

**FIRST AMENDED PROGRAMMATIC AGREEMENT
AMONG THE CALIFORNIA ENERGY COMMISSION,
THE DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT,
THE UNITED STATES DEPARTMENT OF ENERGY, AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING SECTION 106 COMPLIANCE FOR DEPARTMENT OF ENERGY
AMERICAN RECOVERY AND REINVESTMENT ACT PROGRAMS**

WHEREAS, the United States Department of Energy (DOE) administers the *Energy Efficiency and Conservation Block Grant Program* under the Energy Independence and Securities Act of 2007 (EECBG), administers the *State Energy Program* under the Energy Policy and Conservation Act of 1975 and the State Energy Efficiency Programs Improvement Act of 1990 (SEP), and administers the Weatherization Assistance Program (WAP) for low-income persons under Title IV of the Energy Conservation and Production Act, the Energy Policy Act of 2005, and the Energy Independence and Security Act of 2007, and provides financial assistance for the EECBG, SEP, and WAP under the American Recovery and Reinvestment Act of 2009 (ARRA); collectively referred to as the "DOE ARRA" programs; and

WHEREAS, the unprecedented levels of funding available to the DOE ARRA programs has created a large volume of projects requiring expedited historic preservation reviews to ensure the timely obligation of funds, that create new jobs, and improve local and state economies; and

WHEREAS, the California State Office of Historic Preservation (OHP) is experiencing unprecedented numbers of requests for historic preservation review of undertakings funded by all Federal Agencies, including undertakings funded by the DOE ARRA programs; and

WHEREAS, the California State Energy Resources Conservation and Development Commission (Energy Commission) and the California Department of Community Services and Development (CSD) are receiving financial assistance from DOE to carry out the DOE ARRA programs; and

WHEREAS, the projects funded by the DOE ARRA programs are undertakings subject to review under Section 106 of the National Historic Preservation Act, 16 USC 470f (NHPA) and its implementing regulations at 36 CFR Part 800 and include energy efficiency retrofits, renewables, and weatherization (undertakings); and

WHEREAS, the DOE's August 28, 2009 *Memorandum from Office of Energy Efficiency and Renewable Energy Regarding Delegation of Authority for Section 106 Review of Undertakings, Assisted by the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy* authorizes recipients of DOE ARRA program awards to initiate consultation with the California State Historic

Preservation Officer (SHPO) pursuant to Section 106 of the National Historic Preservation Act of 1966 (16 USC 470f), as amended, and implementing regulations in 36 CFR Part 800, and to carry out steps with the SHPO in that regulatory process; and

WHEREAS, the Energy Commission, CSD, and the DOE have determined that the administration of the DOE ARRA programs may have the potential to adversely affect properties included in or eligible for inclusion in the National Register of Historic Places (National Register), historic properties, and has consulted with the SHPO pursuant to 36 CFR § 800.14(b)(3) and DOE's aforementioned August 28, 2009 *Memorandum Regarding Delegation of Authority for Section 106 Review*; and

WHEREAS, the Energy Commission's consultation with the SHPO resulted in an interim agreement between the Energy Commission and the SHPO, dated December 29, 2009, that established an expedited review process for exempt undertakings not subject to the SHPO's direct review, and a subsequent programmatic agreement between the Energy Commission and SHPO, dated February 19, 2010, that clarified and more formally memorialized the review process for exempt undertakings not subject to the SHPO's direct review; and

WHEREAS, Section XI of the February 18, 2010, programmatic agreement between the Energy Commission and the SHPO contemplates amendments to the agreement from time to time to better clarify and identify exempt undertakings not subject to the SHPO's review; and

WHEREAS, the Energy Commission, CSD, the DOE, and the SHPO now desire to amend the February 18, 2010 programmatic agreement to add CSD and the DOE as parties and to further clarify the review process, identify additional exempt undertakings not subject to the SHPO review, and to conform the programmatic agreement to subsequent guidance by the DOE; and

WHEREAS, the Energy Commission, CSD, the DOE, and SHPO agree to amend the February 18, 2010 programmatic agreement.

NOW THEREFORE, the Energy Commission, CSD, the DOE, and SHPO agree that the DOE ARRA programs will be administered in accordance with the following stipulations in order to take into account the effects of the undertakings proposed under these programs on historic properties, and further agree that these stipulations shall govern the administration of these programs until this Agreement is amended, expires, or is terminated.

