



**REQUEST FOR OFFER # 13-409.00-007**  
**Modernized Appliance Efficiency Database System (MAEDBS)**  
**Master Services Agreement: IT Consulting Services**  
**5137002-001 through 5137002-155**  
**Date: March 12, 2014**

You are invited to respond to this Master Services Agreement Request for Offer (RFO) for IT Consulting Services for the California Energy Commission's Modernized Appliance Efficiency Database System (MAEDBS) Project. The services required are described in the following Scope of Work (SOW). By submitting an offer, your firm agrees to the terms and conditions stated in this RFO and your IT MSA contract. Selection will be based on best value using the criteria listed in this document.

Please read this document carefully. All questions must be submitted via BidSync. Answers will be posted directly to the questions on BidSync. The RFO response including supporting documents, if any, as well as one (1) copy of the complete IT MSA contract including the associated price list is due **at 12 Noon, Wednesday, April 9, 2014**. Offer may be submitted electronically as long as it is smaller than 50 MB by the due date (and time) to [Kate.Spiess@energy.ca.gov](mailto:Kate.Spiess@energy.ca.gov). If the response is mailed (including but not limited to U. S. Postal Service or overnight services) or hand delivered, it must include one original, three copies, one electronic PDF version on CD as well as one (1) copy of the complete IT MSA contract, including the associated price list and be received by **12 Noon, Wednesday, April 9, 2014**. Any questions regarding this RFO must be directed to Ms. Spiess.

**California Energy Commission**  
**1516 9th Street, MS-7**  
**Sacramento, CA 95814-5512**  
**(916) 651-6588**

**Key RFO Dates**

Release of RFO	<b>Wednesday, March 12, 2014</b>
Questions Due	<b>Wednesday, March 19, 2014, 12 Noon</b>
State Responses to Questions	<del><b>Thursday, March 20, 2014, 3pm</b></del> <b>Monday, March 24, 2014, 3pm</b>
RFO Response Due Date	<b>Wednesday, April 9, 2014, 12 Noon</b>
Anticipated Contract Award	<b>Thursday, May 15, 2014</b>

**Note:** ALL DATES AFTER THE RFO RESPONSE SUBMISSION ARE APPROXIMATE AND SHALL BE ADJUSTED AS CONDITIONS INDICATE, WITHOUT ADDENDUM TO THIS RFO.

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## **GENERAL INFORMATION**

### **1 BACKGROUND & PURPOSE FOR THE REQUEST FOR OFFER**

#### **1.1 PURPOSE**

The California Energy Commission (Commission) is issuing this Request for Offer (RFO) to obtain a comprehensive software solution for the Commission's Appliance Efficiency Program, with the primary goal of modernizing the current database and supporting tools used by the Program. The Appliance Efficiency Program receives appliance efficiency and performance data from manufacturers located around the globe, and needs to provide more immediate services that are available on a 24/7 basis relating to receiving, processing, and responding to submittals of appliance data.

The goal of this modernization effort is to consolidate the functions of six independent systems into a single unified system, integrate online and automated transaction tools, and ultimately improve the processes used by manufacturers for submitting appliance data, the tools used by staff to process manufacturer submittals, and the website used by consumers to access and compare information about energy efficient appliances.

The solution will be a central part of streamlining incoming and outgoing materials that are processed by program staff. Our intent is to offer an always-on, web-accessible portal that provides immediate validation and immediate feedback for submitted data and forms. This will minimize the most common delays in responding to manufacturers and associated parties while reducing the volume of work handled by staff.

The requirements specified in this RFO reflect the complexity of regulating the wide range of appliances covered by the Energy Commission's Appliance Efficiency Program. Appliance efficiency standards must evolve over time to keep pace with technology, and different appliances require very different types of information to verify conformance with the law. Offers must be designed to address current and, wherever possible, anticipated future business needs of the Commission.

Responses to this RFO will be evaluated based on the total offer, and the award, if made, will be to a single Offeror awarded the highest points as calculated in accordance with the methodology defined in Section 4, Evaluation, of this RFO.

#### **1.2 BACKGROUND**

The Appliance Efficiency Program relies heavily on a database system for its operation. Manufacturers are required by law to submit performance data for every model of regulated appliance that is sold or offered for sale in California. This data is validated, stored, and made publicly available through the Commission's Appliance Efficiency Database. The Commission also maintains separate, internal databases for tracking the approval status of appliance test laboratories, the independent testing results and

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enforcement actions undertaken by the Commission, and the contact data for manufacturers who have provided appliance data. These “satellite” databases combined with a hard-paper filing system make the Program possible, though in a less-than-ideal way.

The Appliance Efficiency Database has existed in multiple forms over the 30+ years of the program. Its current version was designed in 1999 in response to a “Y2K” compliance concern and not built with 12+ years of program growth in mind. Recent state actions combined with rapid technological development in the appliance market have outgrown the existing Appliance Efficiency Database. In order for the Commission to keep up with its current responsibilities for processing and publishing certified appliance data and continue pursuing new appliance efficiency opportunities, a modern database built to accomplish the scope of today’s program is required. Without this, the Commission would be forced to diminish or halt its ongoing and future standards-setting actions and forego significant energy savings opportunities.

There is a significant opportunity for task automation and streamlining in the current system, and a growing need to realign the database to the current, modern needs of both the Appliance Efficiency Program and the public it serves. This modernization project addresses the IT portion of this opportunity, aiming to realize this potential by rebuilding the current database and supporting systems into a single, unified, automated system. An in-depth discussion of the Business Problems present in the current system and addressed by the modernization project can be found in Sections 3.2 and 3.3 of the Feasibility Study Report (FSR) prepared for this project.

### **1.3 INFORMATIONAL LINKS**

Additional information about the Appliance Efficiency Program and its current systems and business processes, along with the FSR for this project, can be accessed at the following links:

- Feasibility Study Report for this Project:  
[http://www.cta.ca.gov/Government/IT\\_Policy/IT\\_Projects/pdf/3360-070\\_CEC%203380-070%20MAEDBS%20FSR.pdf](http://www.cta.ca.gov/Government/IT_Policy/IT_Projects/pdf/3360-070_CEC%203380-070%20MAEDBS%20FSR.pdf)
- Home page of the Appliance Efficiency Program:  
<http://www.energy.ca.gov/appliances/>
  - Current copy of the Appliance Efficiency Regulations:  
<http://www.energy.ca.gov/2012publications/CEC-400-2012-019/CEC-400-2012-019-CMF.pdf>
- Current data collection forms and templates for the Appliance Efficiency Program:  
<http://www.energy.ca.gov/appliances/forms/>

- Example certification packet for appliance data (Dishwashers):  
[http://www.energy.ca.gov/appliances/database/forms\\_instructions\\_cert/Cooking\\_and\\_Washing\\_Products/Dishwashers.zip](http://www.energy.ca.gov/appliances/database/forms_instructions_cert/Cooking_and_Washing_Products/Dishwashers.zip)
- Current directory and database of certified appliances:  
<http://www.appliances.energy.ca.gov/>
- Current State of California template for State web pages:  
<http://webtools.ca.gov/tools/state-template/>

Offerors are strongly encouraged to review these materials as they prepare their response, as they are responsible for understanding the complexity of the existing program.

#### **1.4 TERM OF CONTRACT**

The Firm Fixed Price Contract awarded as a result of this RFO shall become effective upon approval by the Department of Technology and shall remain effective for two (2) years. This RFO is being released as a Tier 1 MSA solicitation, and therefore has a maximum dollar amount of \$1,500,000.

### **2 RFO RESPONSE REQUIREMENTS**

This RFO and the Offeror's response to this document shall be made part of the Energy Commission's procurement contract file. **All offers become public information after they are received by the State: confidential offers will not be accepted or considered as a part of this solicitation.**

Responses must contain all requested information and data and conform to the format described in this section. It is the Offeror's responsibility to provide all necessary information for the Energy Commission to evaluate the response, verify requested information and determine the Offeror's ability to perform the tasks and activities defined in the Statement of Work.

