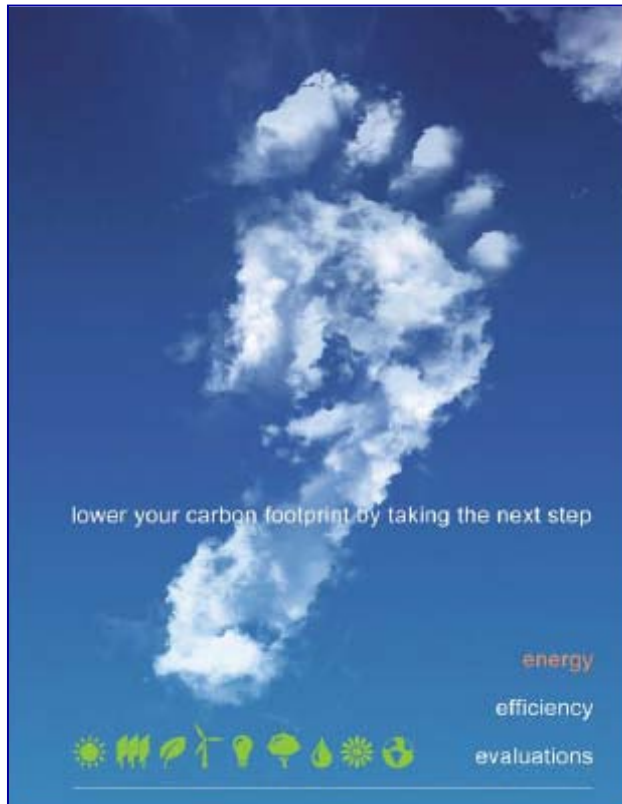




# Sonoma County Energy Independence Program

## PROGRAM REPORT AND ADMINISTRATIVE GUIDELINES



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**Sonoma County Energy Independence Program**  
**PROGRAM REPORT AND ADMINISTRATIVE GUIDELINES**

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## **Sonoma County Energy Independence Program**

### **Program Report and Administrative Guidelines**

#### **I. INTRODUCTION**

In July, 2008, the California Legislature approved Assembly Bill 811, authorizing cities and counties to establish voluntary contractual assessment programs to fund an array of conservation and renewable energy projects proposed by property owners. The California Legislature declared that a public purpose will be served by such programs, giving local governments the authority to finance the installation of distributed generation renewable energy sources – such as solar – and energy efficiency improvements that are permanently affixed to residential, commercial, industrial, or other real property. Because water use and energy use are closely linked, our County program will also assist property owners in reducing water use. In this report, improvements are collectively referred to as “energy and water conservation improvements” or “improvements.”

To make energy and water conservation improvements more affordable and to promote their installation, AB 811 provides procedures for authorizing **voluntary assessments** to finance the cost of these improvements. The Sonoma County Energy Independence Program (“SCEIP” or “program”) works at the request and with the consent of owners of the property on which the energy and water conservation improvements are to be made.

The program will provide financing (“SCEIP financing”) to property owners within the County to finance the installation of energy and water conservation improvements under contractual assessment agreements. Property owners will repay SCEIP financing through an assessment levied against their property which is payable in semi-annual installments on property tax bills.

#### **A. Goals.**

SCEIP will help property owners of improved real property make principled investments in the long-term health of the local, state, and national economy and global environment by providing a long-term financing mechanism for energy and water conservation improvements.

SCEIP provides multiple benefits. By enabling property owners to take responsible energy and water conservation actions, the Program will reduce their utility bills.<sup>1</sup> At the same time it boosts the local economy, the California power grid, and national and global energy interests, and makes it possible for Sonoma County to fulfill energy and water conservation and climate protection commitments.

Sonoma County and each of its incorporated cities and towns (collectively the “Cities”) have established a goal to reduce their greenhouse gas emissions 25 percent below 1990 levels by 2015. This Program will help the Cities and the County reach their goals. The County, the Cities, the Sonoma County Water Agency, the Sonoma County Transportation Authority and the Sonoma County Agricultural Preservation and Open Space District are members of the Regional Climate Protection Coordination Plan (“RCPCP”) with the goal of coordinating efforts to reduce countywide GHG emissions. To help meet GHG reduction goals, carbon credits attributable to Improvements financed by SCEIP, if any, shall be held jointly by the County of Sonoma (on behalf of the Sonoma County Energy Independence Program), by the Sonoma County Water Agency and by the Sonoma County Transportation Authority, as the current RCPCP project manager.

## **B. Program Benefits.**

From the County’s perspective, the program will be a key element in achieving greenhouse gas reduction goals. SCEIP provides a significant tool for funneling more resources into the shift to greater efficiency and renewable energy. Lower energy use translates directly into reduced greenhouse gas emissions and helps secure our energy future. Reducing water use helps conserve our finite water supply and saves even more energy.

For property owners, SCEIP offers a no-money-down means of financing energy and water conservation improvements, fixed-rate financing over a number of years, financing without requiring a property appraisal, a streamlined financing and repayment process, and access to financing that may not readily be available through traditional means, such as home equity loans.

## **C. Program Administration.**

The Auditor-Controller Treasurer-Tax Collector is designated as the SCEIP Program Administrator and is authorized to enter into contractual assessments on behalf of the County. The Program Administrator will oversee professionals from the Auditor-Controller Treasurer-Tax Collector’s Office and other County staff, along with staff from the Sonoma County Water Agency, (“SCEIP staff”) in administering the Program.