STIPULATIONS

The Energy Commission, CSD, and the DOE shall ensure that the following measures are carried out:

I. APPLICABILITY OF AGREEMENT

- A. The review process established by this Agreement will be completed prior to any property owner altering any property eligible for assistance under the subject DOE ARRA programs. The review process may take place after the Energy Commission, CSD, or the DOE have awarded DOE ARRA program funds for a particular program, project or undertaking, but must occur prior to the commencement of any work on the particular program, project or undertaking. Any program, project, or undertaking will be reviewed in accordance with the procedures outlined in 36 CFR Part 800.
- B. Attachment A establishes categories of individual undertakings under the DOE ARRA programs that are exempt from SHPO review. These individual undertakings are not expected to be on Tribal lands and are primarily smaller scale activities and routine projects, without the potential for adversely affecting historic properties, rather than complex undertakings with a greater potential to adversely affect historic properties. The Energy Commission, CSD and the DOE shall perform the following review to determine whether a particular undertaking qualifies for a review exemption under Attachment A.

1. Energy Commission Review.

The Energy Commission shall review documentation from applicants for DOE ARRA program funds to verify that individual undertakings qualify for review exemption under Attachment A, report such exemptions to the SHPO in accordance with stipulation VIII below, and retain that documentation for three (3) years. The applicant's documentation may include a certification by the applicant, a sub-grantee of the applicant, or the contractor conducting the project that the individual undertaking qualifies for a review exemption. It is understood by the SHPO that the Energy Commission review pursuant to this Agreement shall be performed by Energy Commission staff in the Cultural Resources Unit of the Environmental Protection Office of the Energy Commission's Siting, Transmission, and Environmental Protection Division, or by equivalent Energy Commission staff of similar qualifications, expertise, and experience in the Section 106 consultation process and that meet the Secretary of the Interior's Professional Qualifications Standards (36 CFR Part 61).

2. CSD Review.

The CSD shall review documentation from applicants for DOE ARRA program funds to verify that individual undertakings qualify for review exemption under Attachment A, report such exemptions to the SHPO in

accordance with stipulation VIII below, and retain that documentation for three (3) years. The applicant's documentation may include a certification by the applicant, a sub-grantee of the applicant, or the contractor conducting the project that the individual undertaking qualifies for a review exemption. It is understood by the SHPO that the CSD review pursuant to this Agreement shall be performed by CSD staff or consultant(s) having expertise in the Section 106 consultation process, and meeting the Secretary of the Interior's Professional Qualifications Standards (36 CFR Part 61), subject to SHPO approval.

3. DOE Review.

For other California recipients of DOE ARRA program funds (recipients other than the Energy Commission and CSD), recipients shall make documentation available to DOE to verify a recipient's individual undertakings qualify for review exemption under Attachment A. The recipient's documentation may include a certification by the recipient, a sub-grantee of the recipient, or the contractor conducting the project that the individual undertaking qualifies for a review exemption. DOE will provide the SHPO with an annual report in accordance with stipulation VIII below, and retain that documentation for three (3) years.

- C. Program-based undertakings that implement any of the individual undertakings identified in Attachment A are exempt from SHPO review. These program-based undertakings include retrofit projects in which the applicant does not know, at the commencement of the project, which buildings or structures will be retrofitted or which specific retrofit measures will be installed on such buildings or structures. The Energy Commission, CSD and the DOE shall perform the following review to determine whether a particular undertaking qualifies for a review exemption under Attachment A.

1. Energy Commission Review.

The Energy Commission shall review documentation from applicants that are awarded DOE ARRA program funds to verify that an individual undertaking under a program-based undertaking qualifies for a review exemption in accordance with Paragraph B. The applicant's documentation may include a certification by the applicant, a sub-grantee of the applicant, or the contractor conducting the retrofit project that the individual undertaking qualifies for a review exemption. The Energy Commission's review may take place after the applicant has been awarded DOE ARRA program funds, but must occur prior to the applicant's commencement of work on any undertakings. The applicant's award agreement from the Energy Commission shall be conditioned to preclude the applicant from commencing work on any proposed individual

undertaking until the Energy Commission has completed its review of the undertaking in accordance with Paragraph B.

2. CSD Review.

The CSD shall review documentation from applicants that are awarded DOE ARRA program funds to verify that an individual undertaking under a program-based undertaking qualifies for a review exemption in accordance with Paragraph B. The applicant's documentation may include a certification by the applicant, a sub-grantee of the applicant, or the contractor conducting the retrofit project that the individual undertaking qualifies for a review exemption. The CSD's review may take place after the applicant has been awarded DOE ARRA program funds, but must occur prior to the applicant's commencement of work on any undertakings. The applicant's award agreement from the CSD shall be conditioned to preclude the applicant from commencing work on any proposed individual undertaking until CSD has completed its review of the undertaking in accordance with Paragraph B.

