California Energy Commission

PRELIMINARY STATE ENERGY PROGRAM GUIDELINES

JULY 16, 2009

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American Recovery and Reinvestment Act 2009

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CHAPTER I: American Recovery and Reinvestment Act State Energy Program Guidelines

A. Background

The California Energy Commission (Energy Commission) has developed these Guidelines to administer specific programs funded by the State Energy Program (SEP) under the American Recovery and Reinvestment Act (ARRA) of 2009. ARRA was enacted by Congress to preserve and create jobs and promote economic recovery, to assist those most impacted by the recession, to provide investments needed to increase economic efficiency by spurring technological advances, and to make investments that will have long-term economic benefits. ARRA gives preference to projects that promote and enhance these objectives of the Act in an expeditious manner.

The U.S. Department of Energy (DOE) encourages states to develop SEP strategies that align with the following national goals: increasing jobs, reducing US oil dependency through increases in energy efficiency and deployment of renewable energy technologies, promoting economic vitality through an increase in "green jobs," and reducing green house gas emissions. DOE encourages states to focus their program efforts on market transformation initiatives and actions that align with these national goals. Market transformation is defined as: "Strategic interventions that cause lasting changes in the structure or function of a market or the behavior of market participants, resulting in an increase in adoption of energy efficiency and renewable energy products, services, and practices."[1]

These Guidelines summarize the manner in which the Energy Commission plans to implement the ARRA SEP Program for the following three specific program areas

1. Municipal Financing District Program ("AB 811-type programs")
2. California Comprehensive Residential Building Retrofit Program
3. Municipal and Commercial Building Targeted Measure Retrofit Program

Chapter I of the Guidelines provides overall guidelines for how the ARRA SEP program will be administered. Chapters II, III and IV describe the three program areas for which funding will be made available.

The Energy Commission plans to fund additional SEP programs, for which it will provide guidance at a later date. The Energy Commission will enter into partnerships with other State agencies to fund energy efficiency programs. For example, it intends to work with the Department of General Services to establish a revolving loan program for energy efficiency

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[1] See **http://www.energy.ca.gov/recovery/documents/SEP_Recovery_Act_Guidance_DE-FOA-00000521.pdf**

retrofits to state buildings and anticipates allocating approximately $25 million for this purpose. It also intends to work with the Employment Development Department and Employment Training Panel to support the Green Jobs Training Program and anticipates allocating $20 million for this purpose.

The Energy Commission also may allocate up to $50 million in SEP funds for competitive grants under the Energy Conservation and Assistance Account (ECAA) program, and may allocate up to $25 million to augment ECAA loans. The ECAA program provides low-interest loans for energy efficiency and renewable energy retrofits to cities, counties, special districts, public schools and colleges, public hospitals, and public care institutions.[2]

The Commission plans to conduct the Clean Energy Systems Program, which would provide up to $35 million to fund systems such as combined heat and power, distributed generation, and bioenergy.

The final allocation of SEP funds for the above noted purposes will be determined by the Energy Commission at a later date.

The Energy Commission will use roughly $10 million for program administration, implementation, technical support, and monitoring, verification and evaluation.

B. Funding

Up to $96 million dollars are available for the three ARRA SEP Programs included in this Guideline. These funds will be awarded based on the quality of the proposals submitted to the Energy Commission during the solicitation period. The Energy Commission will consider the ability of the proposed programs to implement energy saving projects on or before the March 31, 2012 deadline when making its funding allocation decisions.

C. Period of Performance

Pursuant to the federal SEP guidelines, all projects must be completed and funds must be expended by March 31, 2012.

An applicant may not begin work under these Guidelines prior to the Energy Commission's approval and execution of the applicant's award agreement. Project expenses incurred prior to the approval and execution of an award agreement are not eligible for reimbursement under the award agreement.

[2] See **http://www.energy.ca.gov/efficiency/financing/index.html**

D. Application Process and Selection Method

1. Solicitation Document

The Energy Commission will issue a solicitation document to initiate the application process. Eligible applicants who wish to receive funding for projects pursuant to these Guidelines must apply to the Energy Commission as specified in the solicitation document. The document will identify the following:

a) The program or program area for which the solicitation is issued;
b) Eligibility requirements;
c) Maximum amount of funds available under the solicitation, including any maximum or minimum amounts for individual funding awards;
d) Match fund requirements (if any);
e) Schedule or timetable for conducting the solicitation;
f) Administrative requirements for submitting applications, including forms and instructions;
g) Criteria used to screen and evaluate funding applications; and
h) A sample funding award agreement that the recipient will be expected to execute. The agreement will identify the terms and conditions applicable to an award and will include provisions that address matters such as funding award payments and invoicing, project management, progress reports, dispute resolution, award termination, and any provisions required by law.

The Energy Commission will release a solicitation in the form of a Request For Proposal (RFP). The Energy Commission will hold a pre-bid conference shortly after the release of the RFP. The intent of the pre-bid conference is to explain the intent and schedule of the solicitation, and to answer questions from potential applicants. Written questions can also be submitted to the Energy Commission. The Energy Commission will publish all questions and answers along with any addenda to the RFP approximately one week after the pre-bid conference. All proposals must be submitted to the Energy Commission on or before the deadline published in the RFP. The Energy Commission will evaluate the proposals, select the awardees and publish a Notice of Proposed Award.

Unless otherwise specified in a solicitation document, the Energy Commission or the Energy Commission's American Recovery and Reinvestment Act Ad Hoc Committee (ARRA Committee) may cancel a solicitation at any time prior to the final date applications are due under the solicitation.

2. Request for Funding

Eligible applicants who wish to receive program funding must apply for funding pursuant to the solicitation document described above. The RFP will specify both the address to which applications must be directed and the date by which they must be received.

Unless otherwise specified in the RFP, applications for funding must, at a minimum, include the following:

a) the name, address, and business contact information of applicant;
b) the name, address, and business contact information of the project contact;
c) an itemized budget for the project that identifies all related costs and expenses, including estimate of match amounts and sources; and
d) certification by an authorized representative of the applicant that the information included in the application is true and correct to the best of the individual's knowledge.

Applications may require additional information as required by law or the Energy Commission, as specified in the RFP.

3. Governing Board Documentation

Prior to the execution of any agreement by a city or county, all county and city applicants must provide an original signed resolution (or copy with original signed certification), order, motion, or ordinance of the local governing body that by law has authority to enter into the funding award agreement. This document must authorize the recipient to enter into the funding award agreement and designate an authorized representative to execute all necessary agreements to implement and carry out the purposes of the award. The recipient cannot begin Energy Commission-funded work until the resolution, order, motion, or ordinance has been fully executed and submitted to the Energy Commission and the Energy Commission has approved the award agreement. A sample governing board resolution may be provided in the solicitation document.

4. Data Universal Numbering System Number and Central Contractor Registration

Recipients of SEP funding must obtain a Dun and Bradstreet (D & B) Data Universal Numbering System (DUNS) number and register in the federal Central Contractor Registration (CCR) database.

DUNS Number

A DUNS number is a unique identifier used by the federal government to track distribution of federal funds. To obtain a DUNS number, visit **http://fedgov.dnb.com/webform** or contact the D&B Government Customer Response Center 1-866-705-5711. A DUNS number is required to register in the CCR database.

CCR Database

The CCR database is the federal government's primary registrant database. It collects, validates, stores and disseminates data in support of federal grants, cooperative agreements, and other forms of assistance. To register, please visit CCR's website at **http://www.ccr.gov**. Registrants must update or renew their registration at least once per year to maintain an active status.

E. Approval of Awards

The ARRA Committee will make recommendations for all funding awards, and an award agreement will be prepared. The award agreement will include the project description, work statement tasks and milestones, budget, and schedule. The award agreement must be approved by at an Energy Commission business meeting. Failure to meet any work statement tasks and milestones within the schedule or budget specified in the agreement may result in cancellation of the agreement by the Energy Commission.

F. Interpretation

Nothing in these Guidelines shall be construed to abridge the powers or authority of the Energy Commission or any Energy Commission-designated Committee as specified in Division 15 of the Public Resources Code, commencing with Section 25000, or Division 2 of Title 20 of the California Code of Regulations, commencing with Section 1001.

G. Effective Date of Guidelines

The Guidelines shall not be effective until adopted by the Energy Commission at a publicly-noticed meeting. The Energy Commission will post the draft proposed and final adopted Guidelines on its web site at:

http://www.energy.ca.gov/recovery/sep.html

Applicants may also obtain the Guidelines by contacting:

Hilary Twelves
(916) 651-2928
htwelves@energy.state.ca.us

H. Substantive Changes in Guidelines

Substantive changes to these Guidelines may be made by approval of the Energy Commission upon the recommendation of the ARRA Committee. Substantive changes shall take effect once adopted by the Energy Commission at a publicly noticed meeting with no less than 15-days public notice.