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<sup>1</sup> SCEIP staff does not provide energy evaluations, and SCEIP does not guarantee savings on utility bills. SCEIP highly recommends that a property owner consult with PG&E or other trained professionals to ensure that the proposed Improvements satisfy the property owner’s energy-saving goals.

The SCEIP office is located at 404 Aviation Boulevard, Suite 200, Santa Rosa, California and will operate as a storefront where the public can speak with SCEIP Staff and apply for funding to the SCEIP. The SCEIP website is at [www.sonomacountyenergy.org](http://www.sonomacountyenergy.org). It hosts a variety of information regarding SCEIP financing and conservation.

SCEIP staff responsibilities will include:

- Community outreach;
- Responding to property owners inquiries;
- Processing applications;
- Managing and tracking funds available for SCEIP;
- Tracking individual and collective energy conservation; and
- Working and coordinating with participating jurisdictions.

## **II. PROGRAM REQUIREMENTS**

### **A. Program Report.**

In order to establish this program, the County must prepare this report setting out how the program will function (the “Program Report”)<sup>2</sup>. The Program Report is the guiding document for SCEIP and fulfills the statutory requirements that this report contain:

- A map showing the boundaries of the territory within which contractual assessments are proposed;
- A draft assessment contract between a property owner and the County;
- Program policies concerning contractual assessments, including: a list of [eligible improvements](#); identification of the County official authorized to enter into contractual assessments on behalf of the County; maximum aggregate dollar amount of contractual assessments; and a method for setting priority for applications in the event that requests appear likely to exceed the authorization amount;
- A plan for funding the program; and

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<sup>2</sup> See California Streets and Highways Code Section 5898.22.

- Information on the County's cost of placing assessments on the tax roll.

## **B. Geographic Parameters.**

All cities and towns within the County have agreed to have properties within the incorporated area included in the program and permit voluntary assessments to be established within their jurisdictions. The County has entered into implementing agreements with each city and town. A map showing the County boundaries is attached as Appendix B.

## **C. Eligible Property Owners and Eligible Properties.**

Property owners may be individuals, associations, business entities, cooperatives, and virtually any owner which pays secured real property taxes. Certain eligibility criteria must be satisfied. Financing may be approved if the following criteria are met:

- Property Title is vested in the applicant(s), without federal or state income tax liens, judgment liens or similar involuntary liens on the property;
- Property owner is current on property taxes;
- Property owner is not in bankruptcy and the property is not an asset in a bankruptcy proceeding<sup>3</sup>;
- Property owner is current on mortgage(s)<sup>4</sup>. For commercial property,<sup>5</sup> lender has signed an acknowledgement regarding SCEIP financing;
- Improvement costs are reasonable to property value. As a guideline, proposed improvements should not exceed 10 percent of assessed value. If the proposed project exceeds this guideline or otherwise does not appear prudent when compared to the property's value, the Program Administrator may require additional information supporting both the reasonable relationship of the improvements to the property, and information related to the ability of the property owner to repay the assessment. These applications are reviewed on a case-by-case basis; and

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<sup>3</sup> If property owner has been in bankruptcy in the past three years, the bankruptcy must have been concluded at least one year before application was filed. In addition, all mortgage payments due on the property must have been timely paid during the six months preceding the application.

<sup>4</sup> If property is subject to loan modification because of default or delinquency, the loan modification must have been completed at least one year before application was filed. In addition, all mortgage payments due on the property must have been timely paid during the six months preceding the application.

<sup>5</sup> For SCEIP, "residential property" is defined as single-family properties with 1-to-4 residential units; "commercial property" is all other property.

- Condominium owners must conform to HOA policies.

SCEIP financing is not currently available for properties that are not subject to secured property taxes, such as governmental entities and certain non-profit corporations, or for mobile homes that are not affixed to real property and subject to secured property tax.

Property owners may make more than one application for funding under the program if additional energy and water conservation improvements are desired by the owner.

#### **D. Eligible Equipment.**

SCEIP affords property owners in Sonoma County the opportunity to take advantage of a wide range of energy-savings and water conservation measures, consistent with the following provisions:

(1) SCEIP financing is intended principally for retrofit activities to replace outdated inefficient equipment and to install new equipment that reduces energy consumption, produces renewable energy, or reduces energy use through water conservation. However, SCEIP financing is also available for purchasers of new homes and businesses that wish to add energy efficiency, renewable energy, and water conservation improvements after taking title to the property.

(2) SCEIP provides financing only for improvements that are permanently affixed to real property.

(3) SCEIP provides financing only for improvements specified in Appendix A. Broadly, these include:

- (a) Water Conservation Improvements;
- (b) Energy Efficiency Improvements;
- (c) Solar Systems; and
- (d) Custom Measures.<sup>6</sup>

A detailed list of Improvements is set out in SCEIP's [Eligible Improvements](#) list.

SCEIP financing is also available for projects that combine eligible improvements, such as bundling of water conservation, energy efficiency and renewable energy measures.

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<sup>6</sup> Large scale commercial or industrial projects requiring engineering design and meeting the financing threshold (\$500,000) requiring approval by the Board of Supervisors **or** projects involving emerging technologies for Improvements that provide new ways to save or generate energy will be evaluated on a case-by-case basis.



For instance, a property owner may choose to replace an aging and inefficient furnace, install weather stripping, install low flow toilets and install a photovoltaic system.

#### **E. Eligible Costs and Program Fees.**

(1) Project Costs. Eligible costs of the energy and water conservation improvements include the cost of equipment and installation. Installation costs may include, but are not limited to, energy evaluation consultations, labor, design, drafting, engineering, permit fees,<sup>7</sup> and inspection charges.