3. DOE Review.

For other California recipients of DOE ARRA program funds (recipients other than the Energy Commission and CSD), recipients shall make documentation available to DOE to verify a recipient's individual undertakings qualify for review exemption under Attachment A. The recipient's documentation may include a certification by the recipient, a sub-grantee of the recipient, or the contractor conducting the retrofit project that the individual undertaking qualifies for a review exemption.

II. AREA OF POTENTIAL EFFECTS

For purposes of the Section 106 consultation of non-exempt undertakings, the Area of Potential Effects (APE) will be limited to the individual building when an undertaking is limited to the weatherization, rehabilitation, and/or improvement of the existing building. If construction of exterior additions or the expansion of an existing building is anticipated, the APE shall be expanded to include surrounding historic properties that may be visually impacted.

For DOE ARRA programs where undertaking implementation would include the construction or modification of ancillary facilities exterior to existing buildings or structures, the APE shall include the subject existing buildings and structures, the associated ancillary facilities, historic properties in the viewshed of the existing buildings and structures and the ancillary facilities, and any ground, the disturbance of which is requisite to the implementation of a proposed undertaking.

III. IDENTIFICATION OF HISTORIC PROPERTIES

When conducting their respective reviews of non-exempt undertakings, the Energy Commission, CSD and the DOE will initiate the Section 106 review process by studying all existing and pertinent information on all properties in an APE, including review of the National Register, local inventories, and records housed at the California Historical Resources Information System (CHRIS) regarding those properties which have been determined to be historic properties, either individually, as part of a historic district, or as part of a multiple property nomination. If an APE expands beyond an individual building and other properties in that APE have not been surveyed, the Energy Commission, CSD and the DOE will cause the applicant for DOE ARRA program funds to conduct an inventory effort consistent with 36 CFR § 800.4(b)(1). When considering the results of any such inventory effort,

- A. a property listed in the National Register is an historic property and subject to an assessment of the potential effects of an undertaking on it,
- B. if the agency official determines any of the National Register Criteria are met and the SHPO agrees, the property shall be considered eligible for the National Register for Section 106 purposes. If the agency official and the SHPO do not agree, or if the Council or the Secretary so request, the agency official shall obtain a determination of eligibility from the Secretary pursuant to 36 CFR Part 63.
- C. a property determined, pursuant to 36 CFR § 800.4(c)(2), to be ineligible for inclusion in the National Register in the last five (f) years is not historic and the property will not be subject to further review.

IV. ASSESSMENT OF EFFECTS

- A. When conducting their respective reviews, the Energy Commission, CSD and the DOE will assess, pursuant to 36 CFR §§ 800.4(d)(1) and 800.5(a) and (b), the potential effects of each nonexempt undertaking on historic properties, and will review the scope of work for each such undertaking to determine whether the undertaking would conform to the recommended approaches contained in the Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards).
 - 1. If the Energy Commission, CSD, or the DOE find, pursuant to 36 CFR § 800.4(d)(1), that an undertaking would affect no historic properties, either because there are no historic properties present, or no historic properties will be impacted physically or visually, the Energy

Commission, CSD or the DOE will notify the applicant for that undertaking of that finding, and, upon receipt of the notification, the applicant will be able to proceed with the implementation of the subject undertaking, as submitted, without further review.

2. If the Energy Commission, CSD, or the DOE find, pursuant to 36 CFR § 800.5(b), that an undertaking would not adversely affect historic properties, because it will have only a minor impact and conforms to the Standards, the Energy Commission, CSD or the DOE will notify the applicant for that undertaking of that finding, and, upon receipt of the notification, the applicant will be able to proceed with the implementation of the subject undertaking, as submitted, without further review.
3. If the Energy Commission, CSD or the DOE is unable, pursuant to 36 CFR §§ 800.5(a) and (b), to find that an undertaking would not adversely affect historic properties, the Energy Commission, CSD or the DOE may recommend to the applicant for an undertaking modifications on the scope of work or conditions under which the project would be found to conform to the Standards, the Energy Commission, CSD or the DOE will subsequently forward all documentation on the subject undertaking to the SHPO for further review.
4. If the Energy Commission, CSD or the DOE believe, in accordance with 36 CFR § 800.5(d)(2), that an undertaking would adversely affect historic properties, because it will have a major impact to such properties and does not conform to the Standards, the Energy Commission, CSD and the DOE will subsequently forward all documentation on the subject undertaking to the SHPO for further review and consultation for purposes of addressing adverse effects.