I. Non-Substantive Changes in Guidelines

Non-substantive changes to these Guidelines may be made upon the recommendation and approval of the ARRA Committee. Non-substantive changes shall take effect 15 days after the ARRA Committee has approved and publicly noticed the non-substantive changes. Non-substantive changes include, but are not limited to the following:

1. Changes to the formatting of any application, invoicing, reporting or other form.
2. Changes in the information required in any application, invoicing, reporting, or other form.

J. Confidentiality

Unless the program solicitation permits submission of confidential information, applications that contain confidential material will be disregarded and returned to the applicant. All applications submitted to the Energy Commission will be available for public inspection once the project selections are made, with the exception of confidential materials that may be permitted under a solicitation.

K. Cancellation of Awards

An applicant may withdraw its application for funding at any time prior to the Energy Commission approval of an award agreement. After the award agreement has been executed, the Energy Commission may terminate the award agreement under those circumstances and terms specified in the award agreement.

L. Funding Award Packages

Unless indicated otherwise in the solicitation document, the award package will include at a minimum the following:

1. An award agreement that includes the terms and conditions applicable to the award, and signature blocks for the recipient and Energy Commission;
2. A detailed description of project activities;
3. A schedule of project activities and corresponding due dates; and

4. An itemized budget for the project that identifies all related costs and expenses, including match funding and sources.

M. Award Payments and Invoicing

Unless indicated otherwise in the solicitation document or the award agreement, award payments shall be subject to the following conditions:

1. Payments will be made on a reimbursement basis, after the recipient submits the appropriate invoice(s) to the Energy Commission. (If an applicant is receiving funds from other funding sources(s), total funds requested by all sources shall not exceed the total cost of the project.)

2. Ten percent (10%) of the award agreement amount will be withheld as retention until the final report is received from the applicant and the Energy Commission's Project Manager determines the Project has been satisfactorily completed.

3. All invoices must be submitted with a completed payment request form, as specified by the Energy Commission, and accompanied by all backup documentation. The backup documentation must include copies of paid invoices and receipts detailing the specific equipment and purchases, the services produced, and personnel time records where appropriate.

4. Prior to final payment, the Energy Commission reserves the right to verify that the amount of the award agreement, when combined with all other sources of funding for the project, including any utility rebates or incentives, does not exceed 100% of the total project cost.

5. Energy Commission staff must approve all invoices. Such approval is subject to the recipient's acceptable submittal of the required progress reports, other specified products, and the appropriateness of the invoiced expenses under the funding award agreement.

N. Tracking and Reporting

Though recipients are encouraged to use SEP funding in conjunction with other funding, tracking and reporting of SEP funding must be separate to meet federal reporting requirements. The terms and conditions of the award will specify the format, tools and information required for reporting programmatic and energy metrics as specified by the federal government.

O. Reports and Documentation

All recipients will be required to submit regular progress reports and a final report to Energy Commission staff as specified in the applicable solicitation document and/or award agreement.

P. Project Extensions

Projects funded pursuant to these Guidelines must be completed and funds must be expended by the date specified in the award agreement. If the Commission determines that insufficient progress is being made towards implementing the project, and that there is significant risk that all funds will not be expended by the date specified in the award agreement, the award agreement will be terminated or amended and, if time allows, the funds will be reallocated as specified below (See "Reallocation of Funds" section).

If a project or portion of a project is not started by the date specified in the award agreement due to extenuating circumstances outside the control of the recipient, the recipient may make a written request to extend the date of project completion.

The ARRA Committee may extend the project completion date at its discretion. The ARRA Committee may consider an extension request only if it meets all of the following criteria and procedures:

1. In no event may the date that the project or the portion of the project is started be extended past the required date specified under ARRA or state law;
2. The applicant must show it has taken actions to mitigate the project delay;
3. The applicant must demonstrate that there are no other known obstacles in the way of completing the project;
4. The applicant must show it has incurred a legal obligation such as a contract or purchase order in an effort to complete the project as originally planned; and
5. The requested extension would otherwise comply with all of the eligibility requirements of the SEP Program Guidelines and solicitation document.

Q. Project Changes

Changes to the project's work statement, including changes to specific line items in the project budget, may be approved by the ARRA Committee under the following conditions:

1. Such changes must not substantially alter the original scope or purpose of the project as proposed in the application and as approved by the ARRA Committee and/or full Energy Commission; and
2. Such changes must not substantially reduce the value of the project. Unless indicated otherwise in the funding award agreement, all changes are subject to necessary approval

by the ARRA Committee. The recipient shall notify Energy Commission staff in writing and obtain either ARRA Committee or full Energy Commission approval, in advance of implementing any such changes.

R. Reallocation of Funds

Funding may be reallocated as necessary to best achieve the overall goals of ARRA and state law. Funds identified in a solicitation may be reallocated and used for another purpose only after the solicitation has closed and awards have been made or the solicitation has been cancelled. The Energy Commission may reallocate funds in an award agreement if the Energy Commission determines that insufficient progress is being made towards implementing the project, and that there is a significant risk that all funds in the agreement will not be expended by the date specified in the award agreement. The Energy Commission may terminate or amend the award agreement to accomplish this reallocation.

1. Over 20%: Reallocation of more than 20% may be made only by decision of the Energy Commission.
2. 20% or Less: Reallocation of 20% or less may be made by decision of the ARRA Committee.

Depending on the percentage to be reallocated, the ARRA Committee or Energy Commission (as appropriate), may reallocate funds and may increase or decrease funding in the following situations, without limitation:

3. If a funding award agreement is terminated prior to reimbursement of expenses, the unused portion of the award may be disencumbered and the remaining funds reallocated;

4. If a solicitation is cancelled and there are funds subject to that solicitation that have not been awarded;

5. If the Energy Commission determines that insufficient progress is being made towards implementing the project, and that there is significant risk that all funds will not be expended by the date specified in the award agreement; and

6. If additional funding becomes available for energy efficiency and economic recovery efforts, that may be applied to projects eligible for funding within this program.

S. Program Evaluation, Project Monitoring, and Verification

The Energy Commission may audit a sample of funding recipients to verify compliance with these Guidelines and the solicitation document, and to measure and verify appropriate use and expenditure of ARRA funds, as well as validate electricity and fuel reductions. In addition, the

Energy Commission will monitor the progress of award agreements and evaluate the effectiveness of the particular project.

T. Random Audits, Record Retention and Access to Facilities

Upon written request from the Energy Commission, the recipient shall provide detailed documentation of all expenses, allow the Energy Commission or its agent access to facilities and records, and allow the Energy Commission or its agent to collect data needed to measure and verify electricity and fuel reductions (this may include but is not limited to utility bills, metering data, facility equipment surveys, information on operational practices and site occupancy levels). Further, if requested, the recipient must provide the Energy Commission or its agent associated data from a period prior to the start of the project as necessary to establish baseline energy and/or fuel use.

In addition, the recipient must allow the Energy Commission or any other agency of the state, upon written request, to have reasonable access to and the right of inspection of all records that pertain to the project and to the recipients' energy use during the term of the agreement and for a period of three years after the ending term of the agreement. Further, the recipient must agree to incorporate an audit of this project within any scheduled audits, when specifically requested by the Energy Commission or the State of California.

The recipient must agree to include a similar right to audit in any subcontract with sub-funding awardees. The recipient shall retain all project records (including financial records, progress reports, payment requests, and electricity and fuel reduction documentation) for a minimum of three years after the project has been formally concluded, or final payment received, whichever is later, unless otherwise specified in the award agreement.

U. Use and Disclosure of Information and Reports

The Energy Commission or its authorized agents may use any information or records submitted to the Energy Commission or obtained as part of any audit pursuant to these Guidelines to determine eligibility and compliance with these Guidelines, applicable law, or a particular award agreement, to evaluate the pertinent program or program elements, and to prepare necessary reports as required by law. The information and records include, but are not limited to, applications for funding, invoices for award payments, and any documentation submitted in support of said applications or invoices.

Information and records submitted pursuant to these Guidelines will be disclosed to other governmental entities and policing authorities for civil and criminal investigation and enforcement purposes. This information and records may also be disclosed to the public pursuant to the California Public Records Act (Government Code Section 6250, et seq.). Personal information, such as taxpayer identification or social security numbers, will not be disclosed to the public.