The installation of energy savings and water conservation improvements can be completed by a qualified contractor of the property owner's choice. Eligible costs do not include labor costs for property owners that elect to do the work themselves.

Property owners who elect to engage in broader projects – such as home or business remodeling – may only receive SCEIP financing for that portion of the cost of retrofitting existing structures with energy and water conservation improvements. Repairs and/or new construction do not qualify for SCEIP financing except to the extent that the construction is required for the specific approved improvement. Repairs to existing infrastructure, such as water and sewer laterals, are considered repairs and are not eligible.

The value of expected rebates<sup>8</sup> but not the value of expected tax credits will be deducted from SCEIP financing.

SCEIP staff will determine whether the estimated equipment and installation costs are reasonable. SCEIP staff will evaluate market conditions and may require the property owner to obtain additional bids to determine whether costs are reasonable. While the property owner may choose the contractor, the amount available for SCEIP financing will be limited to an amount determined reasonable by SCEIP staff, and may be reviewed by the Program Administrator. The Sonoma County Board of Supervisors will review all projects over \$500,000.

(2) Program Fees. The following program fees will be the responsibility of the property owner. The annual assessment fee will be included on the annual tax statement. The other fees must be paid at the time they are incurred.

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<sup>7</sup> All improvements, including those normally exempt from permit requirements, will require a permit from the local jurisdiction (town, city, unincorporated area). Each jurisdiction sets its own permit fees. Final inspection by a building inspector will ensure that the Improvements were completed.

<sup>8</sup> "Expected rebates" do not include rebates (1) that are contingent on performance or (2) that are not available to the property owner at or shortly after completion of the project, so as to be available for use to pay for the project.

(a) Title costs, including title insurance, where required. Regular title costs are currently \$50 for projects under \$5,000, and \$125 for projects \$5,000 and over, but less than \$500,000. Projects over \$500,000 will require a title search and insurance.

(b) Recording fee for documents required to be recorded by State law, which include the Notice of Assessment, Assessment Contract, and Disclosure Notification, are set by State law and the Recorder's Office. This fee is currently \$66.00,

(c) Assessment collection and processing costs will be added to the annual assessment on property tax bills. These costs are \$40 for fiscal year 2009/2010, and will be adjusted in subsequent years for cost of living increases using the U.S. Department of Labor, Bureau of Labor Statistics, and Consumer Price Index for all urban consumers for the Northern California counties. This cost was determined after consultation with the County Auditor-Controller Treasurer-Tax Collector's Office and third party assessment contractor.

(d) If property owner wishes to have multiple disbursements (only on improvements in excess of \$60,000), the multiple disbursements will be subject to an additional processing fee of \$150 per disbursement and interest will begin to accrue on the entire assessment amount at the time of the first disbursement. The Application and Assessment Contract are provided in Appendix C and D. A detailed Summary of the SCEIP financing process is attached as Appendix E.

(3) Escrow fees. Some large projects, or projects with multiple contractors, may benefit from funding through an escrow process. If this process is selected by the property owner, the owner would select an escrow agent, and after the Assessment Contract is signed, the amount requested would be funded into the escrow account. Escrow instructions governing release of the funds would need to be approved by the Program Administrator. All fees related to this process would be the responsibility of the property owner but could be requested as part of Program funding. As in the Multiple Disbursement Assessment Contract, interest on the full amount of the requested disbursement will begin to accrue as soon as the escrow is funded. Any amount not needed at the completion of the project must be returned to the Program, and will be deducted from the amount of the assessment lien. All projects over \$500,000 must utilize an escrow process.

## **F. Administrative Costs.**

The Program may elect to cover all or a portion of its costs through the "spread" between its interim funding source interest rate and the SCEIP financing interest rate offered to the property owner. Similarly, it may elect to recover SCEIP costs through a spread between bond rates and assessment rates, or the spread between interest rates of any financial vehicle.

### III. TRACKS FOR PARTICIPATION

There are four categories or “tracks” of technologies under which property owners may participate in the program. Eligible improvements must meet specified minimum efficiency standards. A complete list of approved improvements is set out in the [Eligible Improvements](#) list.

#### **A. The Water Conservation Track.**

The Water Conservation Track covers a wide range of water conserving fixtures, including low flow toilets, tankless water heaters, low flow shower heads, and irrigation controllers.

#### **B. The Energy Efficiency Track.**

The Energy Efficiency Track covers a wide range of energy efficiency fixtures from windows and doors, attic insulation and HVAC equipment that is Energy Star rated. Packaged and central air conditioning systems must meet specified minimum efficiencies.

#### **C. The Solar Track.**

The Solar System Track covers solar energy generation and solar hot water systems.

#### **D. The Custom Measure Track.**

The development of technologies is encouraged by SCEIP as a means of diversifying the County’s energy sources. The Custom Measure Track will evaluate and provide funding, if appropriate, for these innovative projects.

Applicants for the Custom Measure Track should consult with SCEIP staff to determine eligibility and will be required in most cases to submit engineering plans and specifications. The Program Administrator, or designated staff, will approve the Custom Measure Track application on a case-by-case basis, and may request consultation from outside technology experts in making this decision. The applicant would be expected to bear the cost of such consultation. Cost reimbursement would be discussed with the applicant before the project was reviewed.