V. ENERGY COMMISSION, CSD AND DOE RESPONSIBILITIES

A. Energy Commission Responsibilities.

1. The Energy Commission will require sub-grantees of DOE ARRA program funds to retain access to pre- and post-documentation of completed DOE ARRA program-funded work, including the work write-ups and photographs as part of its permanent project records.
2. The Energy Commission will monitor every program for compliance with this Agreement according to established guidelines.
3. The energy Commission will notify SHPO of any changes to an approved scope of work, other than exempted activities, and will

provide SHPO with the opportunity to review and approve such changes.

B. CSD Responsibilities.

1. The CSD will require sub-grantees of DOE ARRA program funds to retain access to pre- and post-documentation of completed DOE ARRA program-funded work, including the work write-ups and photographs as part of its permanent project records.
3. The CSD will monitor every program for compliance with this Agreement according to established guidelines.
4. The CSD will notify SHPO of any changes to an approved scope of work, other than exempted activities, and will provide SHPO with the opportunity to review and approve such changes.

C. DOE Responsibilities.

1. The DOE will require grantees of DOE ARRA program funds to retain access to pre- and post-documentation of completed DOE ARRA program-funded work, including the work write-ups and photographs as part of its permanent project records.
2. The DOE will monitor every program for compliance with this Agreement according to established guidelines.
3. The DOE or its recipients will notify SHPO of any changes to an approved scope of work, other than exempted activities, and will provide SHPO with the opportunity to review and approve such changes.

VI. SHPO RESPONSIBILITIES

- A. SHPO is permitted thirty (30) calendar days after the receipt of any submitted documentation to review and comment on such material. If the SHPO fails to respond within 30 days of receipt of request for review of a finding or determination, the agency official may either proceed to the next step in the process based on the finding or determination or consult with the Council in lieu of the SHPO in accordance with 36 CFR § 800.3(c)(4).

VII. DISCOVERIES AND UNFORESEEN EFFECTS

If, during the implementation of the DOE ARRA programs, a previous unidentified property that may be eligible for inclusion in the National Register is encountered, or is affected in an unanticipated manner, the

Energy Commission, CSD, or the DOE will consult with the SHPO pursuant to 36 CFR § 800.13(b).

VIII. REPORTING

A. Energy Commission and CSD Reporting.

In order to satisfy their respective responsibilities under this Agreement, the Energy Commission and CSD will forward to the SHPO, by the tenth calendar day following the last day of each calendar quarter, a report of all review exemptions verified and all reviews completed for undertakings covered by the terms of this Agreement. The exemptions and reviewed undertakings should be listed by the property address including city and/or county, and should include the original construction date of the property and the type of project.

B. DOE Reporting.

In order to satisfy their respective responsibilities under this Agreement, the DOE will forward to the SHPO within 30 calendar days following the last day of the calendar year, a report of all review exemptions verified and all reviews completed for undertakings covered by the terms of this Agreement. The exemptions and reviewed undertakings should be listed by the property address including city and/or county, and should include the original construction date of the property and the type of project.

IX. MONITORING

SHPO may monitor any activities carried out pursuant to this Agreement. The Energy Commission, CSD and the DOE will cooperate with SHPO in carrying out these monitoring and review responsibilities.

X. DISPUTE RESOLUTION

If the Energy Commission, CSD or the DOE are unable to resolve any disagreement with SHPO arising under the provisions of this Agreement, the Energy Commission, CSD or the SHPO will, unless the dispute relates to the National Register eligibility of any property, forward full documentation regarding the project, the basis for the dispute, and initiate consultation with the Advisory Council on Historic Preservation (Council) in accordance with 36 CFR § 800.2(b)(2).

XI. AMENDMENTS

Any signatory to this Agreement may request that it be amended, whereupon the parties will consult with each other. No amendment to this

Agreement will be come effective without the written concurrence of all signatories.

It is contemplated by the parties that Attachment A of the Agreement may be revised from time to time to better clarify and identify exempt undertakings not subject to the SHPO's direct review and consultation. The parties agree that Attachment A may be revised without having to formally amend the Agreement. All such revisions to Attachment A shall be approved in writing by the parties and shall take effect upon approval.

XII. TERMINATION

- A. Any party to this Agreement may terminate the Agreement by providing thirty (30) days notice to the other signatory, provided that the signatories consult during the period prior to the termination to seek agreement on amendments or other actions that would avoid termination.
- B. In the event of termination, the Energy Commission, CSD and the DOE will ensure compliance with 36 CFR §§ 800.4-6 with respect to individual undertakings covered by this Agreement that are subject to their respective reviews.

XIII. FAILURE TO COMPLY WITH TERMS OF AGREEMENT

In the event that the terms of this Agreement cannot be carried out by the Energy Commission, CSD or the DOE, no action will be taken or sanction of any action or any irreversible commitment by the Energy Commission, CSD or the DOE that would result in an adverse effect to historic properties or would foreclose the Council's consideration of modifications or alternatives to any DOE ARRA program undertaking.