Information concerning the identity of recipients and the amount or payment of awards is public information, and will be disclosed pursuant to the California Public Records Act. This information, along with other public information describing funding recipients, may be disclosed to members of the public to educate them and encourage further program participation. The information may be disclosed through the Energy Commission's website or other means, as the Energy Commission deems appropriate.

If, as part of any audit, the Energy Commission requires a recipient to provide copies of records that the recipient believes contain proprietary information entitled to protection under the California Public Records Act or other law, the recipient may request that such records be designated confidential pursuant to the Energy Commission's regulations for confidential designation, Title 20, California Code of Regulations, Section 2505.

V. Reconsideration and Appeal

Applicants may appeal the denial of an award pursuant to this section upon a showing that factors other than those described in these Guidelines were applied by the Energy Commission in denying an award.

1. Committee Reconsideration

   Any applicant that applied for but did not receive a funding award may petition the ARRA Committee for reconsideration. The petition for reconsideration shall be in writing and shall be submitted, together with any supporting documentation, to the ARRA Committee at the following address within 15 days of the date of the notice of funding denial:

   California Energy Commission
   American Recovery and Reinvestment Act Ad Hoc Committee
   1516 9th Street, MS-31
   Sacramento, CA 95814-5512

   The petition shall specify the basis for the appeal, state why the applicant believes the funding denial is improper given the eligibility criteria for the funding as specified in these Guidelines and the applicable solicitation, explain any supporting documentation filed with the petition, identify the legal authority or other basis supporting the petitioning party's position, and identify the remedy sought.

   Within 45 days of receipt of a complete petition, the ARRA Committee, in its discretion, shall either issue a decision based on its consideration of the petition and a response by

Energy Commission staff, or schedule a hearing to consider the petition. If a hearing is scheduled, the applicant shall be notified of the hearing date and any additional information the petitioner is directed to submit. This notice shall be given at least 15 days before the Committee hearing date. The ARRA Committee may direct the applicant and Energy Commission staff to attend the Committee hearing.

The ARRA Committee shall provide the applicant with a written decision on the petition within 45 days of holding the hearing. If the applicant disagrees with the ARRA Committee's decision, the applicant may appeal the decision to the Energy Commission under subsection 2 of this section.

2. Energy Commission Appeal

The applicant may appeal the ARRA Committee's decision by filing a letter of appeal with the Energy Commission within 15 days of the date of the Committee's decision. The letter of appeal shall state the basis of the applicant's appeal, explain why the Committee's decision is unacceptable, and provide any supporting documentation. The letter of appeal, supporting documentation, and a copy of the ARRA Committee's decision, shall be sent to the Energy Commission's Public Adviser at the address below:

California Energy Commission
Public Adviser's Office
1516 9th Street, MS-12
Sacramento, CA 95814-5512

Within 30 days of receipt of the letter of appeal, the Public Adviser shall coordinate with Energy Commission staff and arrange for the appeal to be presented to the Energy Commission at a regularly scheduled Business Meeting. The Public Adviser shall inform the applicant in writing of the Business Meeting date and the procedures for participating in the Business Meeting. The applicant party shall be responsible for presenting the appeal to the Energy Commission during the Business Meeting. Unless the Energy Commission determines otherwise during the course of the Business Meeting, a determination on the appeal shall be rendered during the Business Meeting.

W. Enforcement Action

1. Recovery of Overpayment

The ARRA Committee, with the concurrence of the Energy Commission, may direct the Energy Commission's Office of Chief Counsel to commence formal legal action against any recipient or former recipient to recover any portion of a funding award the Committee determines the recipient or former recipient was not otherwise entitled to receive.

2. Fraud and Misrepresentation

   The ARRA Committee may initiate an investigation of any recipient which the Committee has reason to believe may have misstated, falsified, or misrepresented information in applying for a funding award, invoicing for a funding award payment, or in reporting any information as required by the Guidelines. Based on the results of the investigation, the Committee may take any action it deems appropriate, including, but not limited to, cancellation of the funding award, recovery of any overpayment, and with the concurrence of the Energy Commission, recommending the initiation of an Attorney General investigation and prosecution pursuant to Government Code sections 12650, et seq., or other provisions of law.

CHAPTER II: Municipal Financing District Program (AB 811-type programs)

A. Program Summary

California law allows the legislative bodies of cities, counties, or groups of cities and counties in California to create a financing district in which property owners may enter into contractual assessments to finance the installation of energy efficiency or distributed renewable energy generation improvements that are permanently fixed to real property. Property owners would repay these assessments with their property taxes, and the lien associated with this assessment would have priority over previously-recorded private liens (such as a mortgage).

These municipal financing districts are a potentially important tool in the State's goal to increase energy efficiency and renewable energy generation in California, and they will decrease or eliminate the upfront costs property owners would normally incur in installing such improvements.

The purpose of the Energy Commission's Municipal Financing District Program is to assist cities, counties and groups of cities and counties in implementing or continuing their own financing district programs. The Energy Commission will work with local governments to ensure that their programs are structured to be cost-effective, sustainable, transparent and able to achieve the greatest energy savings for the amount invested. The Municipal Financing District Program will provide funds and support in the manner that will best help achieve those goals.

Local governments awarded funds under the Municipal Financing District Program will administer their programs, oversee quality control, and report to the Energy Commission on progress, effectiveness and energy savings. The local governments must initiate the financing district using the process described in California Streets and Highways Code Sections 5898.20 - 5898.32 and/or other applicable law, perform any legal validation actions, secure program funding, and administer the program or contract with a turnkey service to administer the program.

B. Program Structure

Proposals for the Municipal Financing District Program must include the following:

1. Financing Plan

   a) To insure the stability and success of the municipal financing district, the Energy Commission requires submittal of detailed information regarding the financing of the program. The financing plan must, at a minimum, answer the following questions:

b) Do you plan to issue bonds, or will you contract with a bank or other lender to issue loans for each property owner?
c) If you are issuing bonds:
    i. Do you have a source of interim financing available?
    ii. What is your bond rating?
    iii. What is the total dollar amount at which the loans will go to a bond sale?
d) What percentage of the total program cost are program startup and ongoing administration?
e) Do you have a letter of credit from a lender?
f) What interest rate are you offering property owners?
g) What are your program's minimum and maximum loan amounts?
h) How long is (are) the loan payback(s)?
i) Will your program's financing dovetail with other existing or potential energy efficiency and renewable energy financial incentives (i.e., California Solar Initiative, utility rebates, tax incentives)?

2. Uses for ARRA SEP funds

The Energy Commission intends to use the ARRA SEP funds in a manner that will best help local governments establish or continue their municipal financing district programs. The ARRA SEP funds should be used to increase lender confidence, lower interest rates, increase bond ratings and lessen the financial burden of local governments. The following are potential uses for the ARRA SEP funds:

a) Establish a loan loss reserve;
b) Cover program start-up costs, including legal counsel and financial advisor costs;
c) Cover some ongoing program administration costs (such as staffing, market surveys and marketing);
d) Interim financing (warehouse line of credit);
e) Interest rate buy-down;
f) Interest rate insurance, which may include an interest rate collar; and
g) Homeowner grants (for low income homeowners or energy efficiency retrofits)

Please indicate which of the above uses (multiple uses may be chosen) for Energy Commission funds you are proposing for the program. Include a detailed description of the effects you expect on your program as a result of the addition of these funds. This description should include the effect on application and other participant fees, interest rates, bond ratings, your general fund, leveraging of private and other funding, job creation and retention, energy use, and greenhouse gas emissions.

3. Matching Funds

In order for the program to be considered for SEP funds, you must be willing to match the Energy Commission's SEP funds received with an equal amount of your own Energy Efficiency Conservation Block Grants (EECBG), or the total amount of EECBG received, whichever is lower, or other match funding approved by the Commission. This requirement may be waived if your city or county has an unemployment rate that is higher than the state average.

Proposals also must include a description of additional programs, tax credits, and other incentives that will be used in conjunction with the proposed financing district to affect the greatest energy and cost savings to both the program and the consumer. These may include the California Solar Initiative, federal energy tax credits, and utility rebates.

4. Eligible Improvements

Programs requesting funds from the Energy Commission's Municipal Financing District Program must:

a) meet the requirements for the second and third tiers of the California Comprehensive Residential Building Retrofit Program for residential customers as specified by these SEP Guidelines;
b) include the permanent improvements eligible for the Municipal and Commercial Building Targeted Measure Retrofit Program as specified by these SEP Guidelines; and
c) pursue measures consistent with the state's loading order.