The Offeror must submit their response as designated on the RFO cover sheet.

### **3 RFO RESPONSE CONTENT**

The Offeror's response to the Statement of Work (SOW) shall respond to the SOW and shall be used to evaluate responsiveness to requirements. This SOW shall map each deliverable/requirement back to the attachments. The Offeror's response shall include any additional information that is deemed necessary to explain how the Offeror intends to meet the requirements.

The Offeror's response to the Statement of Work shall contain the following in this order:

1. A cover letter containing the following information:
  - Company name, address and phone number
  - MSA number
  - Statement indicating that the Offeror has available staff with the appropriate skills to complete performance under the Agreement for all services and provide all deliverables as described in this RFO.
  - Signed by an individual who is authorized to bind the offering firm contractually. The individual's name must also be typed, and include the title or position that the individual holds in the firm. An unsigned Offer may be rejected.
  - Email and phone number of the person signing the letter.
  - Offer submission date
  - If applicable, Disabled Veteran Business Enterprise (DVBE) self-certification or identification of, and tasks/percentages, for disabled veteran business enterprise sub-Offeror(s).
  - If applicable, Small Business Certification number.
2. Table of Contents
3. Executive Summary with content highlights
4. Overview of the required tasks and outcomes, and how tasks shall be performed
5. Work plan for implementing the solution, including a description of each task and sub-task
6. Outlines of what deliverables are proposed for the required tasks
7. Schedule that describes the timing of tasks, dependencies, resources and key milestones
8. Response to all requirements
9. Organization chart that identifies the proposed contract team

Resumes must be provided for all staff members who will participate in this project. The resumes must be specific to the individuals who will perform the tasks and produce the deliverables associated with this project; "representative" or "sample" resumes will not be acceptable. Resumes are expected to include the individual's education, applicable credentials and certifications, current work history, and a summary of similar work performed. Note that the resume of the Offeror's proposed Project Manager must include their PMP Certification Number.

10. Response to Cost Worksheet, Attachment B:

This Attachment details the staff hours by classification, hourly rate, and deliverables(s), per Attachment B.

- The Offeror shall propose a fixed price to complete all deliverables.
- These costs shall map to each classification to the Offeror's SOW.

11. Response to Offeror and Consultant References, Attachment C

Three (3) references for the Offeror **and** three (3) references for **each** Staff Person assigned to the Project Team.

- Staff person references must be for similar work, and are expected to be included in their resumes as described in Item 9.
- Offeror references must also be for similar work performed.
- If the Staff Person is also the Offeror, the Staff Person's references may also be used as the Offeror's references. Interviews and reference checks will be at the discretion of the Energy Commission.

12. Response to STD 843 DVBE Declarations, Attachment D, if Offeror is a DVBE

13. Response to STD 213 Standard Agreement, Attachment E

14. Response to STD 204 Payee Data Record, Attachment F

15. One complete copy of the Offeror's MSA contract and any supplements

#### **4 REVIEW OF OFFERS FOR AWARD**

Offers will first be reviewed for responsiveness to all requirements. If an offer is missing information, it may be deemed not responsive. Further review of non-responsive offers is subject to the Energy Commission's sole discretion.

Award of a contract resulting from this RFO against an MSA contract shall be based on a "best value" method that includes cost as a factor. Scores will be based 30% on administrative criteria, 40% on technical criteria, and 30% on cost. The following specific criteria shall be used to determine the winning offer:

	Item	Percentage of Score
<b>1</b>	<b>Administrative Criteria</b>	
	<ul style="list-style-type: none"> <li>Whether all applicable items in Section 3 are included in Offer.</li> </ul>	30
	<ul style="list-style-type: none"> <li>The extent to which Project Team Member resumes demonstrate knowledge, experience and qualifications in the areas listed in Section 13.9</li> </ul>	
	<ul style="list-style-type: none"> <li>The extent to which references and examples of prior work demonstrate the Offeror's and Project Team's experience in successfully completing similar projects and support the SOW</li> </ul>	
<b>2</b>	<b>Technical Criteria</b>	
	<ul style="list-style-type: none"> <li>The extent to which the proposed Work Plan and Schedule are complete and support the Tasks and Deliverables proposed in the SOW</li> </ul>	40
	<ul style="list-style-type: none"> <li>The extent to which the proposed solution addresses and supports the mandatory requirements outlined in Section 13</li> </ul>	
	<ul style="list-style-type: none"> <li>The extent to which the layout and functions of the proposed interfaces for performing staff work demonstrate an understanding of staff processes and needs, and address those needs</li> </ul>	
	<ul style="list-style-type: none"> <li>The extent to which the layout and functions of the proposed interfaces for external clients to submit form information and appliance data demonstrate an understanding of submitter processes and needs, and address those needs</li> </ul>	
	<ul style="list-style-type: none"> <li>The extent to which the layout and functions of the proposed interfaces for the public to view appliances listed in the database/directory demonstrate an understanding of public interface design and awareness of State requirements for public-facing webpages</li> </ul>	
	<ul style="list-style-type: none"> <li>Whether the optional element of automatically generating QR codes (as described in Section 13) is included in the proposed solution</li> </ul>	
<b>3</b>	<b>Cost</b>	

	Item	Percentage of Score
	<ul style="list-style-type: none"> <li>Cost – See Cost Evaluation example below</li> </ul>	30
	<b>Total</b>	<b>100</b>
<b>4</b>	<b>DVBE Participation</b>	
	<ul style="list-style-type: none"> <li>DVBE Participation – maximum possible 5% adjustment to score for Disabled Veteran Business Enterprises<sup>1</sup></li> </ul>	5
	<b>Total with DVBE Participation</b>	<b>105</b>

#### 4.1 COST EVALUATION

A cost score will be calculated based on the identified lowest cost, using the following formula:

$$\frac{\text{Lowest Cost Offer}}{\text{Offeror's Offer}} \times \text{Maximum Cost Score} = \text{Cost Score}$$

Resource	Offeror #1	Offeror #2	Offeror #3
Offer	\$1,300,000	\$1,400,000	\$1,500,000
	$\frac{1.3M}{1.3M} \times 30 = 30$	$\frac{1.3M}{1.4M} \times 30 = 28$	$\frac{1.3M}{1.5M} \times 30 = 26$

<sup>1</sup> In accordance with Section 999.5(a) of the MVC, an incentive will be given to bidders who provide DVBE participation. For evaluation purposes only the State shall apply an incentive to bids that propose California certified DVBE participation as identified on the bidder Declaration GSPD-05-105 (Attachment D) and confirmed by the state. The maximum incentive for this solicitation is five percent (5%) of the lowest responsive bid amount and is based on the amount of DVBE participation obtained.

## **ATTACHMENT A – STATEMENT OF WORK**

This Statement of Work (SOW) describes the services to be provided under a fixed price contract by the Offeror selected per Section 4. The services shall be to design, develop, test, and implement a comprehensive software solution for the Commission's Appliance Efficiency Program, as described throughout this RFO.

This RFO and the Offeror's response to this document will be made part of the Energy Commission's procurement contract file. **All offers become public information after they are received by the State: confidential offers will not be accepted or considered as a part of this solicitation.**

### **5 SCOPE AND DESCRIPTION**

The Scope of the current project, and of the work described in this SOW, is the creation of a software application or system (system) to consolidate and streamline the business processes of the Energy Commission's Appliance Efficiency Program and to move the submittal of approval forms and appliance data to an automated, publicly-accessible web-based interface.

#### **5.1 CURRENT ENVIRONMENT**

The Appliance Efficiency Program currently uses the following six separate computer systems in support of core program work:

- Email correspondence system (Microsoft Outlook) for appliance certification submittals and testing laboratory application submissions
- Appliance Efficiency database (.Net/SQL Server) for validating and storing appliance efficiency attributes
- Manufacturer contact files (Microsoft Excel) for storing manufacturer contact information from Appliance Declarations
- Test laboratory database (Microsoft Access) for validating and storing Test Laboratory Applications and contact information for the testing laboratories
- Enforcement database (Microsoft Access) for tracking enforcement actions
- Appliance Testing database (Microsoft Access) for tracking appliance testing

These six systems are completely separate from each other and have no integration or interfaces between them. There are no connections between the appliance database and the records of responsible manufacturers, test laboratories, or certifiers. There are also no tools for generating program metrics, such as number of applications processed, and no tools for generating program-related reports.

