governments](#)
- [Cool California Local Government Toolkit](#)



# **APPENDIX D: SAMPLE Local Government Energy Assessment Report**

Appendix D is saved as a separate attachment due to large file size. It is the Energy Assessment Report developed and delivered to the City of Poway.

It is available online as an Acrobat PDF file at:

[www.energy.ca.gov/2009publications/CEC-600-2009-014/CEC-600-2009-014-ATTD.PDF](http://www.energy.ca.gov/2009publications/CEC-600-2009-014/CEC-600-2009-014-ATTD.PDF)