Additional measures can be proposed by Municipal Financing District Program applicants for consideration by the Energy Commission. Municipal Financing District Program measures must have previously demonstrated cost-effective energy savings in numerous applications and be permanently affixed to the property. Please enumerate all proposed eligible measures in your proposal, as well as an explanation of why measures not listed as eligible for the California Comprehensive Residential Building Retrofit Program or the Municipal and Commercial Targeted Measure Building Retrofit Program should be approved by the Energy Commission as part of the Municipal Financing District Program.

Whole-house retrofits are essential if the State is to meet its existing residential energy efficiency and climate change goals. Proposals that include requirements or incentives for whole-house retrofits are strongly encouraged.

5. Loading Order

To encourage the greatest possible benefit for the money invested, financing district programs must require energy efficiency improvements in advance of on-site solar electric (photovoltaic) generation or other on-site renewable energy generation. Installing energy efficient improvements first will lead to:

a) Installation of smaller and less costly solar electric systems;
b) Meeting a greater portion of the building's electricity load with the same size solar electric system; and
c) Maximizing energy savings for combined energy efficiency and solar electric projects, while providing positive cash flow for the total project.

Proposals must include a description of how the proposed project will require energy efficiency improvements first and provide incentives or other mechanisms to maximize energy efficiency.

6. Home Energy Ratings, Energy Audits and Building Commissioning

For residential customers the requirements of the California Comprehensive Residential Building Retrofit Program must be met, including providing California Home Energy Ratings or California Energy Audits, as specified by the California Home Energy Rating Program (HERS II), for third tier measures. For municipal and commercial customers, targeted measures approved by the Energy Commission may be provided. In addition municipal and commercial customers will benefit from energy audits and/or building commissioning projects to evaluate appropriate and comprehensive energy efficiency retrofits and operational improvements prior to installation of on-site solar electric generation. These measures will help property owners make well-informed decisions and lead to more focused and cost-effective retrofits. Documentation of the HERS Rating, Energy Audit or Building Commissioning educates and informs potential buyers at time of sale of the building about the improvements that were made to the property, thereby substantiating the lien that remains with the property.

Proposals for the Municipal Financing District Program must include a description of how residential measures will be provided consistent with the California Home Energy Rating Program, and how commercial energy audits and benchmarking will be conducted and funded as part of the Municipal Financing District Program.

7. Property Owner Qualifications

Since loans are tied to the property and not the borrower, municipal financing district programs to date have tended to require screening processes that generally have been less extensive than those for traditional loans. Given that the subprime lending crisis has been a major contributor to the current economic downturn, a major concern for both local governments and lenders in the development of financing district programs, has been the potential for participants in a financing district program to incur more debt than they are able to repay.

To guard against this possibility, municipal financing district programs should screen applicants for creditworthiness and require a loan-to-value ratio of at most 1:10. Please include in your proposal these and any additional qualifications property owners must meet to participate in your program.

8. Legal Considerations

Since the passage of AB 811, some cities and counties (for example, Sonoma County and the City of Palm Desert) have already begun their municipal financing district programs. However, others have cautioned that current statutes present legal issues that could potentially hamper the implementation of an energy efficiency/renewable energy funding program using the authorized contractual assessments. The most substantive of these issues, which may require clarification before widespread implementation of municipal financing district programs in California, are as follows:

a) Lien priority
b) Proposition 218
c) Mortgage provisions

Those implementing municipal financing district programs disagree that the concerns that have been voiced are legal barriers to the use of contractual assessments to fund energy efficiency and on-site solar electric generation. In this view, the main challenge of AB 811 is that it is a new, and largely untested, method of financing improvements to private property for public benefit, which may lead some local governments to proceed cautiously until the first wave of participants has used such programs successfully.

In advance of development, adoption and validation of a specific municipal financing district program by a particular jurisdiction, no unqualified legal opinion on these issues is possible. In order to obtain an unqualified opinion, the local agency proposing a financing district and/or a bond sale must submit the appropriate documentation (such as a resolution of intention, ordinance and notice) to the appropriate local superior court to begin a validation process. Validation, once brought to the court, can begin immediately, but the entire process will take at least three months. The validation process includes a 30-day public comment period. If no protest is filed, the validation could take little additional time and be decided in favor of the local agency. A contested validation could take years to resolve. If the court decides in favor of the program, the local agency's legal counsel may then provide an unqualified legal opinion. The resulting validation and opinion would only be applicable to the specific program brought forward by the local agency.

Mortgage provisions restricting the voluntary addition of a priority lien by the property owner are sometimes included in the contract between a lender and borrower. These provisions are not present in all mortgages. Some currently operating municipal financing district programs require lender consent to the priority lien before a property is allowed to participate, while others require such consent only for commercial participants. Residential participants in this case would only be required to notify the lender, or the program administrators may seek blanket consent for all residential participants from all mortgage lenders in the area.

Proposals for the Municipal Financing District Program must indicate whether they will be, have been, or are currently involved in a validation action for their financing district. If the validation action has already occurred, whether it was successful, and whether an unqualified legal opinion regarding the program has been received. In addition, proposals must describe how mortgage provisions restricting the voluntary addition of a priority lien will be handled for residential and for commercial property owners.

9. Sustainability

Programs funded through the Municipal Financing District Program must demonstrate sustainability and long-term viability. Sustainability may be achieved through the establishment of revolving loan funds or other methods. Applicants must describe the methods the program will use to ensure its sustainability. This description must include an explanation of how additional funds from the Energy Commission will aid the program to assure sustainability. Proposals that include a revolving loan fund must specify the following:

a. Whether an increased interest rate will be used to sustain the revolving fund;
b. How often additional capital will be infused into the revolving fund;
c. What percentage of the total amount of the fund this addition will constitute.

10. Regional Approach

The Energy Commission encourages collaboration among communities, on a county-by-county basis or through a joint powers authority, to create a larger and more effective municipal financing district. Financing district programs that operate on a countywide or regional scale will have the greatest opportunity for economies of scale and ease of pooling loans if bond sales are planned. Larger programs will have lower administrative costs while reaching more property owners throughout the State.

11. Quality Assurance

Energy efficiency and distributed renewable energy generation improvements funded through a Municipal Financing District Program must be installed properly and in good working order to ensure the cost-effectiveness, energy savings and reputation of the program.

Programs awarded funds through the Energy Commission's Municipal Financing District Program must have a means of ensuring and demonstrating the quality of installed energy improvements. Contractors installing improvements must comply with state and local licensing laws, obtain building permits, and properly field-verify any measures for which Title 24 Building Energy Efficiency Standards field verification protocols have been established.

Proposals must describe the above and any additional quality assurance measures that are or will be enacted by the program.

12. Documentation of Energy Savings

Because one of the metrics of a program's success is the amount of energy saved, a quantifiable measure of this savings must be demonstrated by Energy Commission-funded programs.

Municipal Financing District Programs should require where possible that participants submit electricity and gas bills for a period of one year before and two years after program participation to demonstrate the resulting energy savings, and the program administration should document this information in a report. Such data will not always be available, for example when a building purchaser or new commercial building tenant is the participant. When hourly data is available, access to that data should be provided. Proposals should state the span of time for which energy bills will be required, and provide details of how energy savings will be documented. Applicants must describe how energy savings will be documented when a building purchaser or new commercial building tenant is the participant, and provide a description of how savings will be documented through a post-installation HERS rating or energy audit or other means.

13. Program Transparency and Reporting

ARRA funds have stringent requirements regarding transparency, which any programs funded through the Energy Commission's Municipal Financing District Program must follow. Applicants must comply with federal reporting obligations, as specified in the federal SEP guidelines.[4] In addition,

The Energy Commission will require, at a minimum, the following information:

a) Copies of any consultant contracts
b) Description of the roles of all parties involved in the program
c) Any legal opinions and judicial validation decisions
d) Results of market research/surveys
e) Detailed program startup and ongoing administration costs
f) Details of loans made
g) Details of bonds sold, if applicable
h) A Progress Report due May 1, 2010
i) A Report providing a program description, problems encountered and how they were overcome, administrative costs, documented energy savings, detailed

[4] See **http://www.energy.ca.gov/recovery/documents/SEP_Recovery_Act_Guidance_DE-FOA-00000521.pdf**

description of the effects of Energy Commission funding on your program (including additional funding leveraged, interest rate and bond rating changes, etc.), description of quality assurance measures, number of jobs created/maintained, and an aggregate of loan information, broken down into groups according to the type of energy retrofit, and bond sale information, if applicable

j) Any additional requirements specified in the SEP Guidelines or the Solicitation document.

