



ROSEVILLE ELECTRIC REQUEST EVALUATION, MEASUREMENT and EVALUATION PROPOSAL

Roseville Electric (RE) is requesting proposals to provide third party Evaluation, Measurement and Verification (EM&V) services to assess RE's **Residential retrofit HVAC "Right Size" energy efficiency program** for **FY 2013 (July 1, 2012 to June 30, 2013)**. This program was funded as part of RE's ongoing collection of California mandated Public Benefit dollars.

RE is the municipally owned electric generation and distribution utility for the City of Roseville, California. The City of Roseville occupies approximately 35 square miles and is located 18 miles northeast of Sacramento, California; go to [City of Roseville, California - Homepage](#) for more detailed city information.

RE requires an third party mechanical engineering consulting firm with the knowledge, experience and technical capabilities required to perform EM&V, per the California Energy Commission (CEC) EM&V Guidelines for Publicly Owned Utilities (POU) Energy Efficiency Programs. This document was released by the CEC in 2011 and represents the most precise and comprehensive directions provided by the CEC for POU EM&V services.

The EM&V required by legislation must provide RE with deliverables that includes but is not limited to:

1. Reporting requirements regarding its energy efficiency programs: An evaluation that measures and verifies the energy efficiency savings and reductions in energy demand achieved by the selected energy efficiency and demand reduction program.
2. Feedback on program effectiveness which may result in program improvements.
3. Further, it is essential that the evaluation be independently conducted by experts who have had no prior involvement with the selected programs.

Program Background Information

In spring 2012 Roseville Electric introduced the "Right Size" HVAC program to encourage HVAC contractors to work with owners of single family residences to replace and resize existing, operational HVAC systems to achieve greater energy efficiency savings. The program is based on savings modeled by a third party engineering firm on an average of 372 full run hours (EFLRH). Energy savings and rebate payments are based on the size and vintage of the home and HVAC system. All work is required to be performed by licensed HVAC contractors and verified by certified third party HERS raters.

EM&V: PROGRAM SPECIFICS

Program Design:

- Early replacement program
- Program based on sizing analysis using Micropas.
- Micropas modeling included a large variety of housing stock and construction information including vintage and house size, split and package systems.
- Modeled for cooling savings.

Requirements for the program include:

- Equipment sized within 6,000 BTUH or ½ ton of design loads.
- Summer dry bulb set points of 103°F outside and 75° inside.
- Latent cooling required total capacity in the range of 0.97 to 1.0 (SHR).
- Maximum duct leakage of no more than 15% in load sizing.
- Room-to-room air discharge may not vary more than 10% from Manual D design parameter with total system air discharge not varying more than 5%.
- HVAC design in compliance with 2008 Building Energy Efficiency standards.
- All testing must be performed by a third party certified HERS rater.
- Qualified systems:
 - 15 SEER/12.5 EER/8.5 HSPF- split systems.
 - 14 SEER/12 EER/8.2 HSPF- package systems.
 - AHRI Certification
- City of Roseville building permit.

Program Documentation Required from Contractors for payment of rebate:

- AHRI Certificate with number.
- Serial number for installed and replaced system.
- Manufacturer name and model number for installed and replaced system.
- Paid in full receipt for system purchase and installation.
- SEER/ EER /HSPF of existing and replacement HVAC system.
- Layout of HVAC system for existing home to include:
 - Duct runs with sizes
 - Register locations
 - Residence layout with room dimensions
 - Location of existing HVAC system
- Air Conditioning Contractor of America (ACCA) Forms:
 - Manual J form J1 ae
 - Manual J form MJ8ae, worksheets A-I
 - Manual D friction rate, duct sizing worksheets with room airflow diagram
 - Testing and balance form
 - Or Wrightsoft Wright J& Wright D reports
- California Title 24 Compliance forms:
 - CF1R-ALT-HVAC
 - CF6R-MECH-04
 - CF6R-MECH 20 HERS or 6R-MECH-21-HERS
 - CF6R-MECH-22-HERS-split systems only
 - CF6R-MECH-25-HERS or 6R-MECH-216-HERS-split systems only

Resources and Information Available to Consultant (post selection/authorization):

1. Access to RE staff and participating customers (if required and with advance notification to customers).
2. Access to the third party contracted, program design “white paper” with supporting documentation
3. Access to rebate data and reports from Salesforce based Energy Orbit rebate tracking system.
4. Rebate application package with documentation including all HERS, CF and ACCA forms.

General EM&V Information:

1. RE desires to achieve a 90/10 confidence level but will consider an 80/10 level. Sample size not to be less than CEC recommended for 120 homes rebated in FY 12.
2. Program is a custom entry to E3, 1 unit for all rebated systems.
3. Each system is entered into the rebate tracking system as a measure identified by vintage and size of home. System tonnage collected with each measure.
4. Documentation for all rebates is attached to every customer rebate entry in the tracking system.

EM&V Deliverables to RE

1. Evaluation of the Residential HVAC Right Size Air Conditioner program with applied CEC EM&V methodology for POUs per guidelines published January 2011.
2. EM&V report in format that follows the CEC EM&V Guidelines Checklist of January 2011 (See Attachment A).
3. Consultant must be able to begin work immediately following selection and authorization of contractor by RE and if required, City of Roseville City Council. Anticipated start state is September 15, 2013 with completion of the evaluation with final draft provided to Roseville Electric prior to December 15, 2013.