XIV. LIABILITY LIMITATIONS

- A. Energy Commission and CSD Limitations.

In the event that the terms of this Agreement are not carried out by sub-grantees of the DOE ARRA program funds as indicated in work plans submitted to the Energy Commission or CSD, the sub-grantee will assume all responsibility for any undertaking as indicated in its respective agreement with the Energy Commission or CSD.

- B. DOE Limitations.

In the event that the terms of this Agreement are not carried out by grantees of the DOE ARRA program funds as indicated in work plans

submitted to the DOE, the grantee will assume all responsibility for any undertaking as indicated in its agreement with the DOE.

XV. DURATION OF THE AGREEMENT

- A. Unless terminated pursuant to stipulation XII, or an amended Agreement supersedes it, this Agreement will be in effect following execution by the signatory parties until the Energy Commission, CSD or the DOE, in consultation with the other signatories, determines that all of their respective stipulations have been satisfactorily fulfilled as concurred by the SHPO. This Agreement will terminate as to the Energy Commission, CSD or the DOE, and have no further force or effect with respect to this party, on the day that the party notifies the other signatory in writing of the party's determination that all stipulations of this Agreement have been satisfactorily fulfilled.
- B. The terms of this Agreement shall be satisfactorily fulfilled within five years following the date of execution by the signatory parties. If the Energy Commission, CSD or the DOE determine that this requirement cannot be met, the signatories to the Agreement will consult to reconsider its terms. Reconsideration may include continuation of the Agreement as originally executed, amendment of the Agreement, or termination. In the event of termination, the parties will comply with subpart B of stipulation XII if the parties determine that the administration of the DOE ARRA programs will proceed notwithstanding termination of the Agreement.
- C. If the administration of DOE ARRA programs is not complete five years following execution of this Agreement by the signatory parties, this Agreement shall automatically terminate and have no further force or effect. In such event, the Energy Commission, CSD and the DOE shall notify the SHPO in writing and, if it chooses to continue with the administration of DOE ARRA programs, shall reinstate the review of such programs in accordance with 36 CFR Part 800.

XVI. EFFECTIVE DATE

Amendment 1 of this Agreement will take effect on the date that it has been executed by the SHPO, the Energy Commission, CSD, and the DOE.

EXECUTION AND IMPLEMENTATION OF Amendment 1 of this Agreement, pursuant to 36 CFR § 800.14(b)(3), including its transmittal by the DOE to the Council in accordance with 36 CFR § 800.6 (b)(1)(iv), shall evidence that the DOE, the Energy Commission and the CSD, have taken into account the effects of the administration of DOE ARRA programs on historic properties in order to avoid, minimize, or mitigate any adverse effects on such properties and thereby

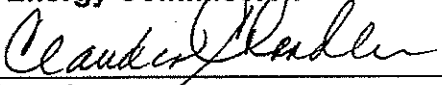
comply with Section 106 of the NHPA, and shall further evidence that the DOE has afforded the Council an opportunity to comment on the administration of DOE ARRA programs and their effects on historic properties.

SIGNATORIES

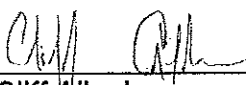
California State Historic Preservation Officer

By:  Date: 19 MAY 2010
Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

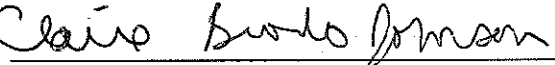
California Energy Commission

By:  Date: 5/19/2010
Melissa Jones
Executive Director

Department of Community Services and Development

By:  Date: 5-19-10
Cliff Allenby
Interim Director

**United States Department of Energy
Office of Energy Efficiency and Renewable Energy**

By:  Date: 5/24/10
Clair Broido Johnson
Acting Program Manager
Weatherization and Intergovernmental Program
Energy Efficiency and Renewable Energy