From a process standpoint, the legacy systems that are currently used to support the Appliance Efficiency Program and their role in core program work are as follows:

1. Data and applications are submitted to our program exclusively by e-mail, as file attachments. Materials are therefore received via Microsoft Outlook. Outlook gives a time and date stamp to received communications and allows for submittals to be sorted into folders. Outlook also automatically purges any and all e-mail over 90 days old; per Commission-wide IT policy.
2. Submitted materials are printed to hard copy to avoid deletion and facilitate archiving. For submittals of appliance data, the date and time information in Outlook is also recorded in a physical log file along with the name of the appliance manufacturer, the “due date” by which the submittal must be responded to, and checkmark fields for recording the presence (or absence) of required forms and materials.
3. For test laboratory approval applications and third party certifier applications, the submitted company and contact information is keyed into a Microsoft Access database. This database records which specific appliance types each laboratory is approved to test as well as their approval date and status.
4. For data submittals, required forms are reviewed and the status of the specified test laboratory is checked against our approval records. If found to be acceptable, the data file provided by the submitter is then uploaded to a Microsoft SQL Server database for automated data validation: this validation checks formatting by necessity but also compares provided data against applicable appliance standards. The validation routines are written in legacy SQL CLR code. Staff decide, based on this validation, whether to commit the records to the database or to return them to the submitter for correction.
5. In all cases, staff will respond by e-mail (using Outlook) and may attach files showing final disposition of the submittal. Approved test laboratory and third party certifier listings are published online by exporting a list of approved companies to an Excel file and posting the file. Accepted appliance listings are published online through a custom web page able to read and display the contents of the database. This interface is developed primarily in ASP.NET and is unrelated to the staff web tools used to process and curate data: where the core database was originally developed in 1999-2000, these public-facing pages were developed in 2008 and do not interact with staff pages.
6. All records are printed and archived, and are required to be retained for a minimum of ten (10) years. Electronic scans of approved applications and Excel copies of processed data files are also kept in folders on the program’s network drives. Finally, contact information present on forms relating to submittal of appliance data are entered into Excel spreadsheets for each appliance type.

7. Enforcement issues are originated and tracked in a separate Microsoft Access database maintained by enforcement personnel.

Thus, current staff processes rely on three standalone database systems, a physical log and physical submittal archive, separate sets of staff-facing and public-facing web pages, collections of Excel spreadsheets, and an e-mail client for the receipt, processing, and publishing of appliance data.

The largest and most critical single component is the SQL appliance database and the staff-facing pages that support it. The current Appliance Efficiency Database has roughly 1.6 million total records spanning three decades. Of these, 400,000 are “active” records representing currently manufactured appliances. The Energy Commission currently processes roughly 40,000 records annually, receiving between 10-15 submittal packages per day (on average). Records are submitted in pre-formatted Excel templates that staff are able to upload to the database for validation and acceptance. Links to the public-facing database web pages and to the certification packages used by submitters are provided in Section 1.2, Background.

## **5.2 PROPOSED ENVIRONMENT**

In broad terms, the proposed system must be able to accept appliance data from manufacturers and publish this information for use by consumers and the general public. Appliance data is required to be certified to the Energy Commission, necessitating use of digital forms and digital signatures. Appliance data must come from approved appliance test laboratories, and may be certified by entities that are approved to act as manufacturer representatives: online application forms are necessary for these functions. Staff must review and accept submittals before they are published or approved, necessitating appropriate interface pages and data handling tools for logging, tracking, reviewing, and responding to submitted materials. Published data must be useful to data viewers, necessitating interfaces for browsing, searching, filtering, and exporting published data. Lastly, program management must be able to track program activity and staff work assignments, necessitating data compilation and reporting functions.

The Feasibility Study Report (FSR) for this project defines the following goals for the modernized system:

- Provide an integrated database system with automated workflow to manage the Appliance Efficiency Program.
- Provide the ability for manufacturers, test laboratories and third party certifiers to submit electronic forms.
- Provide the ability for manufacturers to enter and maintain efficiency and product feature data for their appliances using a browser-based application.

- Automate initial validation of submitted material and transfer responsibility for completeness and correct formatting to submitters.
- Automatically record and maintain the relationships between manufacturers, third party certifiers, test laboratories and the appliance listings each are associated with or responsible for.
- Provide access to appliance data to internal and external parties.
- Provide access to appliance program management data to internal parties.
- Provide the following capabilities:
  - Flexible data record search
  - Mass e-mailings
  - Interface capability to incorporate appliance data from other organizations (e.g., ENERGY STAR<sup>®</sup>/WaterSense<sup>®</sup>)
  - Robust reporting and data extraction / data mining
  - Robust authentication and data security
  - Fully electronic (“paperless”) data archiving
- Provide a workflow system for managing Appliance Efficiency Program processes.
- Provide the ability to manage enforcement actions.
- Provide clearer and more usable interfaces for Appliance Efficiency Program processes.
- Provide business intelligence capability (i.e., report-generating functions sufficient to answer the questions of “What happened? When? By whom?”).
- Provide data mining capability (analysis of large quantities of data).
- Provide a consumer-friendly web application that can be used to make appliance purchase decisions.

Based on these requirements, the Energy Commission is seeking the development of a database system capable of handling and, to a large extent, automating the workflow and business processes engaged in by the Energy Commission’s Appliance Efficiency Program. The specific business needs and requirements are stated in Section 13.6, Business Requirements, and the technical elements necessary to fulfill these goals are stated in Section 13.8, Technical Requirements.

Many of the features required by the Energy Commission are directly analogous to the systems commonly seen in retail websites: the ability to create an account, securely log in, provide contact information, and browse product listings. Where a shopper may need to enter separate shipping and billing addresses, in our system a submitter may need to enter their own contact information and the contact information of the manufacturer they are representing (when the submitter is a “third party”, such as a contracted test laboratory). The core difference is in the receipt and validation of appliance data in addition to these elements.

The system is required to be developed using ASP.NET with C# as the programming language and SQL Server as the database. The required system architecture is described in Section 13.2, System Architecture. The system developed by the Offeror shall be a new, custom system, but may integrate commercial off-the-shelf (COTS) products on an opportunistic basis if found to be appropriate for meeting the business and technical requirements identified in this RFO. Shareware, freeware, or open source software is not considered COTS software for this purpose, and shall not be incorporated into any proposed or developed system in any way.

### **5.3 OFFEROR QUALIFICATIONS**

The Offeror shall be in good standing with the State of California and legally able to conduct business and perform work within the United States.

### **5.4 PROJECT TEAM QUALIFICATIONS & REPLACEMENT**

See Section 13.9 of this document for the specific qualifications needed for the proposed project team. If any key persons assigned to the project team become unavailable prior to the completion of their associated tasks (as specified by the Offeror in the Project Team Staff and Rates Table), the Offeror shall provide a replacement with matching qualifications within 10 business days and shall guarantee continuity of work. The Energy Commission must be provided with a resume, with references, for any proposed replacement which must show qualifications equivalent to the individual specified as performing the work within this RFO. The substitute personnel shall meet all requirements of this RFO and SOW and must be approved in writing by the Energy Commission prior to initiating any work under the contract.

## **6 TASKS AND DELIVERABLES**

Work will be performed on-site at the Energy Commission Headquarters during normal State business hours (8:00 a.m. – 5:00 p.m. Monday – Friday, excluding State-recognized holidays) utilizing its Information Technology Services Branch's (ITSB's) environment(s) and applicable standards. Any exception must be approved by the Energy Commission Project Manager in advance. On-site work is expected to be performed on computers and equipment provided by the Energy Commission.

