Southern California REGIONAL ENERGY NETWORK

Public Agency Program

Local Government Energy Efficiency Resources

Guidebook 2: Strategies to Build Project Support

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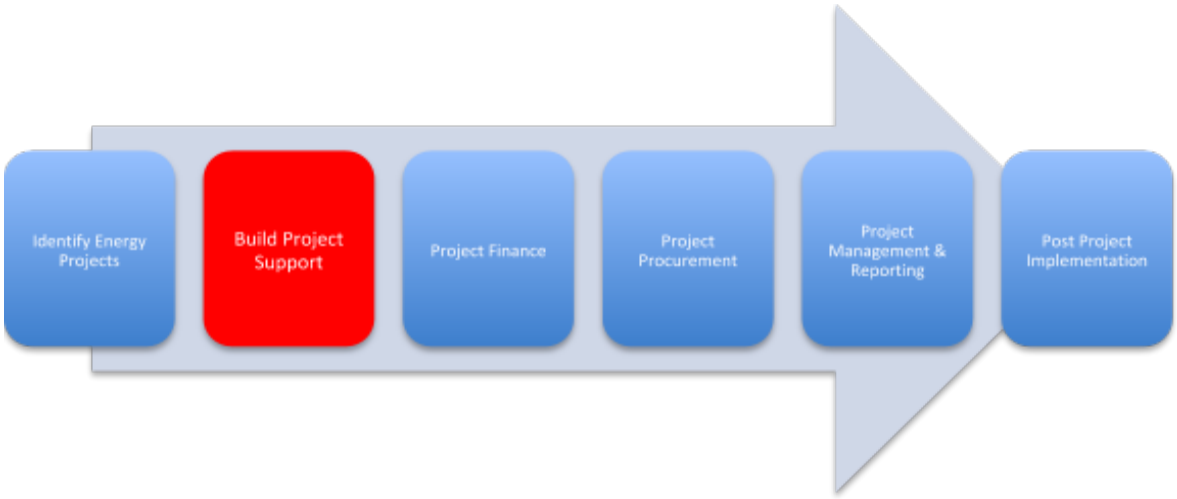
Guidebook 2: Strategies to Build Project Support



About The SoCalREN Public Agency Program

The County of Los Angeles/Southern California Regional Energy Network (SoCalREN) Public Agency Program (formerly known as The Energy Network) was created by the California Public Utilities Commission (CPUC) in 2012 to harness the collective power of residents, businesses, and the public sector to achieve an unprecedented level of energy savings across Southern California. The pilot phase is funded through the end of 2014.

The SoCalREN Public Agency Program provides free technical resources and expertise to qualifying public agencies. At no cost to your agency, The SoCalREN Public Agency Program identifies energy-saving measures and works side-by-side with your staff from design all the way through construction to help you accomplish your energy efficiency projects. Your agency pays for construction. We also help you arrange financing and process utility rebate and incentives. We are your objective, third-party experts. For public agencies it's also about using public funds wisely and being role models for their communities.

Guidebook 2: Strategies to Build Project Support

This guidebook addresses developing an Energy Management Program to help build broad support for identifying and implementing energy projects. It boils down how to set organization-wide goals and seek support from local government staff after energy opportunities are identified.

Table of Contents

Introduction

The SoCalREN Public Agency Program was established to develop a regional, collaborative approach to providing energy efficiency services for local governments. This is the second in a series of six guidebooks developed to assist local government staff in developing and managing energy management programs, including identification of energy projects, building project support, financing, procurement, project management and project closeout. This guidebook provides resources, guidelines and other tools to assist local governments in building an effective energy management program and in building support for implementing energy projects.

A 2009 McKinsey & Company study entitled "Unlocking Energy Efficiency in the U.S. Economy" states that, on average, 27 percent of building energy use could be avoided with a 4.2 year payback.[1] The potential for cost effective energy projects has been growing as energy costs continue to rise and new energy technologies become less costly (e.g., solar, light-emitting diode (LED) lighting, etc.).

> The first key to gaining support for energy projects is communicating the fact that good energy management is good fiscal management.

Despite the fact that there are significant opportunities for local governments to reduce energy use and costs through cost effective energy projects, many challenges exist, including gaining the necessary internal support to implement cost effective projects. There are many factors that contribute to this challenge, including lack of sufficient staff resources to manage projects, lack of financial resources to fund the projects, and in some cases, a general lack of confidence in the ability of energy projects to deliver promised savings.

In order to build the willingness of an organization to support good energy projects, it is necessary to build an understanding that there is a close tie between good energy management practices and good fiscal management. Energy costs are a significant liability for local governments. They also present a financial risk associated with the rising costs of energy over time. These rising costs threaten to deprive funding from other, more important, constituent services. Energy projects must be viewed for their real potential to create long-term cost savings, rather than simply focusing on their short-term costs.

This guidebook will address developing an Energy Management Program to help build broad support for identifying and implementing energy projects. A well-conceived Energy Management Program that establishes a working Energy Management Team, creates an organizational Energy Policy, and develops an Energy Action Plan, will establish a foundation for strong support of good energy projects.

[1] McKinsey & Company, Unlocking Energy Efficiency in the U.S. Economy, 2009; http://www.mckinsey.com/clientservice/electricpowernaturalgas/us_energy_efficiency/.

Challenges and Barriers to Gaining Support for Energy Projects

There are many challenges and barriers to gaining project support for energy projects. Energy management is generally not a core function of local government; therefore, there are many competing priorities and demands for time and resources. It is not uncommon for many local governments to lack sufficient staff and financial resources to dedicate to energy management programs. Table 1 lists some of the common challenges and barriers to building project support and outlines some approaches to overcoming these barriers that will be addressed in this Guidebook.