ATTACHMENT A

EXEMPT UNDERTAKINGS – UNDERTAKINGS NOT REQUIRING REVIEW BY SHPO

- A. ***Properties Less than Forty Five Years Old.*** Undertakings affecting only properties less than forty five (45) years old at the time the work takes place; provided it has not been determined to be eligible under National Register Criterion Consideration G for exceptional significance (36 CFR 60.4).
- B. ***Undertakings for Planning, Training and Educational Purposes***
1. Undertakings to fund regional workforce development programs focused on occupations in energy efficiency, water efficiency, renewable energy (distributed generation and utility-scale), and alternative and renewable transportation technologies.
 2. Undertakings to support existing clean energy job training for new hires and retraining programs for incumbent workers.
 3. Undertakings to fund energy efficiency, water efficiency, and renewable energy training for incumbent and new workers to add new skills to their professional toolbox.
 4. Undertakings to support state planning and energy assurance capabilities by improving state emergency preparedness plans and ensure quick recovery and restoration from any energy supply disruptions.
 5. Undertakings to fund training for energy infrastructure and supply systems, and conduct and participate in state and regional energy and emergency exercises.
 6. Undertakings to conduct residential and commercial building energy audits or assessments.
 7. Undertakings for the design and operation of programs to educate the public, identify the most effective methods for achieving the maximum participation and efficiency rates, establish measurement and verification protocols, and identify energy efficient technologies for possible implementation.
 8. Undertakings to develop and implement programs to conserve energy used in the transportation sector, including the use of flex time by employers, use of satellite work centers, development and promotion of zoning guidelines or requirements that promote energy efficient development, and synchronization of traffic signals.
 9. Undertakings to develop and implement building codes and inspection services, and associated training and enforcement of such codes in order to support code compliance and promote building energy efficiency.
- C. ***Building Interiors***

General Interior Work:

1. Undertakings limited to the interior spaces of properties not listed in the National Register where the work will not be visible from the exterior of the building.
2. Repairing or upgrading electrical or plumbing systems, installing fire, smoke or carbon dioxide detectors and alarms, and installing mechanical equipment, in a manner that does not affect the exterior of the building.
3. Conducting weatherization or energy conservation activities such as air sealing and insulating walls, ceilings, floors, attics, roofs, crawl spaces, ducts and foundations, provided repairs are made by a qualified contractor using current best practices.
 - a. Wall insulation – in terms of materials, blown in cellulose insulation, treated with fire-retardant salts is permitted. Spray foams should only be used in discrete locations for air-sealing and never for filling cavity walls. Urethane foams are not to be used. For moisture laden conditions and moisture vapor, more research should be conducted before in-wall insulation is used, refer to www.ohp.parks.ca.gov (go to sustainability).
4. Undertakings to replace existing residential appliances with new California-qualified residential ENERGY STAR® appliances, where the new appliances must replace appliances of the same type (AC for AC, clothes washer for clothes washer, etc.) and the replaced appliance must be properly recycled.
5. Undertakings to replace lighting in buildings with energy efficient technologies, where only the lighting equipment is replaced and there are no ground disturbances.
6. Undertakings to replace existing heating, ventilation, and air conditioning equipment, electric motors, lighting, and lighting controls with more energy efficiency equipment, where only the equipment is replaced and there are no changes to the building or structure or ground disturbance.
7. Undertakings to install dual technology occupancy sensors to control lighting for intermittently occupied spaces.
8. Undertakings to install variable frequency drives (VFDs) for electric motors, fans, and pumps.
9. Undertakings to install vending machine controls to conserve energy.
10. Undertakings to install programmable thermostats or integrated landscaping control systems to conserve energy.
11. Undertakings to install sensors and equipment controls for purposes of increasing energy efficiency.
12. Lead based paint abatement in accordance with the Standards and Preservation Brief #37.

Energy Efficiency Work with the Building Shell:

Special Note: Any work involving ground-disturbing activities requires SHPO review.

1. Performing plumbing work, including installation of water heaters, water heater tank and pipe insulation, and energy and water efficient distribution systems and controls.
2. Performing electrical work, including improving lamp efficiency, installing task/ambient lighting systems, installing lighting controls, and installing whole house fans and ceiling fans.
3. Sealing air leaks using weather stripping, doors sweeps, and caulk, and testing for and sealing of major air leaks within the building envelope and air delivery system.
4. Repair or replace water heaters, hot water distribution systems and controls.
5. Adding adjustable speed capability, such as on HVAC system distribution fans, cooling tower fans, and pumps.
6. Install insulation on water heater tanks and water distribution pipes and refrigerant lines.
7. Install solar water heating systems, provided the structure is not visible from the public right-of-way.
8. Install waste heat recovery devices, including desuperheater water heaters, condensing heat exchangers, heat pump and water heating heat recovery systems, and other energy recovery equipment.
9. Repair or replace electric motors and motor controls, such as variable speed drives.
10. Incorporate other lighting technologies, such as dimmable ballasts, day lighting controls, and occupant controlled dimming.
11. Lead based paint abatement in accordance with the Standards and Preservation Brief #37.
12. Building cleaning in accordance with the Standards and Preservation Briefs #1, #6, and #10.

Work on Heating and Cooling Systems:

Special Note: Any work involving ground-disturbing activities requires SHPO review.