The tasks in this RFO and the timeline of deliverables are organized according to the five software development phases specified in the California Project Management Methodology (CA-PMM), or SIMM-17. These phases are: Analyze, Design, Build, Test, and Deploy. The Offeror shall adhere to this methodology for this project.

### **Task 1: Project Administration**

The Offeror shall provide full project management, planning, monitoring, supervision, tracking, and control for all project activities during the term of the Agreement. The Offeror shall employ project management standards and practices (e.g., Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK)), including Integration Management, Scope Management, Time Management, Cost Management, Quality Management, Human Resource Management, Communications Management, Change Management, and Risk Management, in the performance of all work.

Offeror will be expected to conduct a kickoff meeting within the two weeks following the start of the contract, as arranged between the Energy Commission Project Manager and the Offeror's Project Manager.

- **Subtask 1.1: Project Initiation**

The Offeror shall perform the following Work in Subtask 1.1:

Deliver and obtain Energy Commission approval for the Project Management Plan.

The Offeror shall deliver and present Deliverable 1.1.1 (Project Management Plan (PMP)) to Energy Commission at a meeting within fifteen (15) calendar days of the Effective Date of this Agreement.

- **Subtask 1.2: Conduct Ongoing Project Management Activities**

The Offeror shall perform ongoing project management activities during the software development process, which shall include:

1. Manage all the Offeror staff, including Subcontractor staff, assigned to the project;
2. Manage issues raised by Energy Commission and documented in bi-weekly status reports;
3. Manage risks as described by the Risk Management Plan;
4. Provide planning and direction in accordance with the Energy Commission approved Project Management Plan, ensuring that proper project management controls exist and are in use;
5. Provide change management, following the methodology documented in the Change Management Plan;

6. Provide routine assessments of progress as targeted in the Project Management Plan;
7. Participate in the Deliverable review/resolution process for all Deliverables;
8. Provide updated copies of the Project Management Plan and Risk Management Plan, which incorporates only Energy Commission-approved variances from the current Energy Commission-approved Project Management Plan; and
9. Provide ongoing risk management that includes input from all the Offeror Key Staff.

The Offeror Project Manager shall submit bi-weekly status reports to Energy Commission Project Manager throughout the term of the Agreement. The first bi-weekly status report shall be due to Energy Commission Project Manager fifteen (15) calendar days after the Effective Date of this Agreement, with subsequent reports due every other Tuesday thereafter for the term of the Agreement. The Offeror shall compare actual progress for the preceding bi-weekly period with current Energy Commission-approved Project Management Plan and discuss any variances and work scheduled for the following period. In each bi-weekly status report, the Offeror shall include:

- Offeror Project Manager Name;
- Offeror Name;
- Reporting period start and stop dates;
- Date of report;
- The current overall project schedule, with the reporting period shown;
- Highlights of the reporting period;
- Tasks, Subtasks and other Work completed during the reporting period which were not scheduled;
- Tasks, Subtasks, and other Work completed during the reporting period which were scheduled;
- Tasks, Subtasks, and other Work started during the reporting period;
- Tasks, Subtasks, and other Work in progress during the reporting period;
- Tasks, Subtasks, and other Work scheduled for completion during the reporting period which were not completed;
- Activities for the next reporting period;
- Issues identified during that reporting period;
- Issues resolved during that reporting period;

- Corrections to the prior bi-weekly status report;
- Meetings scheduled for the next reporting period;
- Updated risk summary report based on the Risk Management Plan; and
- Any other items requested by Energy Commission Project Manager.

The Offeror Project Manager shall attend bi-weekly status meetings with Energy Commission Project Manager to review any issues, the status of the Project Management Plan, and the status of the Risk Management Plan and any Software-related risks. The Offeror shall deliver an updated Project Schedule in Microsoft Project 2007 format and include an indication of any variance from the current Energy Commission-approved Project Management Plan affecting the project's schedule, resources, or impacting the project's critical path. All variances shall be presented to Energy Commission Project Manager for approval at the bi-weekly status meeting. The Offeror shall send an updated copy of the Project Management Plan incorporating only Energy Commission-approved variances to Energy Commission Project Manager for approval no later than twenty-four (24) hours prior to any subsequent bi-weekly status meeting. The Offeror shall provide an electronic version of the updated Project Management Plan to the Energy Commission Project Manager.

- **Subtask 1.3: Project Closeout**

The Offeror shall provide completed and packaged close-out documentation prior to the termination of the contract.

<b>Tasks &amp; Deliverables Under Task 1: Project Administration</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>
<b>1.1</b>	<b>Project Management Plan</b>	<p>The Offeror shall use the Work Plan and Schedule included in their Offer as the basis of a Project Management Plan, which shall be used throughout the life of the project and shall include:</p> <ol style="list-style-type: none"> <li>1) All Work described in this Statement of Work and elsewhere in the Agreement;</li> <li>2) An approach to completing all Work, including a Work Breakdown Structure with Task and Subtask descriptions, associated Deliverables, and resource requirements;</li> <li>3) A Project Schedule, developed in Microsoft (MS) Project 2007, which shall include:</li> </ol>

<b>Tasks &amp; Deliverables Under Task 1: Project Administration</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>
		<p>a) All Deliverables;  b) All Tasks, Subtasks, and other Work for the project's critical path;  c) Associated dependencies among Tasks, Subtasks, and other Work;  d) Resources assigned to each Task, Subtask, and other Work;  e) Start date and date of completion for each Deliverable, Task, Subtask, and other Work;  f) Ten (10) Business Days for Energy Commission review for each Deliverable; and  g) Proposed milestones.</p> <p>4) Identification of all the Offeror (and Subcontractor, if any) Key Staff;</p> <p>5) An approach to Defect Management including methodology, recommended tool(s), and escalation process;</p> <p>6) Approach to project communications;</p> <p>7) A comprehensive Risk Management Plan, documenting the approach to risk analysis (e.g., the evaluation of risks and risk interactions to assess the range of possible project outcomes), risk mitigation (e.g., the identification of ways to minimize or eliminate project risks), and risk tracking/control (e.g., a method to ensure that all steps of the risk management process are being followed and, risks are being mitigated effectively). Risks identified to have a probability of occurrence that is greater than 85% shall be treated as facts, not as risks, and built into the project plan and project schedule accordingly. The plan shall have a clearly established process for problem escalation and shall be updated, as needed, through the term of the Agreement;</p> <p>8) A risk matrix documenting initial identification of risks, based on previous development or installation of like software, that may impact the timely delivery of the software. This shall include probability and potential impact of described risks, recommended mitigation strategy, and impact of implementing recommended risk mitigation strategies; and</p> <p>9) An approach to configuration management and change management. Changes, in this context, refer to changing the functionality of a component/module or adding additional functionality (e.g., changes to the project</p>

<b>Tasks &amp; Deliverables Under Task 1: Project Administration</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>
		scope). The approach shall ensure that the impacts and rationale for each change are analyzed and coordinated prior to being approved. The change management process may vary from item to item, as determined by Energy Commission Project Manager.
<b>1.2</b>	<b>Bi-weekly Status Reports</b>	The Offeror shall provide bi-weekly status reports that summarize the work accomplished in the previous two weeks and the work planned for the upcoming two weeks. These reports shall include summaries of any issues encountered or risks anticipated, any change requests proposed or approved, and any administrative changes such as changes in personnel assignments.
<b>1.3</b>	<b>Project Schedule Updates</b>	The Offeror shall update the project schedule throughout the life of the project and maintain the schedule as an accurate record of the durations of completed tasks and anticipated start and end dates of future tasks. Updates to the project schedule shall occur no more than two weeks after an identified change or impact to the schedule, and shall be subject to approval by the Energy Commission Project Manager.
<b>1.4</b>	<b>Project Management Plan Updates</b>	The Offeror shall update the project management plan throughout the life of the project and maintain the plan as an accurate representation of the Database Modernization Project.
<b>1.5</b>	<b>Final Acceptance Document</b>	The Offeror shall provide a completed and packaged Final Acceptance Document for signature by Offeror and Energy Commission staff which shall include, at a minimum, the following:  <ol style="list-style-type: none"> <li>1) Project Deliverable Checklist</li> <li>2) Outstanding Change or Issues Log</li> <li>3) Comprehensive Lessons Learned Log</li> </ol>

### **Task 2: Analyze**

The Offeror shall analyze the current tools and processes used by Energy Commission staff to gain a direct understanding of the Appliance Efficiency Program. The Offeror shall then synthesize the language in this RFO, the Offeror's response, and the

additional information produced by this analysis into a single, mutually agreed upon revised requirements document.