C. Evaluation Criteria

The following criteria will be used for evaluating proposals in response to the solicitation:

1. Workforce Development – extent to which workforce training is incorporated into the program.

   Job Creation and Retention – Job estimates should be based on the Council of Economic Advisers' *Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009*, May 2009.[5] The total investment in the program shall be divided by $92,000 per job-year to estimate the number of job-years created. The total investment should include SEP funding and all matching funds.

2. Economically Disadvantaged Areas – extent to which applicant's program is targeted to create jobs and enhance the economy in economically disadvantaged areas of the state that have been particularly impacted by California's housing and economic crisis.

3. Time Criticality – extent to which applicant establishes certainty that the ARRA SEP funding will be expended in the completion of actual energy retrofits by March 31, 2012, and will provide progress reports so that resources can be reallocated as necessary by July 1, 2010.

4. Program Design

   a) Financing Plan – extent to which applicant provides a feasible plan, with reasonably low interest rates, administrative costs and participant fees; level completion of the financial preparation for program launch or continuation;
   b) Uses for Energy Commission Funds – extent to which applicant's proposed uses for Energy Commission funds maximize the energy savings, leverage and cost effectiveness of the program;
   c) Matching Funds – extent to which applicant's program matches Energy Commission's funds with EECBG or other Energy Commission approved source of funds; use of additional programs, tax credits, and other incentives in conjunction with the proposed municipal financing district;

[5] See **http://www.recovery.gov/sites/default/files/Job-Years_Revised5-8.pdf**

d) Eligible Improvements – extent to which the applicant's program meets the eligibility requirements for the second and third tiers of the California Comprehensive Residential Building Retrofit Program, and provides requirements and/or incentives for whole-house retrofits for residential customers, and includes the targeted measures of the Commercial Building Targeted Measure Retrofit Program;
e) Loading Order – whether applicant's program requires energy efficiency in advance of on-site solar electric or other on-site renewable generation and provides incentives or other mechanisms to maximize energy efficiency;
f) Home Energy Ratings, Energy Audits, and Building Commissioning – extent to which applicant's program describes how residential measures will be provided consistent with the California Home Energy Rating Program, and how commercial energy audits and benchmarking will be conducted and funded as part of the Municipal Financing District Program;
g) Property Owner Qualifications – extent to which applicant's program reasonably screens participants to ensure that the additional debt will not create an undue burden on the borrower or lender;
h) Legal Considerations – extent to which applicant presents solutions to the potential legal concerns relating to the implementation of municipal financing programs including: lien priority, Proposition 218 and mortgage provisions; whether applicant has completed a successful validation action and/or an unqualified legal opinion regarding their program or the extent to which the applicant has planned these processes and documents the reasonable likelihood of success;
i) Sustainability – extent to which applicant's program will create lasting changes in the market, enabling the accomplishment of California's climate change and energy savings goals and continue to stimulate job creation and retention and revitalize the economy; reasoning and evidence presented in the applicant's proposal demonstrating sustainability;
j) Regional Approach – extent to which applicant's program is a collaborative effort with participation with multiple communities;
k) Quality Assurance – extent to which applicant's program complies with the quality assurance measures laid out in the California Comprehensive Residential Building Retrofit Program Guidelines; any additional quality assurance measures;
l) Documentation of Energy Savings – extent to which applicant plans to clearly measure and report on energy reductions achieved by program participants; length of time before and after program participation for which utility bills will be required; and
m) Program Transparency and Reporting – extent to which applicant explains how it will comply with the Energy Commission's transparency and reporting requirements.

5. Program Cost Effectiveness

   a) Proposals must provide information for the following three program cost effectiveness factors:
      i. Energy saved per State Energy Program dollar invested. Projects must achieve no less than 10 million source Btus saved per $1,000 spent;
      ii. Energy saved per total dollars invested, including matching funding; and
      iii. Ratio of administrative costs to total program costs.

Additional evaluation criteria may be specified in the solicitation document.

D. Eligible Applicants

Eligible applicants include cities, counties, or groups of cities and counties in California that are in the process of establishing or have already established a municipal financing district for the purposes of funding energy efficiency and on-site solar electric or other on site renewable energy generation improvements in accordance with California Streets and Highways Code Sections 5898.20 - 5898.32 and/or other applicable municipal financing district laws.

CHAPTER III: California Comprehensive Residential Building Retrofit Program

A. Program Summary

The purpose of the California Comprehensive Residential Building Retrofit Program is to create jobs and stimulate the economy through a comprehensive program to implement energy retrofits in existing residential buildings. The Program will work with regional groups of local governments, utilities, community colleges, national energy programs, and private and public energy and building contracting experts to deliver a tiered approach to put Californians back to work. The Program will focus on deploying re-trained construction workers and contractors and youth entering the job market to improve the energy efficiency and comfort of California's existing housing, creating in the process a sustainable energy workforce. In addition to pursuing energy retrofits in market-rate housing, the Program will coordinate with and leverage local affordable housing and neighborhood stabilization programs to bring the advantages of energy efficient housing to under-served, economically disadvantaged populations.

B. Program Structure

The California Comprehensive Residential Building Retrofit Program will use a three tiered approach to jump start the use of stimulus funds, making maximum use of unskilled labor and single trade contractors with limited training in energy efficiency retrofits, and launch training and provide support to develop the highly skilled workforce that will enable the whole-house, deep saving retrofits that are critical to achieving California and national energy and climate change mitigation goals.[6]

The three tiers are (see p. 36 for measure checklists for each tier):

Simple Checklist Approaches:

1) First Tier – Low-cost items that can be determined through visual inspection by a minimally trained person (low savings per home);
2) Second Tier – Measures that require installation by a specialty contractor (e.g., HVAC or Insulation) who can be trained in a short time with limited diagnostic equipment (moderate savings per home);

[6] The 2008 California Energy Action Plan adopted jointly by the California Energy Commission and the California Public Utilities Commission has established goals to achieve an average of 40% savings in existing California residences by 2020. Achieving these ambitious savings goals in California existing housing will strongly contribute to the greenhouse gas emission reduction targets for this sector by the Air Resources Board's 2008 Assembly Bill (AB) 32 Scoping Plan.

Whole-house Retrofits Approach:

3) Third Tier – HERS II Rater based approach with Raters and building performance contractors trained to accomplish deeper, comprehensive retrofits (high savings per home)

The first two tiers are based on simple checklist approaches that can be developed quickly and carried out with only limited training. The third tier is a deeper, comprehensive, whole-house retrofit approach that will rely on either 1) a Home Energy Rating System Program (HERS) Phase II Rater working in conjunction with specialty contractors to achieve whole-house retrofits or on 2) a HERS II Rater that is specially trained as a building performance contractor and is able to both perform the energy audit/rating needed to identify deep retrofits and supervise the installation through completion.

The First Tier checklist would be used by unskilled persons with limited training, such as high school students entering the workforce or neighborhood organizations active in the community who are branching out to helping get basic retrofits done in the local area. They would focus on simple measures that work in every home, such as installing CFLs, low flow showerheads and faucet aerators, identifying appliances that are near the end of their useful life and are good candidates for replacement with Energy Star appliances. They may also provide advice to homeowners about behavioral measures that can be taken, such as lowering hot water temperatures to 120^{o} F, properly operating windows for ventilation and free cooling and properly operating shades for keeping heat in during the winter and out during the summer. They would provide information fact sheets about other programs and resources in the community, including water conservation programs and utility rebates, and about do-it-yourself (D-I-Y) projects that the homeowner could consider. A major goal of the First Tier checklist approach is to encourage residential building owners to move to the more extensive retrofits achieved through the Second and Third Tiers.

The Second Tier checklist would be used by single trade contractors (specialty contractors) who would install the materials or equipment that appear on the checklist for which they are licensed to do work and are in business to provide. These might include HVAC contractors who replace furnaces, air conditioners or water heaters nearing the end of their useful lives with high efficiency equipment; electrical contractors who install lighting fixtures with high efficiency fixtures that use CFL or LED lamps; and insulation contractors who install attic and wall insulation. These contractors would employ many people from the construction trades who have been displaced by the bottom dropping out of the housing market and the tight economy's impact on discretionary income. Unfortunately, many of these trades currently are dominated by low-bid competition that results in poor installation quality and construction defects, which typically dramatically reduces the energy efficiency benefits of the equipment and materials they are installing. Training for the Second Tier would explain the priority measures that are on the checklist and how to raise the quality of the installation of those measures. Participating contractors would be required to comply with state and local business licensing laws and to pull building permits. Measures for which the Title 24 Building Energy Efficiency Standards have established field verification protocols would have to be field verified in conformance with those protocols and follow all field verification procedures established by those Standards (HERS Phase I).