#### **IV. WATER CONSERVATION, ENERGY SURVEYS, AND SOLAR SITE CHECKS**

##### **A. Residential Properties.**

Water conservation and energy evaluations are highly recommended but not required. By participating in SCEIP, the property owner is investing in the future, by making improvement to their property that will lead to reduced energy usage and reductions in greenhouse gas emissions. The property owner is also making a financial investment; this decision should be made based on both the energy efficiency and the cost effectiveness of the improvements. SCEIP Staff recommend that property owners complete a water conservation and energy evaluation or survey to assess water conservation, energy efficiency, and renewable energy opportunities for the property. Online surveys can be conducted through PG&E's website [<http://www.pge.com/myhome>]. Residential property owners can obtain an onsite survey by hiring a Home Energy Rating System ("HERS") rater, or equivalent. Property owners can also check with their local water provider to see if free water conservation surveys are available.

Onsite inspections/evaluations can provide the property owner valuable information on how to maximize energy savings for the dollars invested. The auditor will make an on-site inspection of the property and evaluate the condition of the building and recommend an energy savings priority list, which will provide the greatest benefit for the money invested. These inspection/evaluations also provide valuable data on energy usage, savings and GHG emissions reductions, all of which are goals of SCEIP. Costs incurred to conduct onsite evaluations or surveys may be included in the application for SCEIP financing.

##### **B. Commercial Properties.**

A PG&E onsite energy evaluation is required for commercial properties. PG&E offers free onsite evaluations for commercial properties to help property owners determine the most cost-effective and efficient route to maximize investment and energy savings. PG&E provides an individual report tailored to the business describing energy-saving opportunities and analysis of potential savings. Commercial property owners can also obtain a HERS evaluation and may include the cost in the application for SCEIP financing. Property owners can also check with their local water provider to see if free water conservation surveys are available.

## **V. PROGRAM PARAMETERS**

### **A. Minimum Energy Financing Amount and Duration of Assessment.**

SCEIP Assessment Contracts are available for up to 20-year terms to accommodate a wide range of efficiency measures and renewable energy investments. The minimum amount for a SCEIP Assessment Contract is \$2,500. All Assessment Contracts below \$5,000 are subject to a five- or ten-year assessment repayment period. Assessments over \$5,000 are subject to a 10- or 20-year assessment repayment period, requested by the property owner, and agreed to by the Program Administrator or designated Program staff. The Program Administrator may approve a five-year term for a Contract exceeding \$5,000 after discussion with the property owner and in the Program Administrator's discretion after considering such factors as cost to value ratio, and the marketability of bonds relying on the Assessment Contract for security.

### **B. Maximum Energy Financing Amount.**

Although improvement costs must be reasonable to property value, there is no maximum "cap" for a SCEIP Assessment Contract. All contracts for amounts greater than \$60,000 must be approved by the Program Administrator and may require additional documentation. SCEIP Assessment Contracts for amounts greater than \$500,000 must be approved by the Board of Supervisors.

SCEIP financing will be disbursed directly to the property owner after improvements are completed and final documentation is submitted to SCEIP Staff.

### **C. Maximum Portfolio.**

The County intends to initially fund SCEIP with a commitment of up to \$45 million. The County will explore other financing opportunities, with the goal of expanding the Program to \$100 million.

### **D. Assessment Interest Rate.**

The Program Administrator will set the interest rate for a SCEIP Assessment Contract at the time the Program and property owner enter into the contract. The interest rate will be fixed at that point and will not go up, although the County may reduce the rate for all Program participants if it is able to negotiate long term financing on sufficiently favorable terms to allow it to do so while still funding the program costs.

The interest rate for the SCEIP program will be determined periodically by the Program Administrator with the approval of the Board of Supervisors. The interest rate will be set with the intention of creating a self sustaining program at a rate that is competitively priced compared to financing options available through banking or other financial

institutions, balanced with the ability to remarket the securities and encourage the future liquidity of the SCEIP program.

Initially, the Program Administrator is recommending the interest rate for the program be set at a fixed interest rate of 7.00 percent.

#### **E. Property Assessment Lien.**

All property owners must sign and notarize the SCEIP Assessment Contract and Implementation Agreement (“contract documents”). Upon execution of the contract documents, the program will place a lien for the full amount of the assessment on the property that secures the assessment, including capitalized interest being the amount of interest accrued from the date of disbursement through September 1 of the first tax year. If funds are disbursed to property owners by the first business day in September, the assessment will appear on the next tax bill. For disbursements made after the first business day of September, the assessment will not appear on the tax bill until the following tax year, but interest will accrue on the outstanding amount.

#### **F. Delinquent Assessment Collections.**

Delinquent assessments will be collected using the laws and powers authorized under state statutes for collecting property taxes and assessments. Delinquent assessments will be collected and allocated under the Alternative Method (Teeter Plan), in accordance with state statutes. Where bonds have been sold to finance assessments, state law also allows delinquent assessments to be collected through foreclosure proceedings to protect bondholders.

### **VI. THE FINANCIAL STRATEGY**

The County Treasurer will establish the Sonoma County Energy Independence Program Fund (the “SCEIP Fund”) and may accept funds from any available source and may disburse the funds to eligible property owners for the purpose of funding energy and water conservation improvements. Repayments will be made pursuant to Assessment Contracts between the property owners and County of Sonoma and will be collected through the property assessment mechanism in the Sonoma County property tax system and included in the Sonoma County Teeter Program.

The County will manage the SCEIP in one enterprise fund with multiple sub-funds. It is necessary to ensure that financings equal the County’s receivables. Likewise, it is necessary to separate County’s funds for repaying bonds, etc. to ensure funds are available when payment is due. The Auditor-Controller Treasurer-Tax Collector has the authority to develop the necessary accounting structure needed to run the SCEIP.