Table 1: Barriers and challenges to gaining energy project support

Challenge or Barrier	Potential Strategy or Solution
Lack of staff resources	Most local governments do not have the budget to support a full-time Energy Manager, however if an organization is going to succeed at identifying and implementing successful energy projects, it needs to accomplish the tasks normally assigned to an Energy Manager. Forming an Energy Management Team allows an organization to delegate and share the responsibilities associated with good energy management practices. Take advantage of The SoCalREN Public Agency Program's technical assistance offerings.
Lack of financial resources	Even the most well-conceived, cost effective energy projects may seem impossible to sell to senior management in a budget-constrained environment. There are a number of attractive financing options for energy projects available such as on-bill financing, various types of equipment leases, leasing through The SoCalREN Public Agency Program, performance contracts (ESCOs) and power purchase agreements that require no upfront capital (See Guidebook 3).
Lack of information, expertise and understanding of energy projects and alternatives	Engage professional technical assistance to identify and evaluate energy projects. Take advantage of technical assistance offerings available through utilities, the California Energy Commission, ENERGY STAR, The SoCalREN Public Agency Program, etc.
Lack of broad organizational support for energy actions	Develop an Energy Management Policy that is adopted by the City Council. This Policy should set the tone and lay the groundwork for broader organizational support for proactive energy management actions.
Lack of a plan	Energy management can be a complex process. Developing a good Energy Action Plan can help make the process more achievable. An energy project that is presented in the context of a well-conceived Energy Action Plan is more likely to receive support from management than an energy project absent the same Plan.

Communication	Communicating the "business case" for good energy projects is essential. Regular communication about energy management activities develops the case that energy management is not a "fringe" activity. Provide regular update to management on energy programs and project status and successes.
Lack of confidence in the ability of energy projects to deliver promised savings	Share case studies of how other local governments are reaping the rewards of being proactive by pursuing energy projects (fiscal rewards as well as recognition). Emphasize the soundness of the methods used to calculate/estimate energy savings that are proposed in the project proposal/ energy audit. Track energy savings from completed energy projects using historical billing data and an Enterprise Energy Management Information System (EEMIS). Communicate project successes to management.

Build support for energy projects starts long before you actually need approval for a specific project. Gaining the support and confidence of management that is necessary to support individual projects requires good communication, education about energy opportunities, careful prior planning, and a well-conceived energy management program.

The culture of each organization will determine specific strategies, methods, and the people who must be engaged to garner support for energy projects. Organizations that have a culture of being environmentally progressive will have a much easier time gaining this support. Organizations that have significant constraints on their budget will often be reluctant to pursue projects. Fortunately, there are many good financing options available to public agencies to overcome the challenge of financing (See Guidebook 3: Financing).

Building an Energy Management Program

Three critical steps to building an Energy Management Program and a culture that will support good energy management practices and projects include:

1. Forming an Energy Management Team
2. Developing an Energy Policy
3. Developing an Energy Action Plan

The Energy Management Team fills the need for staff resources to address good energy practices. An Energy Policy expresses the organization's overarching recognition and support for proactive energy actions. Finally, an Energy Action Plan will serve as the framework for making critical decisions, including funding energy projects that are directed at achieving the goals outlined in the Energy Policy.

Establishing an Energy Management Team

The first step to a building a good Energy Management Program is to form an Energy Management Team (EMT). Once in place, the EMT must have the appropriate support and resources necessary to lead and execute all aspects of an energy program.

One of the more important players in the EMT is the "Energy Champion." In most cases, an "Energy Champion" is identified as one that takes on improving energy efficiency as a personal goal within the organization. Harnessing the Champion's passion and commitment is crucial to developing the internal support for accomplishing meaningful energy improvement projects. In some cases, this can be more than one person (there could be an Energy Champion that sits on the Council or Board as well as an Energy Champion that is a staff member or management).

Most cities are not large enough to justify the cost of a full-time Energy Manager, however, identifying and empowering a staff member who takes on the responsibilities of an Energy Coordinator is critical for success. The "Energy Manager/Coordinator" is charged with coordinating all energy management functions. In many cases, this responsibility is assigned to a staff member in the Facilities or Public Works Department as a collateral assignment. The Energy Coordinator needs to be passionate about energy efficiency as well as given the appropriate support and resources by management to fulfill this function. Ideally, the Energy Coordinator is also an "Energy Champion."

The Energy Management Team participants and their roles and responsibilities may include (See Figure 1):

Director of Public Works/Facilities

- Overall responsibility for energy management programs and projects.
- Appoints, supervises and directs the Energy Coordinator (or Manager).
- Provides the Energy Coordinator the time and resources necessary to participate in relevant energy training.
- Reviews and submits energy policies, action plans and proposed projects to City Manager and Council for approval.
- Exercises authority to approve smaller projects.
- Coordinates energy program and projects with leadership of other departments such as IT, Planning, Water, Parks and Recreations, etc.

Energy Manager/Coordinator

- Reports to Public Works/Facilities.
- Is responsible for the day-to-day activities related to energy management, programs and projects.
- Monitors and tracks energy billing data, consumption and costs.

- Leads the development of an energy policy and energy management plan.
- Leads the identification, selection and oversight of all energy projects.
- Periodically reports progress on achieving energy reduction targets.
- Actively seeks out opportunities for education and training of staff.
- Coordinates energy program and projects with other departments such as IT, Planning, Water, Parks and Recreations, etc.