1. Clean, tune, repair or replace heating systems, including furnaces, boilers, heat pumps, vented space heaters, and wood stoves.
2. Clean, tune, repair or replace cooling systems, including central air conditioners, window air conditioners, heat pumps, and evaporative coolers, and system components, to save energy and water.
3. Install insulation on ducts, heating system distribution pipes and air conditioner refrigerant lines.
4. Conduct other efficiency improvements on heating and cooling systems, including replacing standing pilot lights with electronic ignition devices and installing vent dampers, correcting improper refrigerant charge, and correcting improper airflow.

5. Modify duct and pipe systems so heating and cooling systems operate efficiently and effectively, including adding return ducts, replacing diffusers and registers, replacing air filters, installing thermostatic radiator controls on steam and hot water heating systems; provided interior of historic structures is not affected.
6. Install programmable thermostats, outdoor reset controls, UL listed energy management systems or building automation systems and other HVAC control systems.
7. Repairing or upgrading electrical or plumbing systems and installing mechanical equipment, in a manner that does not permanently change the appearance of the interior or exterior of the building.

Energy Efficiency Work Affecting the Electric Base Load of the Property:

1. Convert incandescent lighting to fluorescent or other high efficacy light source.
2. Add reflectors, LED exit signs, efficient HID fixtures, daylighting, occupancy (motion) sensors and other lighting controls that reduce lighting energy use.
3. Replace refrigerators and other appliances, replace or install controls or make other efficiency improvements to commercial refrigeration systems and to other equipment installed in nonresidential buildings.

Health and safety measures:

1. Installing fire, smoke or carbon dioxide detectors/alarms.
2. Repair or replace vent systems on fossil-fuel-fired heating systems and water heaters to ensure that combustion gasses draft safely to outside, including combustion safety testing.
3. Install mechanical ventilation, in a manner not visible from the public right-of-way, to ensure adequate indoor air quality.

D. Roofing

1. Repairing or replacing roofing with materials that closely match the historic materials and form, or with materials that restore the original feature based on historic evidence, and in a manner that does not alter the roofline.
2. Installing continuous ridge vents covered with ridge shingles or boards, or roof jacks/vents, bath and kitchen fan vents, gable vents, soffit and frieze board vents, and combustion appliance flues, if not located on a primary roof elevation or visible from the public right-of-way.
3. Installing reflective roof coating in a manner that closely resembles the historic materials and form, or with materials that restore the original feature based on historic evidence, and in a manner that does not alter the roofline, or where not on a primary roof elevation or visible from the public right-of-way.

4. Installation or replacement of downspout extensions, provided that the color of the extensions is historically appropriate for the period and style of the property.
5. Installing integrated shingle style or thin film solar systems on the rear roof of the structure, behind the parapet or not visible from the public right-of-way.
6. Repair of minor roof and wall leaks prior to insulating attics or walls, provided repairs closely resemble existing surface composite.

E. Exterior painting

1. Painting exterior surfaces unless the property is subject to review by SHPO under PRC 5024 and 5024.5 or by local landmark ordinance provisions, provided destructive surface preparation treatments, including, but not limited to, water-blasting, sandblasting and chemical removal, are not used.
2. Conducting Lead-based Paint Abatement of "Management in Place" activities carried out by a qualified contractor using current best practices and methods that are consistent with the preservation techniques in *Preservation Brief #37: Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing*.

F. Masonry

1. Power-washing exterior masonry performed by a qualified contractor at no more than 300 psi with mild detergent, using current best practices and methods that are consistent with the preservation techniques in *Preservation Brief #1: The Cleaning and Waterproof Coating of Masonry Buildings*.
2. Repairing masonry, including repointing, and rebuilding chimneys if the joints are done by hand and the mortar matches the original composition and color, and installing chimney flue liners, provided repairs are made by a qualified contractor using current best practices and methods that are consistent with the preservation techniques in *Preservation Brief #2: Repointing Mortar Joints in Historic Brick Buildings*.

G. Windows and Doors

1. Repairing or replacing caulking, weather-stripping, and other air infiltration control measures on windows and doors, and installing thresholds, in a manner that does not harm or obscure historic windows or trim.
2. Installing interior storm windows or doors, and wood screen doors in a manner that does not harm or obscure historic windows or trim.
3. Installing insulated exterior replacement doors where the openings are not altered and they cannot be viewed from the public right-of-way.
4. Installing removable film on windows (if the film is transparent), solar screens, or window louvers, in a manner that does not harm or obscure historic windows or trim.

H. Foundations

1. Underpinning and ventilating crawl spaces provided the underpinning materials are set at least two (2) inches behind the outer face of piers or foundations on the front façade.
2. Installing foundation vents, if painted or finished to match the existing foundation material.