- **Subtask 2.1: Analyze Existing System**

Offeror shall review the databases, data tables, source code, Excel files, and physical files maintained by staff. In particular, the Offeror shall analyze the validation scripts present in the current Appliance Efficiency Database and the construction of the Access database currently used to store information about test laboratories and third party certifiers. The results of this review and analysis shall be paired with the understanding of the interactions of these systems gained from the staff interviews in Subtask 2.2.

- **Subtask 2.2: Interview Staff**

Offeror shall interview the key technical staff of the Appliance Efficiency Program and allow them to demonstrate how the current system is utilized by staff and how work flows through the program's existing structure. Offeror shall dedicate a minimum of three (3) hours to each of five (5) key staff persons, divided in each case between time spent in formal question-and-answer interview and time spent shadowing the staff person as they demonstrate performance of program work tasks; the Energy Commission will similarly make its key staff persons available for interview and interaction with the Offeror. The results of these interviews shall be paired with the understanding of the physical construction of the current system gained from the analysis performed in Subtask 2.1.

- **Subtask 2.3: Requirements Document – Traceability Matrix**

Offeror shall prepare a Requirements Traceability Document that incorporates the specifications in this Agreement, the details of the system proposed in the Offeror's offer response, information gathered through direct analysis of the IT products currently used by the Energy Commission's Appliance Efficiency Program per Subtask 2.1, and information gathered through interviews with Energy Commission staff per Subtask 2.2. This matrix shall provide the structure to document the requirements across the project, and shall support testing, change management and acceptance of the system.

<b>Deliverables Under Task 2: Analyze</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>
<b>2.1</b>	<b>Requirements Document – Traceability</b>	The Energy Commission Project Manager and interviewed staff will jointly review and approve the revised requirements document, which will represent the mutual

<b>Deliverables Under Task 2: Analyze</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>
	<b>Matrix</b>	understanding of the program’s needs and will serve to set reasonable expectations for the proposed system during development. The draft document is expected to be delivered electronically in an editable document format such as Microsoft Word. The draft document will be considered acceptable when it contains, at a minimum, a refinement of the business and technical requirements stated in Section 13, Requirements that can be shown to result from performance of Subtask 2.1 and 2.2.

### **Task 3: Design**

The Offeror shall produce documentation of the specific structure of the proposed system, and specifically shall produce an entity-relationship diagram to document the design of the core database underlying the system and a software design document (or set of documents) comprehensively describing the application to be developed. The Offeror shall also make any necessary revisions to the schedule and work breakdown based on the greater specificity anticipated in the design document.

- **Subtask 3.1: Establish Database Design**

The Offeror shall establish a comprehensive schema for the proposed data solution, stating in full the data to be stored within the system and the relationships between stored data. The Offeror shall work directly with assigned Subject Matter Experts to confirm inclusion of all current and historic data fields needed for eventual conversion of data from the existing system, and to verify appropriate logical relationships between all data components.

The schema developed by the Offeror shall be memorialized in an entity-relationship diagram, which will act as a blueprint during the appropriate tasks in the Build phase.

- **Subtask 3.2: Draft Design Document**

The Offeror shall prepare a draft set of design documents describing the structure and software elements of the application proposed to meet the requirements of Section 13, *Requirements*. The document shall be a complete description of the proposed system written at a high level and following general best practices for software documentation. This draft will be deliverable to the Energy Commission Project Manager and be subject to approval: following approval of the draft as a

deliverable, the document shall be considered a “living document” during development of the proposed system and a final version shall be prepared at the end of development as a separate task and deliverable (Subtask 3.3 and Deliverable 3).

- **Subtask 3.3: Update Design Document During Development**

The Offeror shall update the design document throughout the project as features are refined and implemented, or as changes occur, to ensure that the document remains accurate with respect to the developed software application. As the Offeror completes the tasks under Task 6, Deploy, Offeror shall also update the software design document into a final form or final version. The final design document shall accompany the final, delivered system, and shall be written to serve as a technical manual for IT staff maintaining the system.

<b>Deliverables under Task 3: Design</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>
<b>3.1</b>	<b>Entity-Relationship Diagram</b>	The Energy Commission Project Manager will review and approve the entity-relationship diagram with advice from key Energy Commission staff. The diagram shall be delivered electronically in an appropriate format such as Microsoft Visio; a graphical file format such as a .jpg may be delivered provided that an editable version, such as a Visio file, is shown to exist. The diagram will be considered acceptable when it describes all required data and data relationships for the appropriate functioning of the database.
<b>3.2</b>	<b>Draft Design Document</b>	The Energy Commission Project Manager and assigned IT staff will jointly review and approve the draft design document. The draft document is expected to be delivered electronically in an editable document format such as Microsoft Word. The draft document will be considered acceptable when it describes all parts of the anticipated software application and how each part will work, and does so using a format and language that is able to be understood by both IT and program staff.
<b>3.3</b>	<b>Final Design Document</b>	The Energy Commission Project Manager and assigned IT staff will review and approve the final design document. The document is expected to be delivered electronically in an editable document format such as Microsoft Word. The final

Deliverables under Task 3: Design		
Number	Name	Description
		document will be considered acceptable if it revises the draft design document to account for any and all changes made to the system's software or features during the course of development, and is written such that it is able to serve as a technical manual for IT staff assigned to maintain the system.

#### Task 4: Build

The Offeror shall develop the system proposed in their selected offer consistent with this Agreement and documented in the design document and other deliverables developed in the previous tasks.

The system shall be developed as a three-tier system, with separated data, logic, and presentation tiers.

- **Subtask 4.1: Construct Data Tier**

The Offeror shall construct, in accordance with the specifications in *System Architecture*, the database described in the approved Entity-Relationship diagram, and shall use the diagram as a blueprint for the construction of the database that will underlie the rest of the system. The Offeror shall establish and use a clear and consistent naming convention for all tables and fields, and shall specify appropriate data types and data widths for all data fields.

- **Subtask 4.2: Develop Logic Tier**

The Offeror shall develop, in accordance with the specifications in Section 13.2, *System Architecture*, Section 13.6, *Business Requirements*, Section 13.8, *Technical Requirements*, and the application described in the draft design document. The Offeror shall work with Energy Commission IT staff throughout the project to ensure adherence to Departmental programming standards, and with the Energy Commission Project Manager to ensure adherence to project objectives and goals.

- **Subtask 4.3: Draft Interface Tier**

The Offeror shall develop interactive web pages to fulfill the business requirements specified in Section 13.6. Web pages developed under this Subtask shall have all appropriate form fields, buttons, body text, and help text. Web pages

shall be developed according to the following principles: clean, simple, accessible, compatible.

Pages must meet standards for accessibility, semantic markup, valid html, and valid css. Pages must be compatible with the web browsers listed in Section 13.5, *Compatibility and Interface Requirements*. No Flash, Active-X, or Java browser plug-ins are to be used in the design of the web pages.