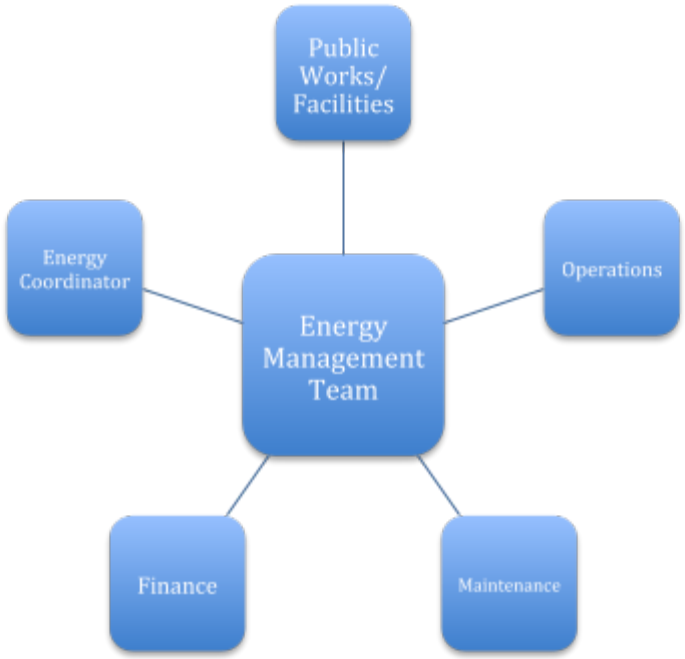
Maintenance/Operations

- Works with Public Works/Facilities to provide support for energy project development and implementation.
- Ensures all maintenance activities follow industry best practices and standards to ensure the highest level of energy performance (e.g., HVAC maintenance is conducted according to ASHRAE/ACCA Standard 180-2012 (Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems).

Finance

- Approves project expenditures and participates in the development of project procurement and financing mechanisms (e.g. loans, leases, performance contracts, etc.). (See Guidebook 3: Financing)
- Establishes criteria by which energy projects can be evaluated and approved (e.g., required simple payback).

Figure 1: Energy Management Team Participants



Although not a formal part of the Energy Team, the City Manager and City Council are important stakeholders that have a crucial role in the success of energy efficiency projects. Having a City Manager who is committed to a successful energy management program is a valuable asset. In addition, many cities have one or two City Council members who have a high level of interest in environmental and energy issues and are willing to proactively support and promote energy programs and projects.

Developing an Energy Management Policy

An important step toward gaining organization-wide support for energy projects is to establish an organization-wide commitment to good energy management practices through an Energy Management Policy that creates broad support for energy initiatives and, if possible, provides specific financial and staffing resources to support the Policy.

A Resolution by the City Council stating its Energy Management Policies establishes a strong foundation for building a proactive energy management program where senior management and the City Council have an expectation for receiving, supporting, and approving proposals for good energy projects. An Energy Policy should be developed by the Energy Management Team as soon as practical and brought to City Council for adoption.

The overall objectives of the Energy Policy should be identified early in the process. The organization's culture will influence which specific objectives are most important for any given organization. Typical policy objectives include:

- Good fiscal management. A well-conceived Energy Policy should clearly equate good energy management practices with good fiscal management and reinforce that good energy projects can free limited resources for more vital public service resources for constituents.
- Environmental commitment. The Energy Policy should be closely tied with the city's overall commitment to the environment. Energy production and use is one of the leading contributors to greenhouse gas emissions. Therefore, a proactive energy policy will further the city's commitment to the environment and climate change initiatives.
- Educate constituents and gain recognition. A proactive energy management policy can help educate constituents on the benefits of energy efficiency by leading-by-example. This can be done by improving the energy efficiency of municipal facilities and then communicating these successes to constituents through case studies and newsletters. The City can also partner with the utilities to promote energy efficiency programs for local residents and businesses.
- Improve overall energy reliability. This can be accomplished by reducing overall energy demand on the system and participating in demand response programs, both of which contribute to the reduction in the likelihood of system outages due to overloaded conditions.

- Mitigate risk. Local governments understand risk and the need to take action to mitigate various forms of risk. It is important to communicate the risk element of energy costs. Energy costs have increased significantly in the past 10 years and are expected to continue to increase at a growing rate over time. Since energy is not a discretionary purchase, future cost increases represent a significant risk to the ability to fund vital programs and services. Effective energy management is one of the best ways to mitigate this fiscal risk.

A Model Energy Policy can be found as Appendix A.

Develop an Energy Action Plan

Establishing an Energy Management Team and a meaningful Energy Policy are good first steps toward a successful energy management program and gaining energy project support. However, the challenges of identifying and evaluating energy projects in light of competing internal priorities and lack of staff resources can stall progress toward achieving the Policy's objectives. The overall Energy Management Policy creates a framework and guidance based on the priorities of the City Council. As a policy, it stops short of delineating actionable steps to achieve its objectives. That is accomplished through the development of an Energy Action Plan (EAP). The Energy Policy is the overarching document that points the direction and establishes energy efficiency goals and objectives. The EAP provides a detailed "map" and actionable, measurable steps for how the goals and objectives of the Energy Policy will be achieved over time.[2]

An Energy Action Plan includes an assessment of current energy use, establishes specific energy reduction goals, delineates specific steps to achieve these goals, and identifies methods for tracking results. The ability to track and measure program success is critical to continuous improvement, communicating results and ensuring the program's positive impact on the organization. An example of an Energy Action Plan can be found in Appendix B (City of Huntington Beach EAP).

A good Energy Action Plan addresses: Background and Introduction, Current Energy Use, Energy Goals, and Action Steps

Background and Introduction

The background section describes the overall drivers for the EAP, such as:

- Reducing current energy costs
- Protecting the City from future energy price increases
- Addressing climate change mandates

[2] An Energy Action Plan is also an essential element of the SCE Local Government Energy Leader Program that provides recognition and enhanced incentives for local governments that pursue proactive energy efficiency goals and actions.

- Identifying short-and long-term actions to achieve ongoing energy goals

A brief history (i.e., 5-10 years) of any prior energy planning activities, programs or projects, including:

- Past energy efficiency or other energy projects (e.g., ARRA-funded projects, facility energy assessments completed, past ESCO projects, etc.);
- Recently completed energy assessments or audits;
- Partnership programs or other contracts with utilities.