The Third Tier approach builds on the concepts of HERS II and Home Performance with Energy Star to deliver comprehensive, whole-house energy efficiency measures that consider the interactive nature of the energy features in a home. This is the level of residential retrofits that ultimately will be needed in all California homes if national and California energy efficiency and climate change goals are to be met. California has an excellent base of HERS raters trained by the infrastructure that the Energy Commission has set up over the past 10 years for Title 24 and the recently adopted HERS II program that the Energy Commission adopted in December 2008. California also has a strong base of building performance contractors and well-developed training curricula developed by the California Building Performance Contractors Association over the past several years that can be easily transferred to the Community College systems and other training organizations to rapidly replicate and expand upon this training through ongoing mentoring, apprenticeships, and on-the-job support for contractors and workers who endeavor to deliver high quality work. The Third Tier focuses on "House as a System" principles, using diagnostic tools to insure high quality, well integrated measures that deliver not only energy efficiency and climate change mitigation, but also improved comfort, indoor air quality, and safer and quieter home environments. Measures would include building air sealing verified using blowerdoors, duct sealing verified using duct blasters, efficient duct installation verified through airflow measurement tools, insulation quality and thermal bypass avoidance verified through infrared cameras, and proper air conditioner refrigerant charge using gauges. This is the emerging future of providing high quality, whole-house retrofits that avoid the current construction defects that are ever-present in the marketplace. This field represents a major opportunity to re-deploy and re-skill California's hardest hit industry to provide highly sustainable and valuable services.

1. Local Government Consortia

The California Comprehensive Residential Building Retrofit Program is designed to collaborate with consortia of local governments in regions around the state that develop and operate programs to provide:

a) targeted information to recruit residential building owners to participate;
b) training and support for the workforce that will be deployed to provide each tier of retrofits;
c) access to and facilitation of retrofit financing, through municipal financing district programs, EECBG funding, Department of Community Services and Development (CSD) or California Public Utilities Commission administered low-income weatherization programs, other U.S. Department of Housing and Urban

Development (HUD) financing such as Energy Efficient Mortgages and other FHA and HUD financing, Energy Star financing, and utility or local program energy and water rebates and incentives;

d) support of and engagement in field verification consistent with the California Home Energy Rating System Program to insure quality installations and to monitor program results;

e) co-funding of incentives to seed programs that will be self-sustaining after the term of the ARRA funding expires.

The Energy Commission will enter into contracts with consortia of local government agencies covering a region of the state that are prepared to actively pursue the California Comprehensive Residential Building Retrofit Program in their regions. These consortia of governments will commit to hit the ground running to attack the residential retrofit opportunity in their region, through localized training and education of the persons involved in providing each tier of retrofits, coordination with local and regional efforts to provide financing and financial incentives, and targeted information to the homeowners in their areas to obtain program participation. Participating local governments will be encouraged both to provide match funding from EECBG funding going to local governments in their regions and to commit to coordinate with local municipal financing district programs that already exist or are emerging in their regions with the California Comprehensive Residential Building Retrofit program. Also, participating local governments will commit to actively coordinating with other financing and incentive mechanisms at work in their communities.

2. Collaboration with National and State Programs

The California Comprehensive Residential Building Retrofit Program will collaborate with the U.S. Environmental Protection Agency's (EPA) Home Performance with Energy Star Program (HPwES)[7] for achieving comprehensive, whole-house retrofits. The Sacramento Utility District (SMUD) and each of California's investor owned utilities (IOUs) are in the process of developing HPwES programs. Coordination with these HPwES programs will be strongly encouraged.

The DOE is also a strong proponent for HPwES. DOE has decided to allocate stimulus funds to enable their Building America teams to provide consultation for a neighborhood approach to achieve retrofits in existing homes. DOE's concept is that their Building America teams, who have been working for several years with production builders to achieve zero energy in newly constructed homes, are uniquely able to assist with the evaluation of older tracts of existing homes, which were built at the same point in time with similar features, to determine probable energy efficiency measures that would be suitable for entire neighborhoods and could be implemented with similar mass delivery approaches

[7] See **http://www.energystar.gov/index.cfm?c=home_improvement.hm_improvement_hpwes**

as those that production builders use Participating local governments will be encouraged to coordinate with this DOE approach.

The California Comprehensive Residential Building Retrofit Program also is interested in collaboration with HUD to coordinate with the variety of stimulus funded programs that they are conducting at the local level. This will include the Neighborhood Stabilization Program, weatherization and financing programs.

The California Comprehensive Residential Building Retrofit Program is intended to effectively contribute to California's ambitious energy savings and greenhouse gas emission (GHG) reduction goals established in the Energy Action Plan, CPUC Strategic Plan and ARB AB 32 Scoping Plan. These goals call for close collaboration between the Energy Commission, CPUC and ARB and coordination of the program delivery actions of each agency, including ARB climate change regulatory actions, Energy Commission establishment of standards and programs for residential retrofit (including the HERS II regulations for whole-house home energy ratings and energy audits), and the CPUC's direction to IOUs regarding rebates and home performance programs aimed at dramatically exceeding past utility program accomplishment of comprehensive residential retrofits. The California Comprehensive Residential Building Retrofit Program needs to be strongly coordinated with the efforts of the CPUC and ARB. In addition, the California Comprehensive Residential Building Retrofit Program needs to be coordinated to the extent feasible with California weatherization programs administered by both CSD and the CPUC.

3. Targeting Economically Disadvantaged Areas

One area of emphasis for the California Comprehensive Residential Building Retrofit Program will be on coordinating with local programs in areas that have been the hardest hit by the economic downturn. These areas suffer when inadequate attention to housing construction quality and energy efficiency, particularly in lower-income neighborhoods, result in high energy bills and poor comfort conditions.. The residents of this housing deserve strong attention to quality retrofits that reduce their energy bill burden as much as possible.

The foreclosed property targeted by the HUD Neighborhood Stabilization Program represents a special opportunity for the California Comprehensive Residential Building Retrofit Program. These foreclosed homes that stand vacant in need of rehabilitation to return them to satisfactory market condition are particularly strong candidates for comprehensive, whole-house retrofits, and provide an ideal learning environment for apprentices or recent trainees to learn on-the-job without the added complications of the presence of homeowners and personal property. The California Comprehensive Residential Building Retrofit Program will encourage local government participants to actively coordinate with their local Neighborhood Stabilization Program.

There also is an opportunity for the California Comprehensive Residential Building Retrofit Program to collaborate with low income weatherization programs, administered either by CSD or by the California Public Utilities Commission. This collaboration could work to achieve comprehensive retrofits in housing receiving weatherization program assistance consistent with the Second and Third Tiers of the California Comprehensive Residential Building Retrofit Program. This collaboration could be pursued using a "neighborhood approach" whereby neighborhoods that are made up of relatively homogeneous housing types and vintages could be evaluated to identify energy efficiency measures that would be expected to be consistently appropriate throughout the neighborhood. This neighborhood approach also could be considered for the income level immediately above that which is currently eligible for low-income weatherization programs, at approximately 200 – 300% of the poverty level.

4. Coordination with Workforce Training

Fundamental to the success of the California Comprehensive Residential Building Retrofit Program is the provision of training and ongoing mentoring, apprenticeships and support for the workers necessary to deliver each of the tiers of the Program. Training of these workers will be coordinated with the Energy Commission's ARRA SEP funded Green Jobs Training Program. The Green Jobs Training Program is working with public, private and nonprofit partners to develop a comprehensive, sustainable green workforce development program in California. This Program intends to leverage existing workforce partnerships by coordinating with state agencies, the State's Community College system and local workforce investment boards. At the local level the Green Jobs Training Program will be working with the 49 local workforce investment areas, which provide regional "one-stop centers" for assessment, training and placement for job seekers and businesses, and have long-standing relationships with local government and civic leaders, economic development agencies, labor and community organizations, and businesses. In addition this Program will be working with the State's investor owned utilities (IOUs) and publicly owned utilities (POUs), which operate energy training centers that provide education and workforce training related to energy efficiency. Local participants in the California Comprehensive Residential Building Retrofit Program will be expected to actively coordinate with the Green Jobs Training Program.

5. Funding Leveraging and Sustainability

The California Comprehensive Residential Building Retrofit Program is intended to create jobs, re-employ displaced workers, and re-train the hardest hit construction industry as a means of meeting DOE's SEP goal of strategic intervention that causes lasting changes in the market. It is intended to jump start the effort to meet California's aggressive Energy Action Plan goals to achieve an average of 40% savings in existing California residences by 2020. The Program intends to achieve sustainability after the term of the ARRA funds through three means: 1) coordinating with local financing initiatives; 2) leveraging local funding through match funding; and 3) seeding self-sustaining training approaches that will make permanent improvements to the skill level of the people who will be needed to deliver residential retrofits.