For accessibility, developed pages must comply with Section D of the California Government Code 11135. Code 11135 requires that all electronic and information technology developed or purchased by the State of California Government is accessible to people with disabilities. This law fully incorporates federal Section 508 and the Americans with Disabilities Act. There are various types of physical disabilities that impact user interaction on the web. Vision loss, hearing loss, limited manual dexterity, and cognitive disabilities are examples, with each having different means by which to access electronic information effectively

The public-facing web pages, meaning any developed web pages that are not restricted solely to use or access by Energy Commission staff, must use the State web page template. The State template uses Cascading Style Sheets (CSS) to achieve their look and feel. Note that the database described in Subtask 4.1 cannot be hosted on the Commission's public web server, where these web pages will be deployed. It must be hosted on separate application servers (e.g., Natural Resources Agency Data Center VMs). For both entry and display of appliance data, column headings should lead to explanations of the values expected for, or displayed within, that column. This help text shall be displayed by clicking a small button or icon, to provide improved accessibility: display of this help text shall be toggled, such that the help text will not vanish until the button or icon is clicked a second time.

- **Subtask 4.4: Regular Code Review, Software Approval**

Once work on any of the subtasks under Task 4 has resulted in creation of computer code or related IT products, the Offeror shall schedule periodic code review to keep Energy Commission IT staff appraised, informed, and knowledgeable in regards to the code underlying the system under development. As a part of code review, Energy Commission IT staff shall provide feedback and guidance regarding Departmental programming standards.

In addition, the Offeror shall seek approval from Energy Commission IT staff prior to installing any software on Energy Commission computers or servers, or prior to acquiring any such software for such installation if not already licensed or owned.

<b>Deliverables Under Task 4: Build</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>
<b>4.1</b>	<b>Data Layer - "Empty" Database</b>	The Offeror shall deliver a constructed database following the design specified in the entity-relationship diagram and capable of storing and correctly relating all of the appliance data and associated information collected by the Appliance Efficiency Program.
<b>4.2</b>	<b>Logic Layer - Unit Test Results</b>	The Offeror shall deliver appropriate reports documenting unit testing of the developed components of the system's logic tier. Included with these reports shall be documentation verifying correct performance of data handling, data validation, and automated response functions.
<b>4.3</b>	<b>Interface Layer - Draft Web Pages</b>	<p>The Offeror shall deliver a complete set of draft web pages for the system, including all pages to be used by staff, customers, and the general public.</p> <p>Draft pages shall be deliverable to the Energy Commission Project Manager and be subject to approval: as it is highly likely that the pages will change as a result of testing, and in particular as a result of user acceptance testing, final versions of all pages shall be prepared at the end of development as a separate task and deliverable (Subtask 6.4 and Deliverable 6.5). The draft pages will be considered acceptable when they demonstrably cover all of the needs specified in Section 13.6, Business Requirements, and meet the specifications in Section 13.8, Technical Requirements.</p>

### **Task 5: Test**

The Energy Commission maintains a test environment where software is tested "in situ" in the Natural Resources Agency's server environment. Offeror is expected to make use of the available test environment during development and to coordinate with Energy Commission IT staff in developing the test methodology for this project.

The Offeror shall document the results of testing in appropriate reports and consolidate these reports into a final deliverable document. This final document shall additionally

include documentation of the specific changes made to address the issues discovered as a result of testing, thereby demonstrating that the test results were acted upon.

The Offeror shall perform the following Work during this Task 5:

1. Develop the Master Test Plan;
2. Develop test plans and procedures for integration testing (if needed), system testing, and user acceptance testing that ensures all requirements are being tested and verified; and
3. Conduct the testing for all stages of testing (including integration testing, system testing, and user acceptance testing), evaluate results, correct problems, and re-test.

- **Subtask 5.1: Develop Master Test Plan**

The Offeror shall prepare Deliverable 5.1.1 (Master Test Plan) that describes the overall approach to testing the developed system, including modifications, customizations, interfaces with data, integration testing, system testing, performance testing, and user acceptance testing. The Offeror shall include:

1. Scope and guiding principles for performing testing, both for the overall testing effort as well as specific to each type of testing;
  2. Roles and responsibilities for the Offeror's test team members, for functional, technical, and training purposes, and required the Offeror staffing resources;
  3. Overall test approach, including a summary of techniques to be used, how the Offeror will group functionality for testing, strategy for testing interfaces to external systems, and conduct of any end-to-end system tests;
  4. Testing schedule, including all proposed activities and major testing milestones. The Offeror shall also integrate these dates with the schedule in the Project Schedule;
  5. Approach to validating that all requirements have been tested and verified (e.g., validation checklist);
  6. Tools to be used, including automated test tools, additional materials needed (e.g., test databases, test transactions, and load simulators), and tools to track testing progress; and
  7. General rules for software acceptance upon exit of system testing and user acceptance testing as approved by the Energy Commission Project Manager.
  8. Approach to specialty testing to include usability, security, and performance.
- **Subtask 5.2: Integration and System Testing**

Integration testing ensures that the joining of otherwise separate software components creates a cohesive whole. System testing ensures that all facets of the system work together as a cohesive whole. Under this Subtask, the Offeror shall verify that the system is ready for User Acceptance Testing by performing Integration and System testing as appropriate for their developed system.

The Offeror shall ensure that all processing environments utilized for a given test shall be restored to its original condition prior to the start of the given test, including all system files and data that may be affected or changed during execution of the test. The Offeror shall complete certain testing, including:

1. Performance and Load Testing – the Offeror shall demonstrate that the system can successfully meet the performance requirements specified in the Agreement under full load conditions.
2. Security Testing – the Offeror shall demonstrate that the system can successfully meet Energy Commission security requirements.
3. Interface Testing – the Offeror shall demonstrate that all interfaces are working properly and adhere to all specifications identified in this RFO, the selected Offer, and any change requests agreed to over the course of development.
4. Reports Testing – the Offeror shall verify the correct layout, format, and distribution of all generated reports, both standard and ad hoc, with its supporting procedures.
5. Accessibility testing – the Offeror shall verify that the system is compliant with Section 508 (Rehabilitation Act of 1973, as amended).

The Offeror shall correct all deficiencies that the Energy Commission determines should be corrected prior to the start of Subtask 5.3, User Acceptance Testing, based on the likelihood of the deficiency impacting user acceptance testing.

Remaining deficiencies identified in the System Test Summary Report shall be corrected in accordance with the project schedule approved by the Energy Commission Project Manager.

- **Subtask 5.3: User Acceptance Testing**

The Offeror shall provide a User Acceptance Test Plan to include:

1. A description of proposed tests to be conducted during user acceptance testing;
2. A description of tools, environments, and controls to be used during user acceptance testing;
3. A proposed test schedule;
4. A description of the Offeror and Energy Commission roles, responsibilities, and resources needed to perform user acceptance testing;

5. A proposed training plan and schedule for a user acceptance testing team composed of Energy Commission staff;
6. A process for user acceptance testing problem reporting, tracking, and resolution process; and
7. A proposed approach for the correction of Deficiencies identified by the Offeror or the Energy Commission during user acceptance testing.

The Offeror shall also provide tools, environment, and controls to be used during user acceptance testing. The User Acceptance Test shall target the entire application and cover all requirements from the perspectives of the three user groups identified in Section 13.6 (staff, customers, and members of the public); the test is expected to be able to reveal both programmatic errors and any circumstances where requirements are inadvertently not met.

The Energy Commission will develop all test scenarios, with test data created from live production data. The Offeror shall work collaboratively with the Energy Commission in developing the User Acceptance Test Plan. All user acceptance testing results shall be recorded.

During user acceptance testing, the Offeror shall provide support to the Energy Commission, including configuration of the test environment, training on testing tools or processes for the user acceptance testing team, management of test results, and performance of any corrective actions in the case of identified Deficiencies by the Offeror or the Energy Commission. The Offeror shall be responsible for installing any special software and/or making any other needed changes to ensure the system is ready for user acceptance testing. The Offeror shall provide any necessary tools to simulate system performance under operational conditions. Energy Commission staff will perform user acceptance testing using data sets representative of operational complexity.

The Energy Commission will notify the Offeror of any Deficiencies identified by the Energy Commission during user acceptance testing. For each Defect identified by the Offeror or the Energy Commission, the Offeror shall provide a corrective action plan, which shall include:

1. Description of each Defect and its root cause;
2. Functions and/or interfaces impacted;
3. Corrective action plan and test scenarios;
4. Schedule for completion of each corrective action; and
5. Status of each corrective action.