The "Purpose" or the "Long-Term Vision" of the EAP should be articulated. An example of long-term vision statements include:

- Reduce electricity consumption, demand, and expenditures on an annual basis;
- Increase the use of clean renewable energy supply; and
- Meet or exceed all regulatory requirements (e.g., AB 32);

Current Energy Use

This section summarizes current energy use by providing a detailed summary of energy use and costs by end use and by facility. The task of collecting historical energy use data and benchmarking facilities is described in detail in Guidebook 1.

Presented data should include:

- Total annual energy consumption and costs for the previous year.
- Total annual consumption and cost by end use (facilities, water pumping, streetlights, traffic signals, etc.)
- Historical energy use that notes any trends of significance, taking into account:
    - Energy efficiency projects
    - Potential weather and economic variability
    - Construction of new facilities

Provide a detailed description of all end uses (consumption and demand):

- Facilities
- Street Lighting
- Traffic Signals
- Water Pumps

Provide detailed consumption and demand for all facilities, including results of ENERGY STAR Benchmarking for each facility.

Energy Goals

Once a baseline energy use is identified, clear energy goals should be established. These can be energy use reduction goals or goals specific to certain activities, such as having audits done of all your facilities, upgrading all lighting systems, or increasing the use of renewable supply. The following are examples of typical energy goals:

- Achieve an overall 25 percent reduction in energy consumption by 2030
- Complete energy audits of all facilities and retro-commissioning of larger facilities and HVAC systems by 2015
- Increase the clean, renewable electricity supply (e.g., solar photovoltaics) to supply up to 50 percent of building energy use by 2030

It is useful and informative to tabulate specific energy reduction goals in terms of energy cost reductions/avoidance to reinforce the connection between the actions delineated in the EAP and good fiscal policy. For example, the goal "Overall 25 percent reduction in energy use by 2030" does not fully communicate the magnitude of the opportunity. Calculating and stating the cumulative energy cost savings is more meaningful from the perspective of the priorities of city leadership (good fiscal management).

Action Steps

The heart of the Energy Action Plan is identifying and recording specific actions to be taken by the organization to move toward meeting its energy goals. This section of the Plan includes specific steps to be taken to organize and equip the Energy Management Team to achieve the overall goals of the EAP. These action steps can include benchmarking facility energy use, engaging a consultant to perform energy audits/ retro-commissioning of facilities, conducting a briefing to City Council on energy issues, and eventually implementing specific energy projects that have been identified. These steps should also include any projects that have been identified to be cost effective and form the basis for their planning and accomplishment.

The Plan can, and should, be tracked by the Energy Management Team and updated regularly (at least quarterly) to reflect progress made and anticipated actions over the next time period (See Table 2). Periodic review of the activities outlined in the Action Plan is critical to gauge progress toward established targets, milestones, and deadlines.

Table 2: Energy Action Plan Steps

Action Step	Target Completion Date
Get historical energy use data from utility	April 2013
Benchmark all facilities	May 2013
Issue Request for Proposals to engage consultant to complete energy audits and building Retro-commissioning	June 2014
Complete energy audits/Retro-commissioning of all major facilities	July 2014
Complete lighting retrofit project of City Hall and Public Works	August 2013

When presenting projects to management and the City Council for approval, the information should be organized in a clear and concise manner, carefully explaining the need and justification for the project. If possible, it is useful to tie each project back to the organization's Energy Policy, emphasizing how the project will move the organization toward achieving its energy, cost and Greenhouse Gas (GHG) reduction goals. A brief summary of the project should be presented including estimated energy and cost savings as well as the simple payback. When communicating the benefits of the project, emphasize the benefits that specifically motivate leadership's decision-making in your organization (e.g., cost reduction). A sample "Energy Efficiency Project Proposal Summary" can be found in Appendix C.

Additional Considerations for Building an Effective Energy Management Program and Gaining Project Support

Building support for energy projects is not an exact science. It's a dynamic process that is largely dependent on factors such as the willingness of staff and leadership to champion these energy projects. There are several additional considerations and strategies that can help build the underlying support for energy projects.

Staff Education and Training

Energy is not a core function of local government staff. Therefore, education of stakeholders within the organization who need to support energy projects on relevant energy-related topics is critical element of building support for energy projects. Fortunately, there are many educational opportunities to build staff knowledge and expertise while growing in-house capacity to pursue energy projects. Education and training opportunities are available from

many sources, such as the Association of Energy Engineers (AEE)[3], EPA ENERGY STAR Webinars[4], the Local Government Sustainable Energy Coalition (LGSEC)[5], SCE's Energy Education Center[6] and other utility-supported energy programs such as The SoCalREN Public Agency Program.

There are numerous opportunities to provide staff with useful training that will provide them the resources necessary to identify good energy projects and to gain the necessary support to make those projects successful. It is incumbent upon the Energy Coordinator to continually watch for training opportunities and to request that resources be allocated for staff participation. Training provides staff with the information necessary to make informed recommendations and for management to make informed decisions.

Communications

Good communication strategies and skills are essential to build support throughout the decision-making process. All stakeholders need to be aware of how energy use impacts the organization. Increasing awareness of energy issues throughout all levels of the organization is an important step to building support for energy management initiatives. In order to gain support for your Energy Action Plan, it is essential to build a communication strategy that keeps all stakeholders of the organization informed on energy priorities, plans and actions. Effective communications come in many forms including:

- Informal or formal meetings – Periodic meetings should be arranged with key utility staff, such as account executives and government affairs representatives, to build strong working relationships with staff and key decision-makers.
- Action Plan updates – In addition to briefing management and the City Council during the adoption of the Energy Policy and Action plans, periodic (i.e., annual) updates should be made to the Council, updating them on the status of goals and action steps that are in progress.
- Project recommendations and presentations – Updates to the EAP should be made to management as projects are proposed for consideration and approval.

The message embedded in the communications strategy should target employees, management and other key stakeholders to make them aware of the organization's energy policy and goals to reduce energy consumption.