C. Evaluation Criteria

The following criteria will be used for evaluating proposals in response to the solicitation:

1. Leveraging of funding – extent to which ARRA SEP funding is matched by financing, incentives and program administration resources identified and committed by the applicant, including EECBG funding;
2. Sustainability – extent to which the applicant's program will create lasting changes in the market, enabling the accomplishment of California's climate change and energy savings goals for comprehensive residential retrofits and continue to stimulate job creation and revitalization of the economy; reasoning and evidence presented in the applicant's proposal demonstrating sustainability;
3. Economically Disadvantaged Areas – extent to which the applicant's program is targeted to create jobs and enhance the economy in economically disadvantaged areas of the state that have been particularly impacted by California's housing and economic crisis;
4. Total Job Creation – extent to which all resources brought together by the applicant will create jobs;
5. Total Energy and GHG Emissions Reductions – extent to which all resources brought together by the applicant will result in energy savings and GHG emissions reductions;
6. Time Criticality – extent to which the applicant establishes certainty that the ARRA SEP funding will be expended in the completion of actual energy retrofits by March 31, 2012 and will provide accurate information monitoring implementation progress so that resources can be re-allocated as necessary by July 1, 2010
7. Conformance with California Law – extent to which applicant insures compliance with California contractor licensing law, pulling of building permits, compliance with Title 24 field verification protocols and procedures (HERS I), compliance with HERS II regulations for whole-house home energy ratings and energy audits;
8. Collaboration with National and State Programs – extent to which the applicant collaborates with national and state programs, including but not limited to Home Performance with Energy Star; programs administered by HUD targeting low and moderate income housing, such as the Neighborhood Stabilization Program, Energy Efficient Mortgages and other HUD financing; Energy Commission efforts to establish programs to conduct home energy ratings at the time of sale and inclusion of ratings in multiple listing services; programs administered by the CPUC, CSD and/or ARB; the Green Jobs Training Program.

Additional evaluation criteria may be specified in the solicitation document.

California Comprehensive Residential Building Retrofit Program
Measure Checklists

First Tier – Low-cost Walk-through Using Newly Trained Unskilled Labor

- Install
  - CFLs, Low-flow Showerheads, Faucet Aerators
- Identify Appliances Near End of Useful Life that are Eligible for Utility Rebates
  - Energy Star Appliances - Refrigerator, Dish Washer, Clothes Washer
- Provide Information on Ways to Operate home to save energy, D-I-Y Measures, available Rebates and Financial Incentives

Second Tier – Installation Retrofits Using Newly Trained Single Trade Contractors

- Install Attic Insulation (pull permit and comply with T-24)
- Insulate Un-Insulated Walls (pull permit and comply with T-24)
- Install Floor Insulation (pull permit and comply with T-24)
- Replace near end of useful life air conditioner or furnace with Energy Star (pull permit and comply with T-24 quality protocols)
- Replace near end of useful life water heater with Energy Star (solar water heating)
- Install Cool Roof when reroofing (pull permit and comply with T-24)
- Install Radiant Barrier (pull permit and comply with T-24)
- Install Energy Star Windows (pull permit and comply with T-24)
- Install WaterSense Toilets, Showerheads, Landscape Irrigation Controllers

Third Tier – Whole-House Deep Retrofits Using HERS Phase II

- California Energy Audit/California HERS Rating
- Integrated approach that addresses all of the home's energy using features, resulting not only in energy savings but also often more valued comfort, indoor air quality, combustion safety, noise attenuation benefits which increase program participation
- Meshes with approaches used for EPA/DOE Home Performance with Energy Star program; deep retrofits are required to meet Energy Action Plan goals for existing residential buildings (40% savings in every home by 2020)
- Correct Thermal Barrier Defects – these defects allow cold and hot air from the attic, crawlspace or outside to leak into the interior walls and under insulation substantially reducing the usefulness of insulation that has been installed (assisted with blowerdoor and IR camera)
- Correct Duct Leakage (assisted with ductblaster)
- Correct Insulation Defects (assisted with blowerdoor and IR camera)
- Correct Combustion Safety Hazards
- Correct Air Conditioner and Furnace Installation Defects (assisted with refrigerant charge gauges and airflow devices)
- Install all Second Tier Measures that are determined to be cost effective and applicable for the house
- Install PV System that is well integrated with energy efficiency

CHAPTER IV: Municipal and Commercial Building Targeted Measure Retrofit Program

A. Program Summary

The Municipal and Commercial Building Targeted Measure Retrofit Program will focus on achieving significant energy savings from targeted retrofit measures where opportunities exist in large numbers across the state's municipal and commercial building sectors. The targeted measures to be employed in this program have repeatedly demonstrated 50-70% energy savings compared to the existing equipment that is replaced and have broad applicability in both public and private buildings. Some examples of these targeted measures are occupancy controlled bi-level lighting fixtures for parking lots, parking garages, exterior walkways, and building stairwells. There are also some broadly applicable targeted measures for commercial kitchen ventilation and HVAC controls. This is not a comprehensive retrofit program that considers all cost-effective retrofit measures for each specific building application. The focus of the Municipal and Commercial Building Targeted Measure Retrofit Program is to capitalize on low risk, high return efficiency opportunities across the state.

This Program builds on the successful Public Interest Energy Research (PIER) State Partnerships for Energy Efficiency (SPEED) technology demonstration program.[8] Because these targeted measures have been successfully deployed in numerous applications, energy savings in municipal and commercial buildings can be achieved at very low risk. Program participants can benefit from volume purchasing agreements with technology manufacturers to minimize payback periods. The targeted measures selected for deployment in the Municipal and Commercial Building Targeted Measure Retrofit Program must be market transformative, in that they must represent the best practice concepts for their specific applications, achieve significant energy savings compared to the existing technologies being replaced, and provide ancillary benefits such as higher quality building environments and reduced maintenance costs that will improve customer acceptance and demand.

Training entry-level workers to conduct the relatively straightforward energy audits necessary for these targeted measures is a key aspect of this program. Partnerships with community colleges and other local or regional organizations that can target workforce development activities in economically depressed areas of the state are also encouraged.

Municipal and Commercial Building Targeted Measure Retrofit Program applicants are encouraged to develop public and private partnerships to deploy these targeted measures quickly and effectively, leveraging other existing retrofit program funds to the extent possible. Local governments that are interested in using the Municipal and Commercial Building Targeted Measure Retrofit Program to complement the retrofits planned for the Energy

[8] See **http://pierpartnershipdemonstrations.com**

Efficiency Conservation Block Grant Program and/or the Energy Conservation Assistance Act (ECAA) Program should partner with other applicants for these programs. The Energy Commission intends to award Municipal and Commercial Building Targeted Measure Retrofit Program funds to a small number of program administrators who propose partnering with local governments and other public and private partners across the state to achieve the goals of the Municipal and Commercial Building Targeted Measure Retrofit Program.

Municipal and Commercial Building Targeted Measure Retrofit Program funds can be used to create new or increase existing efficiency incentive programs, provide match funding for other ARRA program areas, establish volume purchasing mechanisms, develop audit and retrofit training programs, deploy Municipal and Commercial Building Targeted Measure Retrofit Program marketing campaigns and/or complete the technology retrofits. Match funding and use of revolving funds will improve the overall cost-effectiveness of proposed Municipal and Commercial Building Targeted Measure Retrofit Programs.

B. Program Structure

The program proposals should include the following program design features:

1. Targeted Measure Retrofits

   These targeted measures have successfully demonstrated significant energy savings and are broadly applicable for both public and private municipal and commercial building sites.

   a) Occupancy Sensored Lighting Fixtures
      i. SMART Parking Lot Bi-Level Fixture
      ii. SMART Parking Garage Bi-Level Fixtures
      iii. SMART Pathway Lighting
      iv. SMART Wall Pack Fixtures
      v. Bi-Level Stairwell Fixture
   b) Task Ambient Office Lighting
   c) Task Ambient Desk Lamp
   d) Classroom Lighting
   e) Refrigerator Case LED Lighting with Occupancy Sensors
   f) Lighting Controls
      i. Wireless
      ii. Simplified Daylighting
   g) Kitchen Exhaust Variable Air Volume Controls
   h) HVAC Controls & Fault Detection
      i. Wireless - constant volume to variable air volume system conversion
      ii. Fault Detection for Packaged Units and Air Handlers

Additional targeted measures may be proposed by the Municipal and Commercial Building Targeted Measure Retrofit Program applicants for consideration by the Energy Commission. Proposed targeted measures must have previously demonstrated cost-effective energy savings in numerous applications and be broadly applicable to existing municipal and commercial building properties and be market transformative in nature.