The Sonoma County Financing Authority (the “Authority”) is a joint powers agency formed to assist the County with financings. The County and the Authority intend to cooperate in a financing arrangement whereby the Authority issues a bond or a series of bonds in an amount not to exceed the Maximum Portfolio established in Section V(C). . The aggregate amount of bonds held by the Sonoma County Treasury on behalf of the Treasury Pool at any time may not exceed three percent of the total Treasury Pool (\$45 million).

An example of a possible financing arrangement is briefly described below.

When the County is ready to advance funds to property owners in connection with a designated group of assessment contracts (i.e., the improvements have been completed and inspected), the Authority will issue a bond (the “bond”) in a principal amount equal to the aggregate amount to be advanced by the County pursuant to the assessment contracts. The Treasury will purchase the bond from the Authority.

The Authority will make a loan (the “loan”) of the bond proceeds to the County pursuant to a loan agreement between the County and Authority (the “loan agreement”). The County will use the bond proceeds to advance moneys to the property owners pursuant to the assessment contracts. The loan agreement will provide for the County to repay the loan from the assessments received by the County pursuant to the assessment contracts (excluding the annual administrative assessments to be paid by the property owners). In turn, the resolution authorizing the issuance of the bond will provide that the Authority will repay the bond from the loan payments paid by the County pursuant to the loan agreement.

Each year, the County may use assessment revenues in excess of the amounts needed to repay the loan to fund a reserve account and a program expense account. Moneys in the reserve account will provide additional security for the repayment of the loan. Moneys in the program expense fund may be used to pay or reimburse the County for expenses to administer the SCEIP. The County may use surplus funds, which remain after the payment of the Bond at maturity or upon early redemption for any lawful purpose for the program.

The County will use revenues from the annual administrative assessment provided for in each assessment contract to pay for the administrative expenses of the County and Authority in connection with the bond and the collection of the assessments. It is anticipated the administrative assessment will be a nominal amount, to cover the cost of the assessment administrator and the Auditor-Controller Treasurer-Tax Collector’s cost in placing the charge on the tax roll.

For long-term and additional financing, the Program Administrator will explore funding opportunities from a number of other potential funding sources, and combinations of sources, which may include but are not limited to additional funding from any funds under the control of the Board of Supervisors and Board of the Water Agency, the

issuance of notes, bonds, or agreements with utilities or public or private lenders, other governmental entities and quasi-governmental entities such as SCERA, CALPERS, Nationwide Retirement Solutions, or any financing structure allowed by law .

Initially, 50 percent of the funds will be reserved for SCEIP assessment contracts for residential property owners. The Program Administrator may adjust that allocation to not less than 30 percent of the funds to be reserved for residential property owners and not more than 70 percent of the funds to be reserved for all other property owners. The Program Administrator will report on program progress to the Board of Supervisors and County Administrator on a quarterly basis at a minimum, providing the Board of Supervisors with the information necessary to further adjust this allocation to match Program participation, with recommendation from the Program Administrator.

The Program Administrator and County Administrator have the authority to establish a SCEIP budget to be ratified by the Board of Supervisors.

With the approval of the Board of Supervisors, the County agrees to include the SCEIP contractual assessments in the Alternative Allocation Method, otherwise known as the “Teeter Plan”, for collection and allocation of property taxes.

## **VII. CHANGES TO REPORT**

The Program Administrator may make changes to this Report that the Program Administrator reasonably determines are necessary to clarify its provisions. Any changes to this report that materially modify the Sonoma County Energy Independence Program shall only be made after approval by the County Administrator and Board of Supervisors.

The Program Administrator may modify from time to time the [eligible improvements](#) List, Assessment Contract and Application attached hereto as Appendix A, Appendix D and Appendix C, respectively, as deemed necessary by the Program Administrator to effectuate the purposes of the program.



## **Sonoma County Energy Independence Program APPENDIX A – ELIGIBLE IMPROVEMENTS**

The Sonoma County Energy Independence Program offers SCEIP funds for a number of equipment types, including water conservation measures, energy efficiency measures, solar systems, and other innovative, energy-saving and energy generation custom measures. In each case, if a rebate is available to the property owner to be applied to the purchase price, that amount must be deducted from the amount of financing requested. A comprehensive list of [eligible improvements](#) is available on the SCEIP website.

### **I. WATER CONSERVATION MEASURE**

#### **A. Residential Indoor Water Conservation Measures.**

- (1) High efficiency toilets (average flush volume of 1.28 gallons or less)
- (2) Showerheads (1.75 gpm)
- (3) Bathroom aerators (1.5 gpm)
- (4) Hot water delivery options, as defined by the Energy Star "[Volumetric Hot Water Savings Guidelines](#)"
  - (a) Hot water recirculation systems use a hot water circulating pump to pump hot water from the water heater, through the hot water piping, and on back to the water heater through an additional length of pipe that runs from the furthest fixture back to the water heater.
  - (b) Demand initiated hot water systems use a recirculation pump to rapidly pull hot water from a water heater while simultaneously sending cooled-off water from the hot water lines back to the water heater to be reheated.
  - (c) Whole house manifold systems consist of a manifold (trunk line) connected to the water heater from which individual pipes (twigs) are connected to each water fixture.
  - (d) Core plumbing systems are hot water distribution systems where water volumes in the pipes are reduced by a combination of smaller pipe diameters and shorter pipe runs due to a centrally located water heater.
- (5) Demand initiated water softeners, Energy Star rated
- (6) Demand initiated or instantaneous hot water heaters
- (7) Hot water pipe insulation (minimum of R4)

**B. Residential and Commercial Outdoor Water Conservation Measures.**

- (1) A weather-based irrigation controller, or Smart irrigation controller with a rain shut off device, uses weather data and site information such as plant type and sprinkler system output to adjust watering times and frequency. This provides more efficient watering, reduces water run-off and improves the health of your landscape.
- (2) Permanently installed rainwater cisterns.
- (3) Drip irrigation systems in gardens, planters and beds. Drip irrigation can save up to 70% in water usage due to more efficient delivery.
- (4) Matched precipitation sprinklers so that all spray patterns and radius deliver water evenly over the landscape area.