Budget

RE is relying on Consultant expertise and knowledge of right sized HVAC systems and technology to assess the amount of time and resources required to properly evaluate this program and propose a competitive bid.

Response to this RFP

Respondent MUST provide the following information to be considered for this contract:

EM&V Project Experience and Expertise

1. Prior experience conducting mechanical engineering EM&V of residential home heating and air conditioning systems.
2. Demonstrated familiarity with California Title 24 Building Standards
3. Utility references
4. Description of EM&V projects performed
5. Other relevant experience

EM&V Cost

1. Staff hourly billing rates
2. Travel and Miscellaneous expenses
3. Total project cost
 - a. Broken out by staff hours and project phase

EM&V Staff Skills and Experience

1. Staff
 - a. Project Management Staff qualifications
 - b. Field Auditor Staff qualifications

EM&V Project Timeline

1. General Timeline - Project Schedule
 - a. Projected meetings
 - b. Projected deliverables
 - i. Draft
 - ii. Final
 - c. Project completion

The City of Roseville requires that individuals and firms that contract for services file a certificate of insurance prior to the execution of the contract agreement. If awarded the contract, you will need to provide proof of Insurance on an original Certificate of Insurance (Attachment B)

Completed, hard copy proposals must be delivered and received no later than 3 p.m. July 12, 2013,

City Clerk's Office
311 Vernon St.
Roseville, CA 95678

Proposals must include **4** hard copies submitted to the **City Clerk's office** followed by an emailed copy to rlaffey@roseville.ca.us.

Attachment A: CEC EM&V Checklist

Contextual Reporting

- Clearly state savings values and compare to the associated SB 1037 annual report.
- What portion of RE's portfolio is covered. Describe the programs or savings not evaluated?
- Assess risk or uncertainty in selecting the components of the portfolio to evaluate.

Overview and Documentation of Specific Evaluation Effort

- Clearly identify what is being evaluated in the study (part of a program; an entire program; the entire portfolio).
- Include an assessment of EUL and lifecycle savings.
- Provide documentation of all engineering and billing analysis algorithms, assumptions, survey instruments and explanation of methods.
- Describe the methodology in sufficient detail that another evaluator could replicate the study and achieve similar results.
- Include all data collection instruments in an appendix.
- Describe metering equipment and protocols in an appendix.

Gross Savings

- Review the program's choice of baseline.
- Characterize the population of participants.
- Discuss the sampling approach and sample design.
- State the sampling precision targets and achieved precision.
- Present ex post savings.
- Expand the results to the program population. If not, state reasons why and clearly indicate where ex ante savings are being passed through.
- Explain any differences between ex ante and ex post savings.

Net Savings

- Include a quantitative assessment of net-to-gross. If not, clearly indicate the source of the assumed net-to-gross value.
- Discuss the sampling approach and sample design.
- If a self-report method is used, does the approach account for free-ridership?

EM&V Summary and Conclusions

- Provide clear recommendations for improving program processes to achieve measurable and cost-effective energy savings.
- Assess the reliability of the verified savings and areas of uncertainty.

Attachment B:**RISK MANAGEMENT DIVISION**

GENERAL INSURANCE REQUIREMENTS

Proof of insurance must be provided on a *CERTIFICATE OF INSURANCE*. This document must be signed. A stamped signature will suffice.

Types of Insurance Required:	<p>General Liability – 1M per occurrence/2M aggregate (<i>coverage must be as broad as the standard ISO form</i>)</p> <p>Automobile – 300/500/100</p> <p>Workers’ Compensation - Statutory</p> <p>Professional Liability – 1M per occurrence</p>
Coverage Limits:	<p>Vary (based on type of work to be performed)</p> <p>See above</p> <p>Self-Insured Retention (SIR) or deductibles amounts must be stated on the certificate</p>
**Additional Insured: ** <i>The insurance policy may not contain language which prohibits additional insured or other insurers from satisfying the self-insured retention or deductible.</i>	<p>Required on <u>General Liability</u> Insurance.</p> <p>A separate endorsement form or section of the policy indicating “The City of Roseville, its officers, agents, volunteers and employees” are named as an additional insured for on-going and completed operations must accompany the certificate. <u>A STATEMENT ON THE CERTIFICATE WILL NOT SUFFICE.</u></p>
Certificate Holder:	<p>The Certificate Holder on the <i>Certificate of Insurance</i> is “The City of Roseville, attn. Risk Management, 311 Vernon St., Roseville CA 95678”.</p>
Primary Insurance:	<p>The General Liability policy must be primary insurance as to the City of Roseville. Companies issuing such policies shall be liable up to the total amount of liability without right of contribution from the City of Roseville or its insurers.</p>
Description of Operations:	<p>This box should contain information on the project being insured. For companies doing various projects with the City an “All California Operations” description is adequate.</p>
Cancellation Notice:	<p>The City requires a 30-day cancellation notice. Ten (10) day for non-payment is acceptable.</p>
Approval Process:	<p>Proof of insurance for all insurance coverage required by the Agreement must be approved and on file with the City before the Agreement can be executed.</p>
Questions:	<p>If you have questions regarding insurance requirements you may contact the Risk Management Division:</p> <p>Phone :(916) 774-5202.</p> <p>FAX: (916) 774-5461</p> <p>Email:riskmanagement@roseville.ca.us</p>