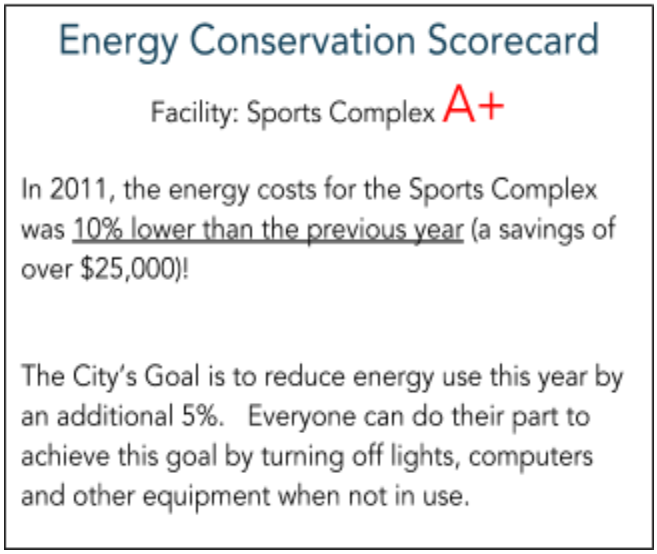
There are at least two major types of communications – general awareness and specific, targeted messaging. General awareness can be achieved by communicating the organizations' commitment to energy efficiency by using posters in common spaces or articles in newsletters to remind employees of the importance of energy conservation. The organization can also

[3] http://www.aeecenter.org/
[4] http://www.energystar.gov/
[5] http://www.lgc.org/lgsec/
[6] http://www.sce.com/b-sb/energy-centers/workshops-classes.htm

periodically recognize departments or individuals that show a high level of commitment to good energy practices. For example, designate the Month of May as "Energy Awareness Month."

Another possible approach is to periodically communicate energy performance of each facility to all staff using an "Energy Scorecard" and set energy savings targets for each facility to motivate employees to do their part to reduce energy consumption (See Figure 2). If people see that they can contribute and receive recognition for their efforts, overall support and awareness for energy management will be elevated. This awareness and support will be infused into leadership's mindset so that expect to see and support proposals for energy projects.

Figure SEQ Figure * ARABIC 2: Sample Facility Energy Scorecard



Gaining full commitment of senior management for an energy program is a matter of communicating how well-planned energy investments can deliver a positive return-on-investment in the form of energy cost reductions.

It is not uncommon for many stakeholders to be somewhat skeptical of the promise of energy projects and to doubt whether the projected savings are "real." Credibility can be gained by providing case studies and lessons learned from other organizations that have embarked on similar energy programs or projects.

Seek Out Recognition and Share Success

There are many opportunities for recognition of good energy management practices. Your City can join the ENERGY STAR Challenge at http://www.energystar.gov/ and work toward achieving an ENERGY STAR Award that recognizes top-performing organizations. There are also utility energy efficiency partnership awards and recognition such as the Institute for Local Government Beacon Award that recognizes exceptional efforts of local governments in the area of environmental and energy improvement. Gaining recognition and then sharing this success with stakeholders will strengthen the overall support for the Energy Action Plan and help gain project support for future energy projects.

Expand Your Network

The Energy Management Team participants should seek out opportunities to expand their network to include other local government energy staff and counterparts, utility program managers, The SoCalREN Public Agency Program, and other energy experts through participation in energy efficiency training, conferences and other programs. This network will help infuse project ideas and best practices into your energy management plan, which will give your management team the confidence to provide support for projects when the time comes. These networking opportunities should be indicated in the Energy Action Plan.

Foster Senior Management and City Council Ownership

One of the most important ways to garnish management and Council support, is through the adoption of the Energy Policy and the Energy Action Plan. Additionally, it is useful to increase your leadership's visibility of your energy efforts by seeking out opportunities for management to attend conferences and seminars that address the issues of decision makers. Lastly, once successful projects are implemented, seek out opportunities to apply for, and accept, awards and to present accomplishments at local government conferences. This helps create a strong sense of pride of ownership that will motivate leadership to support expansion of the energy program and to pursue additional project opportunities.

Summary of Guidelines for Gaining Project Support

Gaining support for energy projects is a long-term investment in time and resources. Management at all levels must have the confidence that energy projects will be successful and that the promised energy savings and investment returns have a high likelihood of being realized. The following is a summary of best practice guidelines for building project support:

- Form an Energy Management Team if your organization does not already have one. Ensure that all staff members who have a stake in good energy practices are involved.
- Ensure the Energy Management Team meets on a regular basis to maintain momentum and continuity of energy plans and projects.
- Involve the City Manager and City Council through periodic briefings on energy issues and updates on energy projects.
- Seek out leadership commitment to energy projects by starting with small, low-cost or no-cost measures.
- Develop an organization-wide Energy Policy and bring it to the City Council for adoption.
- Develop an Energy Action Plan that builds on the Energy Policy and delineates specific actions to be taken to achieve energy reduction goals. These actions will include energy projects for which you will be seeking support. Leadership will have more confidence in providing support for projects that are part of a well-conceived plan. Continue to update this plan as steps are completed and cost effective projects are identified.