The Offeror shall coordinate resolution of Defects with the State, and shall coordinate re-testing of any related and affected areas of the system. All medium, high, and critical Defects shall be resolved to the State’s satisfaction as a part of Task 5, and an agreed-upon timeframe shall be determined for the resolution of low-severity defects: low-severity defects may either be addressed within Task 5 or as a part of Subtask 6.4, as appropriate.

The Offeror shall schedule and participate in a meeting with Energy Commission staff to review the results of user acceptance testing and determine whether all requirements for system design and development have been met prior to the start of Task 6, Deploy. The Offeror shall also provide Deliverable 5.4 (User Acceptance Test Report) to summarize all aspects of user acceptance testing performed, including any Deficiencies identified by the Offeror or the Energy Commission and how they were corrected or resolved.

The Offeror shall correct all known medium, high, and critical Defects prior to the start of Task 6, Deploy.

<b>Deliverables under Task 5: Test</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>
<b>5.1</b>	<b>Master Test Plan</b>	The Offeror shall provide the Master Test Plan in accordance with Subtask 5.1 (Develop Master Test Plan). This plan shall be reviewed by the Energy Commission for accuracy and reasonableness of the dates, resources, and format of the plan.
<b>5.2</b>	<b>System Test Summary Report</b>	<p>The Offeror shall prepare a System Test Report for each completed test, which shall include:</p> <ol style="list-style-type: none"> <li>1) Name and description of the test;</li> <li>2) Date and time conducted;</li> <li>3) Name of each test team member;</li> <li>4) Name of the environment in which the testing occurred; and</li> <li>5) Results of test, including automated regression testing.</li> </ol> <p>At the conclusion of testing, the Offeror shall provide a System Test Summary Report, which shall summarize all activities, types of tests, and results of the system testing and allow the Energy Commission to assess the system test outcome. This Report shall include:</p> <ol style="list-style-type: none"> <li>1) Summary of all tests conducted during system testing;</li> </ol>

		<ol style="list-style-type: none"> <li>2) Summary of results;</li> <li>3) Summary of each defect identified by the Offeror, its corrective action status, date of completion of each correction, and date of Energy Commission Project Manager's approval of each correction, as applicable; and</li> <li>4) Justification for moving to User Acceptance Testing.</li> </ol> <p>Energy Commission Project Manager approval of this Deliverable is required prior to the Offeror proceeding to Subtask 5.3, User Acceptance Testing.</p>
<b>5.3</b>	<b>Recommended User Acceptance Test Plan</b>	<p>The Offeror shall provide a Recommended User Acceptance Test Plan which shall include:</p> <ol style="list-style-type: none"> <li>1) Description of proposed tests to be conducted during user acceptance testing;</li> <li>2) Tools, environments, and controls to be used during user acceptance testing;</li> <li>3) Proposed test schedule;</li> <li>4) Roles, responsibilities, and resources in performing user acceptance testing;</li> <li>5) Training plan and schedule for user acceptance testing team;</li> <li>6) Defect reporting, tracking, and correction process; and</li> <li>7) Approach to correcting Deficiencies identified during user acceptance testing.</li> </ol>
<b>5.4</b>	<b>User Acceptance Test Report</b>	<p>The Offeror shall provide the User Acceptance Test Report, which shall include:</p> <ol style="list-style-type: none"> <li>1) Summary of all tests conducted during user acceptance testing;</li> <li>2) Summary of test results;</li> <li>3) Summary of each Defect identified by the Offeror or Energy Commission. The summary shall include for each Defect: <ol style="list-style-type: none"> <li>a) Description of each Defect and its root cause;</li> <li>b) System functions and/or interfaces impacted;</li> <li>c) Corrective action plan and test scenarios;</li> <li>d) Schedule for completion of each corrective action;</li> <li>e) Status of each corrective action;</li> <li>f) Date of completion of each correction; and</li> </ol> </li> <li>4) Date of Energy Commission Project Manager's approval of each correction, as applicable.</li> </ol>

**Task 6: Deploy**

The Offeror shall work with Energy Commission staff to finalize the developed system for deployment. This shall include performing data conversion between old and new systems, training staff on the functions and use of the new system, working with the Energy Commission web team to publish the pages in the Energy Commission's web domain, and taking any final steps necessary to deploy the final system in the live environment. This shall also include final delivery of the completed system and transference of knowledge to Energy Commission IT staff to allow them to assume ownership and maintenance of the final system.

As this Task represents the final phase of the project, the Offeror must deliver all specified deliverables and documentation in their Final form (e.g., after any changes identified during State review have been made, verified and accepted by the State). Under this Task, the Offeror shall transition their training processes, tools, materials, techniques and any other documentation or information needed to support training to the State to meet Energy's ongoing training needs.

- **Subtask 6.1: Perform Data Conversion**

Energy Commission staff will be responsible for "cleaning" existing data in the current system to prepare said data for conversion. Data conversion shall include solely electronic records and shall not include conversion of non-electronic records into an electronic format.

The Offeror shall convert the cleaned appliance records and contact information stored in the current databases, spreadsheets, and other referenced documents into data stored within the new system. For the appliance data, this will also include transfer of all historic appliance listings, which include fields not used for maintaining or validating active records.

Under direction of the Energy Commission Project Manager, program staff will review the converted data to ensure completeness and accuracy. Offeror shall make any necessary edits to the converted data identified during staff review.

- **Subtask 6.2: Train staff**

The Offeror shall train the technical staff of the Appliance Efficiency Program in the use of the new system prior to deployment. This training shall be conducted in two (2) live training sessions held on-site at the Energy Commission. The initial session shall be used to instruct staff in each of the different interfaces and the use of each available tool, including all tools to be used by outside parties to submit data and forms. The final session shall occur ten (10) business days after the first session and shall provide staff the opportunity to ask questions and seek guidance after having used the new system independently, following the initial training session. The initial training session shall be budgeted to take 5 hours. The final session shall be budgeted to take 2 hours. Attendance is expected to be

fifteen (15) Energy Commission employees, but may be less. Training sessions may be split across consecutive days if necessary, with the consent of the Energy Commission Project Manager.

Training shall be conducted on-site in the Energy Commission's ITSB training room: this training room has individual computers for attendees as well as a projector and computer for the instructor. It shall be the Energy Commission's responsibility to make staff available during the times agreed upon for the training sessions and to ensure participation by staff.

The training held by the Offeror shall follow a "train the trainers" approach, understanding that Energy Commission staff will be responsible for instructing outside parties on the use of the new system and providing customer support for the program.

As a part of this task, the Offeror shall develop a training plan for approval by the Energy Commission Project Manager, which shall include mutually agreeable dates and times for the training sessions. The Energy Commission Project Manager shall be responsible for availability of staff to attend the training.

The Offeror shall also provide or produce training materials appropriate to the training sessions. Training materials are expected to take the form of a succinct user and reference manual for the developed system. These training materials shall be provided in both hard-copy and editable electronic formats. The training materials shall be usable as reference guides during use of the system, and shall contain appropriate graphical elements such as screenshots of key screens. The Energy Commission will own the delivered training materials and will be able to freely reproduce and distribute copies of these materials to both internal and external users of the system.

- **Subtask 6.3: Knowledge Transfer**

The Offeror shall work with Energy Commission IT staff throughout the life of the project to ensure adherence to Departmental programming standards as well as to provide comprehensive knowledge transfer of the design and operation of the developed system. Knowledge transfer shall be a component of the periodic code reviews described in Task 4, and shall include a final knowledge transfer after the system is deployed.

Offeror shall perform a final knowledge transfer session with Energy Commission IT Staff after system deployment to ensure uninterrupted support for the system after the contract has ended. This final knowledge transfer shall occur during the Warranty period after live deployment of the developed system. This session may

be broken into multiple, smaller sessions if necessary to cover all relevant material, with the consent of the Energy Commission Project Manager.