I. General Efficiency Measures Not Affecting Exterior of Buildings

Special Note: Any work involving ground-disturbing activities requires SHPO review.

1. Installing thermal insulation, such as non-toxic fiberglass, cellulose, foam, and foil wrapped, in walls, floors, ceilings, attics, and foundations in a manner that does not harm or damage historic fabric.
2. Energy audits and feasibility studies.
3. Weatherization of mobile homes and trailers.
4. Caulking and weather-stripping around doors and windows in a manner that does not harm or obscure historic windows or trim.
5. Water conservation measures, such as low flow faucets, toilets, showerheads, urinals, and other efficient water using equipment.
6. Repairing in kind existing driveways, parking areas, and walkways with materials of similar appearance.
7. Ventilating crawl spaces.
8. Replacement of existing HVAC equipment including pumps, motors, boilers, chillers, cooling towers, air handling units, package units, condensers, compressors, heat exchangers that do not require a change to existing ducting, plumbing, electrical, controls or a new location, or if ducting, plumbing, electrical and controls are on the rear of the structure or not visible from any public right-of-way.
9. Adding or replacing existing building controls systems including HVAC control systems and the replacement of building-wide pneumatic controls with digital controls, thermostats, dampers, and other individual sensors like smoke detectors and carbon monoxide detectors (wired or non-wired).
10. Installing vents (such as continuous ridge vents covered with ridge shingles or boards, roof vents, bath and kitchen vents, soffit and frieze board vents or combustion appliance flues) if not visible from the public right-of-way.
11. New installation on non-hard wired devices including photo-controls, occupancy sensors, carbon dioxide, thermostats, humidity, light meters and other building control sensors, provided the work conforms with applicable state and local permitting requirements.
12. Adding variable speed capacity to electric motors, fans and pumps.
13. Insulation of water heater and boiler tanks and pipes.
14. Furnace or hot water tank replacement that does not require a visible new supply or venting.
15. Installing whole house fans or ceiling fans.

J. Insulation Measures Not Affecting the Exterior of the Building

1. Thermal insulation installation in walls, floors, attics and roof (excluding toxic spray foam insulation).
 - a. Wall insulation – in terms of materials, blown in cellulose insulation, treated with fire-retardant salts is permitted. Spray foams should only be used in discrete locations for air sealing and never for filling cavity walls. Urethane foams are not to be used. For moisture laden conditions and moisture vapor, more research should be conducted before in-wall insulation is used, refer to www.ohp.parks.ca.gov (go to sustainability).
2. Duct sealing, insulation, repair or replacement in unoccupied areas.
3. Attic insulation with proper ventilation.
4. Band joist insulation – R11 to R19 as applicable.
5. Water heater tank and pipe insulation, and heating system pipe insulation and air conditioner refrigerant line insulation.

K. Electric Base Load Measures Not Affecting the Exterior of the Building

1. Appliance replacement (upgrade to EnergyStar or higher efficiency appliances).
2. Compact fluorescent light bulbs or other high efficacy light source.
3. Energy efficient light fixtures, including ballasts (Replacement).
4. LED light fixtures and exit signs (Replacement).
5. Upgrade exterior lighting (replacement with metal halide bulbs, LEDs, or others) along with ballasts, sensors and energy storage devices not visible from any public right-of-way.
6. Refrigeration equipment and systems replacement, controls, tuning and repair.
7. Thermal energy storage devices and controls not visible from any public right-of-way.
8. Replacing lighting in parking lots, traffic signals and street lighting with energy efficient technologies, where only the lighting equipment is replaced and there are no ground disturbances.

L. Efficiency and Repair Measures

1. Installation or replacement of downspout extensions, provided that the color of the extensions is historically appropriate for the period and style of the property.
2. Repairing or upgrading electrical or plumbing systems and installing mechanical equipment, in a manner that does not permanently change the appearance of the interior or exterior of the building.
3. Installing integrated shingle style or thin film solar systems on the rear roof of the structure, behind the parapet or not visible from the public right-of-way.
4. Installing solar systems (including photovoltaic and solar thermal) not visible from the public right-of-way and if ground mounted can be installed

without ground disturbance and if roof mounted will not require new building reinforcement.

5. Lead based paint abatement in accordance with the Standards and Preservation Brief #37.
6. Building cleaning in accordance with the Standards and Preservation Briefs #1, #6, and #10.
7. Installing vents (such as continuous ridge vents covered with ridge shingles or boards, roof vents, bath and kitchen vents, soffit and frieze board vents or combustion appliance flues) if not visible from the public right-of-way.