2. Public and Private Partnerships

One possible Municipal and Commercial Building Targeted Measure Retrofit Program approach is for California's public sector to install these cost-effective targeted measures in large volumes, taking advantage of group purchasing arrangements already established by public agency associations. Once local governments and special districts are experienced in the purchasing and deployment of these targeted measures for their own buildings, they can then offer marketing, financing and technical support to deploy these targeted measures in private commercial buildings in their jurisdictions.

Another possible Municipal and Commercial Building Targeted Measure Retrofit Program approach is to recruit large retailers and other commercial businesses to deploy these targeted measures in their commercial properties across the state. These commercial enterprises can capitalize on the Municipal and Commercial Building Targeted Measure Retrofit Program marketing campaign to promote their participation in California's economic recovery.

Municipal and Commercial Building Targeted Measure Program proposals should describe the specific public and private partnerships that have been established and how these entities will participate in the program.

3. Workforce Development and Job Creation

Trainers, energy auditors, and retrofit technicians will be needed to deploy the Municipal and Commercial Building Targeted Measure Retrofit Program across California. Building these skills within California's workforce will also be part of the Energy Commission's ARRA SEP funded Green Jobs Training Program. The Green Jobs Program is working with public, private and nonprofit partners to develop a comprehensive, sustainable green workforce development program in California. The Green Jobs Program intends to leverage existing workforce partnerships by coordinating with state agencies, the State's Community College system and local workforce investment boards. At the local level, the Green Jobs Program will work with the 49 local workforce investment areas, which provide regional "one-stop centers" for assessment, training and placement for job seekers and businesses, and have long-standing relationships with local government and civic leaders, economic development agencies, labor and community organizations, and businesses. The Municipal and Commercial Targeted Measure Retrofit Program proposals should include a plan to coordinate training delivery with the ARRA SEP funded Green Jobs Training Program to the extent possible.

The Municipal and Commercial Building Targeted Measure Retrofit Program should also coordinate with the State's investor owned utilities and municipal utilities, which operate energy training centers that provide education and workforce training related to energy efficiency. Municipal and Commercial Building Targeted Measure Retrofit Program proposals should explain how the training needs of the Program will be met in coordination with these existing workforce development efforts across the state.

Job creation for dislocated and under-employed incumbent workers in construction and related technical trades is a program feature that should be addressed by the Municipal and Commercial Building Targeted Measure Retrofit Program applicants. Creating new jobs in areas of the state most in need of economic stimulus is also encouraged. The Energy Commission believes that partnering with community colleges, local government consortia, and local trade unions to deploy the Municipal and Commercial Building Targeted Measure Retrofit Program can provide jobs and save energy in communities throughout the state.

4. Volume Purchasing

Receiving volume discounts for the targeted measures is a key aspect of the Municipal and Commercial Building Targeted Measure Retrofit Program design. The following organizations have existing purchasing agreements that could be used to negotiate volume discounts for the targeted retrofit measures included in the Municipal and Commercial Building Targeted Measure Retrofit Program:

a) Department of General Services
b) University of California/California State University/California Community Colleges (UC/CSUS/CCC)
c) U.S. Communities Government Purchasing Alliance – California Cities & Counties
d) California Special Districts Association

In addition, the SPEED Program has begun to negotiate and facilitate volume purchasing for some of the efficient lighting targeted measures [9]

[9] see **http://www.thelightingportal.com/gpp/**

5. Match Funding

Match funding is not explicitly required for the Municipal and Commercial Targeted Measure Retrofit Program but proposals will be evaluated on their overall program cost effectiveness, which will improve proportionally with additional match funding. Match funding can be provided from a variety of sources including but not limited to other ARRA SEP programs, IOU and POU energy efficiency programs, local government initiatives, public university and college energy bond programs, private financing and federal tax credits.

6. Marketing & Outreach

Achieving statewide deployment of specific targeted measures in municipal and commercial building is the core design concept for the Statewide Municipal and Commercial Building Targeted Measure Retrofit Program. Success will require an excellent marketing strategy and key partnerships. Working with the Energy Commission, the following organizations provide support to their members, organize conferences and other activities that make them good candidates to provide marketing and outreach assistance to the Municipal and Commercial Building Targeted Measure Retrofit Program:

a) Coalition for Adequate School Housing
b) Local Government Sustainable Energy Coalition
c) California Special Districts Association
d) League of California Cities
e) California State Association of Counties
f) State Agency Energy Policy Advisory Committee
g) Annual UC, CSU, CCC Sustainability Conference
h) California Retailers Association
i) California Grocers Association
j) Building Owners and Managers Association
k) California Building Properties Association

7. Technical Support

Some Municipal and Commercial Building Targeted Measure Retrofit Program funds can be allocated to existing Energy Commission Interagency Agreements with the California Lighting Technology Center (CLTC) and the Western Cooling Efficiency Center (WCEC) for technical support and training. CLTC has been instrumental in deploying efficient lighting technologies in UC campuses and in negotiating group purchasing agreements with manufacturers for the SPEED program. The WCEC can provide similar technical support for the HVAC related retrofit technologies. These centers can also develop simple audit tools and other training materials for "train the trainer" programs with Community Colleges and other training organizations across the state. Program applicants should work with CLTC and WCEC to propose the level and type of technical support from these statewide centers to be included in the Municipal and Commercial Building Targeted Measure Retrofit Program.

8. Project Reporting

   The basic ARRA reporting requirements will be incorporated into the project reporting for the Municipal and Targeted Measure Building Retrofit Program. The Energy Commission will likely require additional reporting requirements to track each ARRA funded project in the state and for program evaluation purposes. Municipal and Commercial Building Targeted Measure Retrofit Program applicants should propose innovative and cost-effective methods of collecting project performance data, computing key project metrics, sending this information to the Energy Commission electronically and publishing project results on the internet. All Municipal and Commercial Building Targeted Measure Retrofit Program reporting methods must be flexible enough to meet future tracking and reporting requirements that will be established by the Energy Commission during the early implementation stages of the ARRA program.

C. Evaluation Criteria

The following criteria will be used for evaluating proposals in response to the solicitation:

1. Workforce Development

   The Energy Commission is seeking effective approaches to bring entry-level workers into the energy efficiency workforce to assist in the deployment of the most cost effective easy to implement targeted measures. Municipal and Commercial Building Targeted Measure Retrofit Program proposals will be evaluated on their approach to training auditors, retrofit technicians and other trainers. Collaborations with the Green Jobs Training Program and other training organizations should be documented in the proposals.

2. Job Creation

   Job estimates should be based on the Council of Economic Advisers' Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009, May 2009. The total investment in the program shall be divided by $92,000 per job-year to estimate the number of job-years created. The total investment should include SEP funding and all matching funds. Actual job creation information will be required to be reported as the projects progress.

3. Program Design

   Municipal and Commercial Building Targeted Measure Retrofit Program proposals will be evaluated on their overall approach to deploy the cost effective and easy to implement targeted measures throughout California. In addition to workforce development and job creation, the Municipal and Commercial Building Targeted Measure Retrofit Program designs should include secured public and/or private partnerships, collaboration with existing and/or emerging commercial building retrofit programs, a well-developed approach for volume discounts, and a comprehensive marketing strategy. The Program design should also include a well-developed strategy and schedule of program action milestones and deliverables to ensure that the efficiency retrofits will be completed before the March 2012 deadline.

4. Program Cost Effectiveness

   The principal element of cost effectiveness that will be evaluated is energy saved per dollar invested. U.S. DOE requires that ARRA projects achieve no less than 10 million source Btu's saved per $1,000 spent. The dollars spent include only the ARRA SEP funds. The savings to report are those resulting from the total dollars spent, including match funding.

5. Energy Metrics Project Reporting

   Municipal and Commercial Building Targeted Measure Retrofit Program proposals will be evaluated on their proposed approach to collect project performance data, compute key project metrics, transfer data to the Energy Commission and publish project results.

Additional evaluation criteria may be specified in the solicitation document.

D. Eligible Applicants

Public, nonprofit or private agencies acting as a Program Administrator are eligible to apply to the Municipal and Commercial Building Targeted Measure Retrofit Program. The Program Administrator is expected to partner with public and private entities to implement the Program. Local governments or special districts interested in participating in this Program should collaborate with an existing public entity, nonprofit agency or private business that can act as a Program Administrator.