- Understand, track and report energy use and costs for the organization. Management will be more inclined to provide support for projects that are tied to specific performance metrics.
- In all stages of building project support, emphasize the financial benefits of the project in terms of energy cost savings and the opportunity to reallocate these resources to provide needed services to local constituents.
- Be creative in the use of all possible funding sources to offset the costs of projects, including utility rebates, on-bill financing and piggyback leases such as the leasing program offered through The SoCalREN Public Agency Program (See Guidebook 3)[7].
- Seek out training and certification of staff. Staff that has a higher level of training and expertise in energy will have more credibility with senior management and be more likely to achieve project support than someone who does not have the same level of training and experience.
- When seeking out project support, always tie a project back to the Energy Policy and Energy Action Plans emphasizing how the project will move the organization toward achieving its energy and cost reduction goals. You are more likely to gain project support when the project is part of a bigger plan and supports a policy that has been adopted by the City Council.
- When communicating with leadership, emphasize the project benefits that specifically motivate leadership's decision-making in your organization (e.g., cost reductions, environmental stewardship, etc.).
- Maintain continuity of an overall energy improvement program and pursue projects in an incremental manner. Maintaining momentum will help make energy projects a continuous improvement process so that good energy projects become the expectation of leadership.
- Be aware of new opportunities that may evolve over time. What may not be a feasible option today can become a good project in the next five years as technology costs decrease.
- Seek out recognition for good energy management practices, such as an ENERGY STAR Award. Gaining project support is easier when the leadership has seen recognition for superior past performance.

A logic model for gaining project support is presented in Appendix D.

[7] http://www.socalren.com

Appendix A: Model Energy Policy

Energy Policy

City of _____, California

Council Policy

Subject: Energy Conservation and Management

Policy No.: 2012-01

Effective Date: January 1, 2012

Background

Energy is essential for maintaining our quality of life and economic prosperity. There is an inextricable relationship between electricity use and greenhouse gas (GHG) emissions. Additionally, energy costs have risen over 40 percent in the last 10 years. In response to these challenges, the City has an interest in taking positive steps toward reducing its electricity consumption, and as a result, its costs and the greenhouse gas ("GHG") emissions associated with electricity use.

The primary objective of this Energy Policy is to implement best energy management practices across all departments of the city. The benefits of this Policy are numerous, including:

- Reduced municipal utility costs.
- Reduce GHG emissions associated with municipal operations.
- Provide enhanced building performance and improved worksite conditions for employees.
- Increase the useful life of utility equipment and infrastructure.
- Set a positive example for the community.

This Policy sets target reduction goals for energy consumption. These goals are in-line with the California Public Utilities Commission's ("CPUC") California's Long-Term Energy Efficiency Strategic Plan[8] which call s for local governments to "lead-by-example" by setting aggressive targets for energy use reduction in the coming decades.

Policy

It is the Policy of the City of _____to:

[8] http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/eesp/

1. Establish an Energy Action Plan that establishes short, medium and long-term goals for reduction in energy consumption and the increased use of clean, renewable energy (e.g., solar photovoltaics). These goals are as follows:
2. Reduce annual electricity consumption by 5% by 2015.
    a. Reduce annual electricity consumption by 15% by 2020.
    b. Reduce annual electricity consumption by 30% by 2030.
    c. Despite increasing electricity prices, to reduce electricity expenditures on an annual basis.
    d. Increase the use of clean energy sources (e.g., solar photovoltaics) to supply 50% of the net energy demand from facilities by 2030.
    e. Meet or exceed compliance with all mandatory regulatory requirements (e.g., AB32)
3. When purchasing equipment to give priority to purchasing "Energy Star" labeled products whenever possible.
4. Retro-commission all facilities that are 10,000 square-feet and larger as soon as practicable, but no later than 2020.
5. Provide staff resources to participate in training to upgrade their skills and knowledge in order to better manage energy use and reduction strategies (e.g., Building Operators Certification).
6. Partner with other local governments and the utilities to pursue collaborative efforts to improve energy efficiency (e.g., Southern California Regional Energy Center).
7. Maintain a close, working relationship with utility account representatives to ensure the city is maximizing its benefits from utility rebate and other programs.
8. Implement any Energy Conservation Measures (ECMs) that have a return-on-investment of over 20 percent or greater while making the maximum use of utility rebates and incentives, and to ensure that there is sufficient funding in the Capital Budget for reasonable investment in cost-effective energy efficiency measures.
9. Ensure all new facilities are designed and constructed to exceed the current Title 24 by at least 25% and that all new facilities are properly commissioned.
10. All buildings and system will be maintained and operated in accordance with relevant standards and best practices to ensure they remain as energy efficient as possible.
11. Provide training for all staff on the importance of energy efficiency and how each can contribute toward reducing energy use and costs.

History: Adopted 01/01/2012

Appendix B: Sample Energy Action Plan (City of Huntington Beach)

Table of Contents

4/12/2011

EXECUTIVE SUMMARY

The city of Huntington Beach has a long-standing commitment to protect the environment and has recently expanded its focus to include sustainability. One expression of this commitment is this Energy Action Plan (EAP). This document outlines the city's history and commitment to (a) eliminating energy waste, (b) preparing for peak oil production and (c) reducing greenhouse gas emissions. The most significant action taken to date was the city council establishing a need for a full time energy project manager in 2008.

The areas of focus for the city's EAP are:

- Utility Bill audits and expenditure tracking
- Developing and managing energy efficiency projects
    - Utility partnerships
    - Monitoring Based Commissioning (MBCx)
    - IS energy efficiency
    - Energy efficiency retrofits/upgrades
    - HVAC and controls retrofits
- Managing Federal, State and utility grants and incentive programs
- Developing and managing renewable energy programs
- Developing energy & sustainability guidelines/policies
- Design best practices and resource sharing regionally through Local Government Energy Management Services Program (LGEMSP)

The city of Huntington Beach has developed a solid foundation from which to support future state and federal energy efficiency policy, while creating a resilient city poised to succeed in a carbon (fossil fuel) constrained economy. The city has already achieved success in its own facilities, improving their energy effectiveness. The community-wide strategy will meet success eliminating energy waste through the use of community based social marketing. Staff will aggressively seek funding for programmatic support to support the success of the pending community-wide strategies.