**C. Commercial Water Conservation Measures.**

- (1) All applicable water conservation measures listed for “residential”
- (2) Pre-rinse spray valves (1.2gpm)
- (3) Urinals (pint)
- (4) Waterless urinals
- (5) Bathroom aerators (0.5 gpm)

**D. Commercial Custom Measures.**

- (1) Industrial process water use reduction
- (2) Recycled water source
- (3) Deionization
- (4) Filter upgrades
- (5) Cooling condensate reuse
- (6) Foundation drain water
- (7) Cooling tower conductivity controllers

**E. Residential and Commercial Recycled Water Use (Custom Track Measures).**

- (1) Outdoor irrigation

**II. ENERGY EFFICIENCY MEASURES**

The Sonoma County Energy Independence Program provides services and funding for a wide range of Energy Star-rated efficiency measures, including many Energy Efficiency measures for which property owners can get rebates as well as SCEIP funding. Excepting the HVAC equipment as noted below, efficiency measures must meet the performance criteria stated in the list of [eligible improvements](#) or the Energy Star minimum efficiency levels.

For all packaged and central air conditioning systems funded in this Program, the minimum efficiency levels shall be as required by the current minimum requirements set forth in list of [eligible improvements](#).

All other proposed efficiency measures will be considered in the Custom Measure Track.

The County of Sonoma anticipates that Energy Star requirements will “ratchet up” to greater efficiency levels over time. Energy Star will also become more inclusive of technologies over time. Thus, the SCEIP will evolve with Energy Star and the market for energy-efficient technologies.

The following Energy Star measures – among others – are eligible in the Efficiency Track.

**A. Residential Energy Efficiency Measures.**

- (1) Geothermal exchange heat pumps
  - (a) Minimum efficiencies
    - (i) Ground source exchange open loop system 17.8 EER or higher
    - (ii) Ground source exchange closed loop system 15.5 EER or higher
- (2) Home EV charging installations

(3) HVAC Systems

- (a) Minimum efficiencies
  - (i) Split systems with 14 SEER and 12 EER or higher rating
  - (ii) Natural gas furnaces of 90 AFUE or higher
  - (iii) Package systems with 14 SEER and 11 EER or higher rating
- (b) Home energy management control systems
- (c) Whole house fan systems
- (d) Duct insulation, meeting Energy Star guideline
- (e) Duct sealing
- (f) Combined hydronic systems with a coefficient of performance (COP) meeting and or exceeding Title 24 requirements
- (g) Hydronic radiant heating systems – in combination with energy efficient water heating
- (h) High Efficiency HVAC Air Filter / Air Cleaner
  - (i.) Electronic Air Cleaner /Filter – Whole House
  - (ii.) Input Power: 24Volts AC
  - (iii.) Output Power: 24KV DC Nominal
  - (iv.) Rated Static Pressure: 0.25" initial @ 500FPM
  - (v.) Minimum Depth Thickness: 2.0" Nominal
  - (vi.) Recommended media changes per year: 1-2 per year
  - (vii.) Ozone production: 0 PPB detectable

NOTE: reference Manual D Residential Duct System and Manual J Residential Load Calculations and other relevant guides

(4) Evaporative Coolers

(a) Cooler must have a separate ducting system from air conditioning and heating ducting system

(b) Maximum 5 gallons/ton-hour cooling

(5) Natural gas storage water heater, EF of 0.67 or higher and Energy Star listed

(6) Tankless water heater, EF of 0.82 or higher and Energy Star listed

(7) Solar water heater systems, rated by Solar Rating Certification Council

(8) Cool roof system as defined by the 2005 California Building Energy Efficiency Standards (also called the California Energy Code). Roofing replacement eligible under this program shall be:

(a) Tested and rated through the Cool Roof Rating Council (CRRC);

(b) Be labeled for its initial reflectance and initial emittance as determined in the CRRC tests and be labeled that the product meets Title 24, Section 118(i);

(c) Achieve at least a 0.75 initial emittance and 0.70 initial reflectance or, if the initial emittance is less than 0.75, have an initial reflectance of at least  $[0.70 + \{0.34 \times (0.75 - \text{initial emittance})\}]$ ; **and**, if applied as a liquid coating in the field, be applied at a minimum dry mil thickness of 20 mils\* across the entire roof surface and meet performance requirements listed in the table shown immediately below:

Physical Property	ASTM*** Test Procedure	Requirement
Initial percent elongation (break)	D 2370	Minimum 60% 0 °F (-18 °C) Minimum 200% 73 °F (23 °C)
Initial tensile strength (maximum stress)	D 2370	Minimum 100 psi (1.38 Mpa) 73 °F (23 °C) Minimum 200 psi (2.76 Mpa) 0 °F (-18 °C)
Final percent elongation (break) after accelerated weathering 1000 h	D 2370	Minimum 40% 0 °F (-18 °C) Minimum 100% 73 °F (23 °C)
Permeance	D 1653	Maximum 50 perms
Accelerated weathering 1000 h	D 4798	No cracking or checking Any cracking or checking visible to the eye fails the test procedure
<i>NOTE: Aluminum-pigmented asphalt roof coatings and cement-based roof coatings are not required to meet this table. The former must meet ASTM D2824, D6848, and D3805 and the latter must meet greater dry mil thicknesses (depending on the substrate) and meet ASTM D822. Details are found in Standards Section 118(i)3.</i>		

(9) Reflective roof and cool wall coatings

(a) Tested and rated through the Cool Roof Rating Council (CRRC);

(b) Be labeled for its minimum reflectance of 0.39 and minimum emittance of 0.88 as determined in the CRRC tests

(c) Labeled that the product is California Title 24 compliant

(d) Energy Star guidelines

- (10) Insulation:
- (i.) Attic insulation minimum combined R value of 30
  - (ii.) Wall insulation minimum combined R value of 13
  - (iii.) Crawlspace/floor insulation, minimum combined R value of 19
  - (iv.) Hot water system and pipe insulation

Meet Energy Star guidelines

NOTE: Envelop air sealing before insulating is strongly recommended.

- (11) Insulated exterior siding – following Energy Star guidelines of the of the Home Sealing effort, using Energy Star qualified products
- (12) Reflective insulation or radiant barriers
- (13) Attic fans
- (14) Windows and glass doors, U value of 0.40 or less and solar heat gain coefficient of 0.40 or less
- (15) Window filming, in compliance with the NFRC glazing attachment ratings for solar heat a gain and visible transmittance
- (16) Weather-stripping, following Energy Star guidelines
- (17) Home sealing, following Energy Star guidelines. Techniques include:
- sealing leaks with caulk, spray foam, and weather stripping;
  - replacement of fixtures perforating ceiling drywall with insulation contact, air tight fixtures (i.e. IC AT can lights)
- NOTE: mechanical ventilation may be required to achieve a minimum of 0.35 air changes per hour (0.35 ACH)
- (18) Skylights, U Value of 0.60 or less and solar heat gain coefficient of 0.40 or less
- (19) Solar tubes
- (20) Additional building openings to provide addition natural light, windows and doors must meet the Energy Star rating U value of 0.40 or less
- (21) Lighting, Energy Star listed (no bulb only retrofits)
- (22) Pool equipment

(a) Pool circulating pumps (must be variable flow and/or multi-speed with controllers)

(22) Energy use monitoring systems (fixed/permanent installation)

**B. Residential Energy Efficiency Custom Measures.**

(1) Passive solar (heating/cooling)

**C. Commercial Energy Efficiency Measures.**

(1) Heating, ventilating and air conditioning systems (“HVAC”)

(a) Minimum efficiencies

(i) Split systems with 14 SEER or 12 EER

(ii) Package systems with 13 SEER or 11 EER

(2) Geothermal exchange heat pumps

(a) Minimum efficiencies

(i) Ground source exchange open loop system 17.8 EER or higher

(ii) Ground source exchange closed loop system 15.5 EER or higher

(3) High efficiency electric hand dryer

(4) All applicable energy efficiency measures listed in “Residential” section

**D. Commercial Energy Efficiency Custom Measures.**

(1) Building energy management systems,

(2) Lighting control systems, which shall include occupancy sensors and other energy saving measures

(3) HVAC duct zoning control systems

(4) Motors and controls (processing or manufacturing equipment)

(5) Customer electric vehicle plug-in station

### **III. SOLAR EQUIPMENT**

Solar track funding is available for a wide range of solar equipment. SCEIP funding will be available for photovoltaic equipment and installers listed by the California Energy Commission. Solar thermal equipment must be rated by the Solar Rating Certification Council (SRCC). As with efficiency measures, if a rebate is available to the property owner to be applied to the purchase price, that amount must be deducted from the amount of financing requested. Eligible solar equipment for both residential and commercial properties include:

- (1) Solar thermal systems (hot water)
- (2) Solar thermal systems for pool heating
- (3) Photovoltaic systems (electricity)
  - (a) Battery back-up systems will be allowed
  - (b) Funding for off-grid systems will be allowed
  - (c) PV systems can be sized to accommodate plug-in electric vehicles
  - (d) Plug in stations
- (4) Emerging technologies – following the Custom Measures Track
  - (a) Nano/thin film photovoltaic
  - (b) High intensity (parabolic solar panels)

### **IV. CUSTOM MEASURES**

The Custom Measures Track is a process by which SCEIP Staff can evaluate and fund projects that are not “off the shelf” improvements listed in the eligible Water Conservation, Energy Efficiency or Solar Measures. These custom projects may involve large scale industrial or commercial energy efficiency improvement projects, such as process or industrial mechanical systems, renewable energy sources and energy generation, other than the solar system (photovoltaic), such as geothermal, and potentially fuel cells, as well as more complex and cutting edge energy management solutions and emerging technologies. The Custom Measure Track will evaluate and provide funding, if appropriate, for these innovative projects.

Applicants for the Custom Measure Track should consult with SCEIP staff to determine eligibility and will be required in most cases to submit engineering plans and



specifications. A SCEIP Custom Measure's Track review/technical panel will meet to review the engineering documents and data for custom and emerging technology projects. SCEIP may require an additional administrative fee for project evaluation by the technical review. In all cases, the County reserves the right to decline funding of a custom measure.