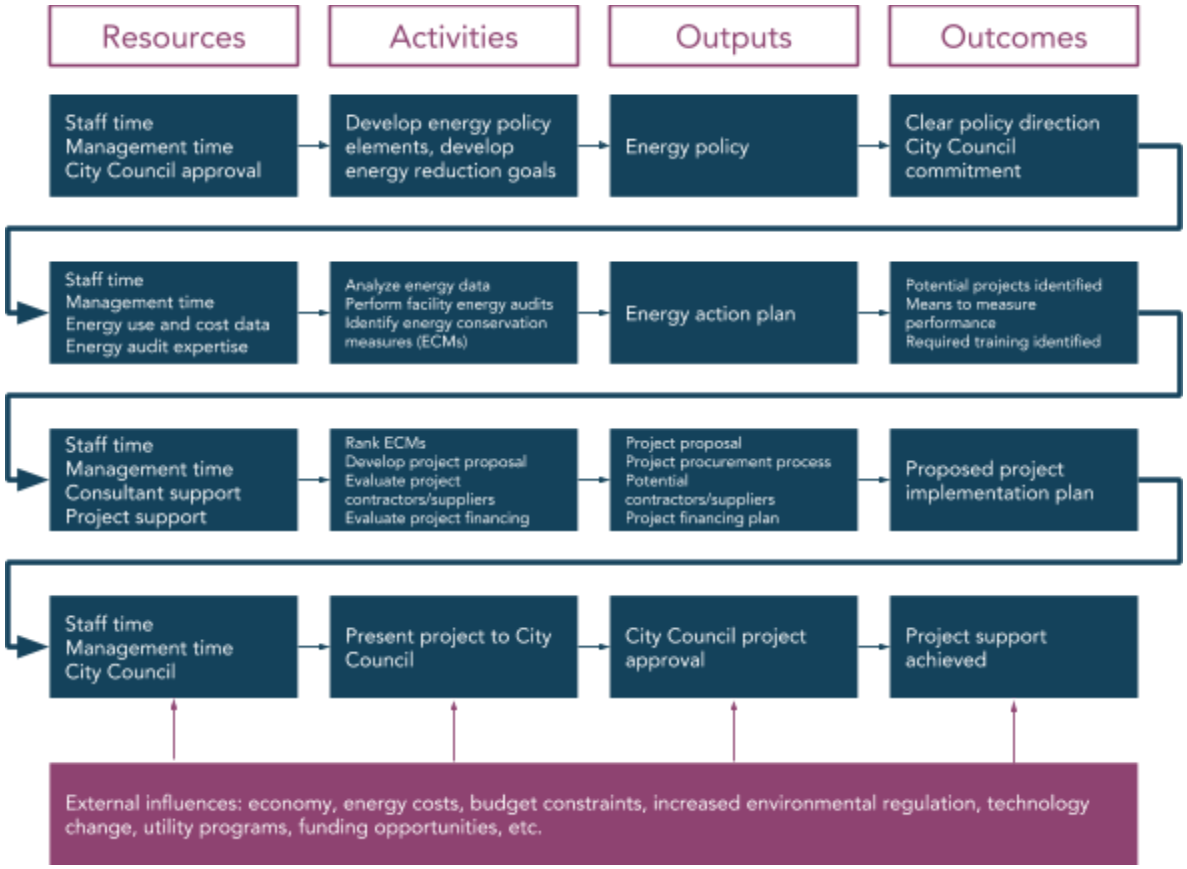
The methods, procedures and policies the city develops can serve as a template for other Orange County Cities in becoming more sustainable. Huntington Beach led the last energy revolution in Southern California with oil production over the last century and is poised to lead the next clean energy revolution in Southern California as we prepare for the impacts from peak oil production and climate change.

4/12/2011

Appendix C: Logic Model for Gaining Project Support

A Logic Model can express a clear and concise thought process for a well-designed energy management program that will produce good energy projects and receive the necessary support from decision-makers. A Logic Model describes the linkages between resources, activities, outputs, expected outcomes and external influences. Once this model is understood, staff can gain confidence in their ability to identify and propose projects that have a logical connection to a larger plan. A Logic Model for gaining project support through good energy management practices is illustrated in Figure 3.

Figure 3: Logic Model for Gaining Project Support



Resources include staff time, financial resources as well as other inputs required to support an energy management program such as training and partnerships with utilities. Activities include all action steps necessary to produce the energy management program outputs. Outputs are the results of good energy practices and projects. For example, implementing ongoing tracking of energy use data and benchmarking facilities is an activity that produces reports to management that communicate program success (or problems), one of several outputs of this activity.

Outcomes are characterized as changes or benefits resulting from activities and outputs (such as reduction in energy use, energy costs and GHG emissions). There are multiple, sequential outcomes that are expected with this approach. There are short-term outcomes, such as completing the development of the organization's Energy Policy, Action Plan and initial benchmarking of facilities. Intermediate outcomes include the identification of specific energy projects that can be completed as capital improvement projects, improved equipment maintenance, or behavioral changes. Long-term outcomes are a result of the entire process. These include energy use reductions, cost savings and a reduced carbon footprint as a result of GHG reductions associated with reduced energy use.

An important feature of the logic model is the identification and description of factors external to the program, not under its control that could influence its outcome either positively or negatively. It is important to consider and examine the external conditions under which a program is implemented and how those conditions may affect outcomes. This analysis helps communicate the assumptions on which performance expectations are set (e.g., increasing energy costs, legislative or regulatory trends, changing technology, etc.).

Measurement activities are an important outcome of the Logic Model. Verifying project savings that were expected and communicating these savings to stakeholders that support energy projects is important feedback that is necessary to garnish support for future energy projects. Measurement strategies can include ongoing monitoring of energy use of individual equipment (e.g., through a Building Management System) or energy use captured by a Utility Bill Management System.

Appendix D: Energy Organizations and Networks

Alliance to Save Energy (ASE)
ASE is a non-profit coalition of prominent business, government, environmental, and consumer leaders who promote the efficient and clean use of energy worldwide.
http://ase.org/

American Council for an Energy-Efficient Economy (ACEEE)
ACEEE is a non-profit organization committed to research, publications and conferences on energy efficiency in buildings, utilities, appliances, office equipment, industry and transportation.
http://www.aceee.org/

American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)
ASHRAE is a building technology professional society that conducts research, develops standards and publishes focuses on building systems, energy efficiency, indoor air quality and sustainability within the industry.
http://www.ashrae.org/

Building Operator Certification (BOC®)
The BOC is a nationally recognized, competency-based training and certification program that offers facilities personnel the improved job skills and knowledge to transform workplaces to be more comfortable, energy-efficient and environmentally friendly.
http://www.theboc.info/

California Energy Commission (CEC)
The CEC is the state's primary energy policy and planning agency that forecasts future energy needs; promotes energy efficiency and conservation by setting the state's appliance and building efficiency standards; supports public interest energy research that advances energy science and technology through research, development and demonstration programs;

develops renewable energy resources and alternative renewable energy technologies for buildings, industry and transportation; licenses thermal power plants 50 megawatts or larger and provides planning for and directing state response to energy emergencies.
http://www.energy.ca.gov/

California Lighting Technology Center (CLTC)
The California Lighting Technology Center's (CLTC) mission is to stimulate, facilitate, and accelerate the development and commercialization of energy-efficient lighting and daylighting technologies. CLTC accomplishes these goals through technology development, demonstrations, and outreach and education activities in partnership with utilities, lighting manufacturers, end users, builders, designers, researchers, academics, and government agencies.
http://cltc.ucdavis.edu/

California Public Utilities Commission (CPUC)
The CPUC regulates privately owned electric and natural gas companies and oversees all public benefit programs that promote energy efficiency, demand response and renewables.
http://www.cpuc.ca.gov/PUC/energy/

California Air Resources Board (CARB)
CARB is responsible for developing and overseeing the states efforts and protocol for quantification and reporting of greenhouse gas emissions inventories in order to ensure compliance with AB32.
http://www.arb.ca.gov/

California Commissioning Collaborative
A statewide industry organization that develops and promotes tools, resources and best practices for commissioning and retrocommissioning of buildings.
http://www.cacx.org/

Coalition for Better Buildings
The Coalition for Better Buildings (C4BB) is an alliance of companies and organizations dedicated to improve energy efficiency of commercial and multi-family buildings.
http://www.c4bb.org/

Consortium for Energy Efficiency (CEE)
CEE is a consortium of efficiency program administrators from across the U.S. and Canada who work together on common approaches to advancing efficiency.
http://www.cee1.org/

DesignLights consortium (DLC)
The DLC — a collaboration of utility companies and regional energy efficiency organizations — is committed to raising awareness of the benefits of efficient lighting in commercial buildings. The DLC contributes to the Qualified Products list for Solid State Lighting (SSL) commonly adopted by

utility companies as the criteria for LED incentives and rebates.
http://www.designlights.org/

U.S. Department of Energy (DOE)
The DOE The Office of Energy Efficiency and Renewable Energy (EERE) invests in clean energy technologies that strengthen the economy, protect the environment, and reduce dependence on foreign oil.
http://www.eere.energy.gov/

DOE Municipal Solid-State Street Lighting Consortium
The DOE Municipal Solid-State Street Lighting Consortium shares technical information and experiences related to LED street and area lighting demonstrations and serves as an objective resource for evaluating new products on the market intended for street and area lighting applications.
http://www1.eere.energy.gov/buildings/ssl/consortium_about.html

ENERGY STAR®
ENERGY STAR® is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping us all save money and protect the environment through energy efficient products and practices.
http://www.energystar.gov/

ENERGY STAR® Portfolio Manager
http://www.energystar.gov/benchmarking

Local Government Commission (LGC)
The LGC is a member-based organization that provides resources and programs to assist local governments in establishing and developing sustainable communities.
http://www.lgc.org/

International Facility Management Association (IFMA)
IFMA is an international association for facility management professionals and has a mission to advance the facility management profession by providing exceptional services, products, resources and opportunities. They deliver a variety of credentials for facilities managers including the CFM, FMP and SFP.
http://www.ifma.org/

The Illuminating Engineering Society of North America (IES)
The Illuminating Engineering Society of North America (IES) is the recognized technical authority on illumination. For over 100 years; its objective has been to communicate information on all aspects of good lighting practice to its members, to the lighting community, and to consumers, through a variety of programs, publications, and services.
http://www.iesna.org/

National Electrical Manufacturers Association (NEMA)
NEMA is the association of electrical equipment manufacturers. They publish hundreds of standards, application guides and white papers on a range of equipment including premium efficiency motors.
http://www.nema.org/

Southern California Edison (SCE)
SCE is the investor-owned utility that provides electric service to most portions of Southern California.
http://www.sce.com/

SoCalGas (SCG)
SCG is the investor-owned utility that provides natural gas service to most portions of Southern California.
http://www.socalgas.com/

The SoCalREN Public Agency Program
The SoCalREN Public Agency Program was created by the California Public Utilities Commission (CPUC) in 2012 to harness the collective power of residents, businesses, and the public sector to achieve an unprecedented level of energy savings across Southern California. The SoCalREN Public Agency Program provides free technical resources and expertise to qualifying public agencies. At no cost to your agency, The SoCalREN Public Agency Program Public Agency Program identifies energy-saving measures and works side-by-side with your staff from design all the way through construction to help you accomplish your energy efficiency projects. Your agency pays for construction. We also help you arrange financing and process utility rebate and incentives. We are your objective, third-party experts. For public agencies it's also about using public funds wisely and being role models for their communities.
http://www.theenergynetwork.com/

U.S. Green Building Council (USGBC)
USGBC's mission is to transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life. Their work includes the LEED Rating System and related professional credentials including the LEED Green Associate and LEED AP.
http://www.usgbc.org/