The following types of measures – among others – will be considered for SCEIP funding through the Custom Measure Track:

**A. Energy Efficiency Custom Measures.**

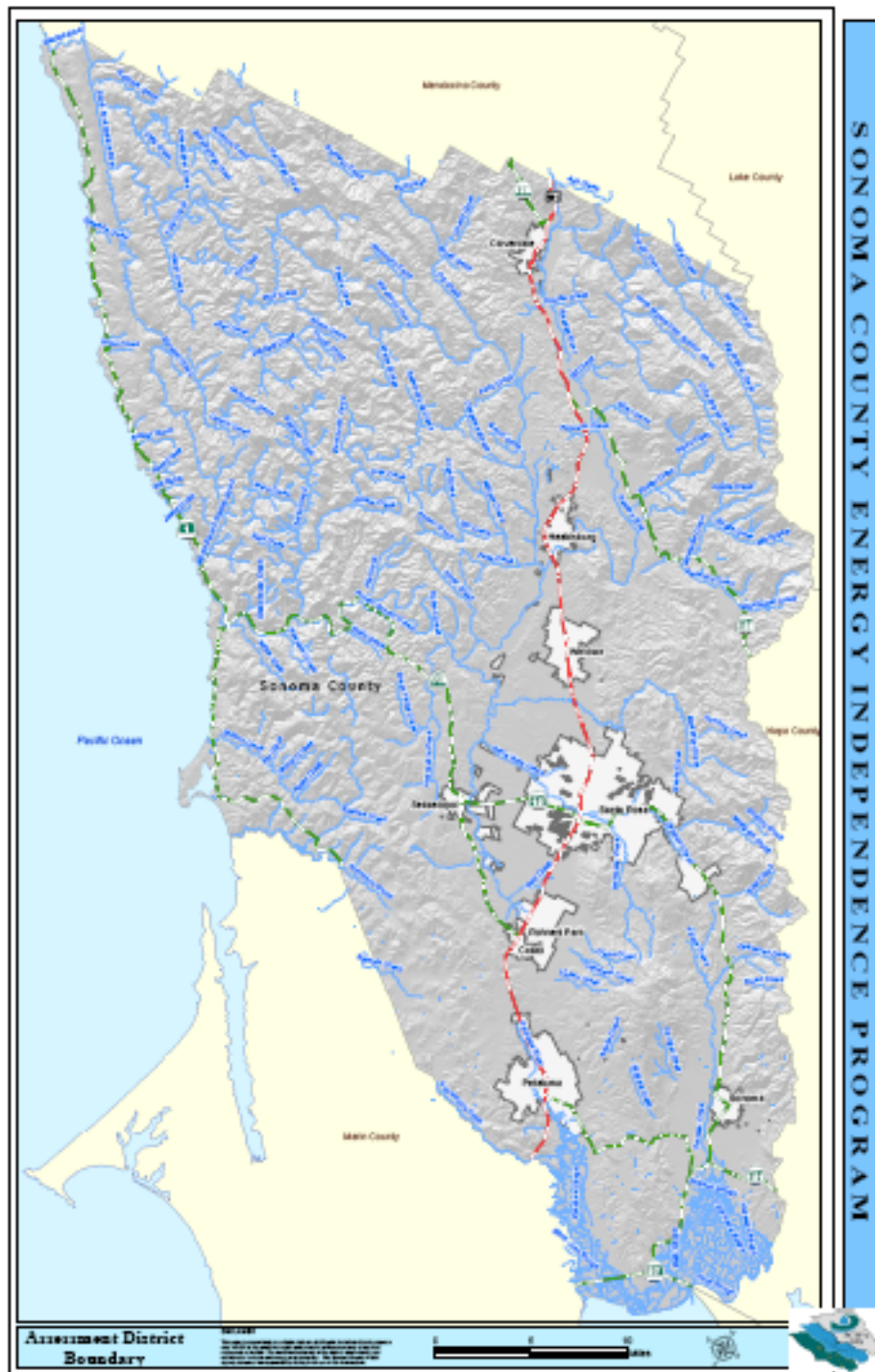
- (1) Alternative energy generation (other than photovoltaic)
- (2) Building energy management controls
- (3) HVAC duct zoning control systems
- (4) Irrigation pumps and controls
- (5) Lighting controls
- (6) Industrial and process equipment motors and controls

As these "Custom Measures" become Energy Star rated they will be included in the list of [eligible improvements](#).

**B. Energy Generation Custom Measures.**

- (1) Fuel Cells
- (2) Natural gas
- (3) Hydrogen fuel
- (4) Other fuel sources (emerging technologies)
- (5) Co-generation (heat and energy)

## Sonoma County Energy Independence Program APPENDIX B – MAP OF AREA



**Sonoma County Energy Independence Program  
APPENDIX C – APPLICATION**

Document available online at [www.sonomacountyenergy.org](http://www.sonomacountyenergy.org).

[Application](#)

**Sonoma County Energy Independence Program  
APPENDIX D – CONTRACT DOCUMENTS**

Document available online at [www.sonomacountyenergy.org](http://www.sonomacountyenergy.org).

[Assessment Contract – Single Disbursement  
Implementation Agreement – Single Disbursement](#)

[Assessment Contract – Multiple Disbursement  
Implementation Agreement – Multiple Disbursement](#)

**Sonoma County Energy Independence Program  
APPENDIX E – SUMMARY OF FINANCING PROCESS**

Document available online at [www.sonomacountyenergy.org](http://www.sonomacountyenergy.org).

[Summary of Financing Process](#)