Offeror shall direct their developers to engage directly with Energy Commission IT staff during code review and knowledge transfer sessions to provide direct knowledge transfer to the IT staff assigned to maintain and support the received system. Offeror shall support knowledge transfer by providing in-line documentation of application source code (i.e., comments) sufficient to serve as a technical guide for any IT persons tasked with maintenance of said code. The design document shall further serve as a technical manual for IT staff maintaining the system, per Task 3 Subtask 3.4.

The Energy Commission Project Manager will be given the opportunity to attend any knowledge transfer sessions, with the understanding that such sessions are expected to involve discussion of highly technical and specialized IT-related information (i.e., code-level discussion of system functions and features). Offeror is not expected to discuss technical IT topics in non-technical terms for the benefit of the Energy Commission Project Manager during any such sessions attended.

- **Subtask 6.4: Finalize System for Deployment**

The Offeror shall take all necessary steps to finalize the developed system for transition to the Energy Commission's live environment and public deployment. This includes completing any and all necessary changes to application code discovered during staff use of the system during training under task 5, any and all necessary edits to converted data identified following staff review under task 6.1, and any and all outstanding improvements, fixes, or other changes identified as necessary up to this point.

Offeror shall work with Energy Commission IT staff to transfer the system from the Energy Commission's test environment to its live environment, and to confirm correct and consistent behavior in the live environment.

Offeror shall work with the Energy Commission web team to finalize all web pages used for interacting with the system, including applying all required State templates and formatting to said pages.

The Energy Commission will make the live pages and system interfaces accessible internally to facilitate review by the project sponsor and project steering committee. The system shall not be deployed publicly until the project sponsor and project steering committee have approved the system. The Offeror shall, at that point, work with the Energy Commission Project Manager to debut the system to the public.

- **Subtask 6.5: Provide Warranty Service for Period Immediately Following Deployment**

The Offeror shall perform work as-needed on the deployed database for a period not to exceed four months following deployment, performed at the request and direction of the Energy Commission Project Manager. During this warranty period, the Offeror shall be responsible for the continuing maintenance and support for the system, as part of the acquisition and installation of the system. Offeror's responsibilities in performing this task include the following:

- Offeror shall ensure that staff assigned to this task include technical staff that participated in the design, development and implementation of the system under previous tasks.
- Offeror shall ensure that all software upgrades operate with any changes/customizations made during the design, development and implementation of the solution, including any post-implementation customizations made under this task.
- Offeror shall update any affected system documentation (e.g., technical design, testing, service desk, maintenance, data dictionary and other user documentation) or shall create new documentation when modifications are made as a part of this task.
- Offeror shall collaborate with State staff while executing work under this task to facilitate knowledge transfer.
- Offeror shall keep the system in good operating condition and shall be responsive to the maintenance requirements of the State.

Work requested by the Energy Commission Project Manager under this task will be consistent with ensuring the desired behavior and proper function of the deployed system following deployment (e.g., bug fixing; patching or updating of any integrated COTS software; etc.), and with providing minor usability adjustments as may be requested by external users of the new system.

Work during this period is not expected to result in changes to the deployed system significant enough to necessitate retraining of program staff, however if such a change occurs the Offeror shall provide retraining to affected staff as a part of this warranty service.

<b>Deliverables Under Task 6: Deploy</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>

<b>Deliverables Under Task 6: Deploy</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>
<b>6.1</b>	<b>Data Conversion</b>	The Energy Commission Project Manager and program staff will jointly review the data once present in the new system, with the goal of insuring consistency between the data as it exists in the current system and as it exists in the new system. Data conversion will be considered acceptable and completed when staff have concurred that there are no records missing from the converted data (i.e., no missing rows), no fields or other data elements missing from the converted data (i.e., no missing columns), and that any identified differences or errors present as a result of conversion are either addressed by the Offeror or are deemed by staff to be sufficiently rare and minor so as not to impede deployment of the system. The Energy Commission Project Manager will have the final say regarding what constitutes a sufficiently rare or minor error, but in general an error that does not result in a misstatement of appliance performance, is limited to a small, known subset of records, and does not recur in multiple data tables will be considered minor.
<b>6.2</b>	<b>Training Plan</b>	The Energy Commission Project Manager will review and approve the training plan prepared by the Offeror. The training plan is expected to be delivered electronically in an editable document format such as Microsoft Word. The training plan will be considered acceptable when it specifies instruction in all of the ways in which the new system may be accessed and used, and allocates instruction time to each feature of the new system.
<b>6.3</b>	<b>Training Materials</b>	The Energy Commission Project Manager, in consultation with appliance program staff, will review and approve the training materials prepared by the Offeror. The training materials are expected to be delivered electronically in an editable document format such as Microsoft Word. The training materials will be considered acceptable when they are sufficient to cover all of the ways in which the new system may be accessed, are drafted such that they may be used as a reference manual or guide for the new

<b>Deliverables Under Task 6: Deploy</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>
		system (i.e. "cheat sheet"), and are found by staff to be understandable and useful.
<b>6.4</b>	<b>Training Sessions</b>	The Energy Commission Project Manager, in consultation with appliance program staff, will approve the sufficiency of the training sessions provided by the Offeror. The training sessions shall be conducted on-site in the Energy Commission's ITSB training room. All training sessions shall be conducted within a span of ten business days. The training sessions will be considered acceptable when staff feel that they have sufficient understanding of the new system to conduct core work and to instruct others in the use of the system.
<b>6.5</b>	<b>Final Web Pages</b>	The Energy Commission Project Manager and the Energy Commission's webmaster will review and approve the final versions of the web pages prepared by the Offeror. The web pages are expected to be delivered electronically in a format suitable for posting to the Energy Commission's website: the Energy Commission's webmaster will post the sites in an appropriate restricted-access domain to observe their behavior in the live environment. The web pages will be considered acceptable when they are demonstrably able to appropriately display and interact with the required State template for State web pages and correctly perform the specific functions for which each web page is designed.
<b>6.6</b>	<b>Integrated System into Production  (including documentation, source codes, source comments)</b>	The project steering committee and project sponsor will be given the opportunity to review the final, ready-to-deploy system before directing the Energy Commission Project Manager to consider acceptance of the system. The Energy Commission Project Manager will also consult with program technical staff regarding the expected and actual behavior of the pre-final version of the system, and with program IT staff regarding the state of the code, code comments, and any integrated COTS products. The Energy Commission will complete its review within twenty (20) business days. On consensus

<b>Deliverables Under Task 6: Deploy</b>		
<b>Number</b>	<b>Name</b>	<b>Description</b>
		that the system meets expectations for functionality, behavior, and performance, the Energy Commission Project Manager will approve the final system as “ready to deploy” and accept delivery of the system into production. At this time, full documentation, including source code and source comments, shall be delivered to the Energy Commission.
<b>6.7</b>	<b>Final System Transition, Warranty Period &amp; Final Acceptance</b>	<p>Final transition to the new system and full acceptance and release of retention will occur following a warranty period as specified in Task 6.5. The warranty period shall begin on the first State workday following installation (and certified as ready for use) of the system in the live environment, and will end four (4) months after placing the system into production or on April 15, 2016, whichever is earlier.</p> <p>At this time, a final acceptance document shall be drafted and executed to finalize the complete transition of the new system to the Energy Commission and record the successful completion of all duties under this RFO. Final system acceptance will complete the one-time cost contract.</p>

## 6.1 ESTIMATED PROJECT TASK & DELIVERABLES TIMELINE

<b>Del. #</b>	<b>Deliverable</b>	<b>Estimated Delivery by</b>
1.1	Project Management Plan	July '14
1.2	Bi-weekly status reports	Biweekly
2.1	Requirements Document – Traceability Matrix	September '14
3.1	Entity-Relationship Diagram	October '14
3.2	Draft design document	November '14
4.1	Data layer – “Empty” Database	March '15
4.2	Logic layer – Unit Testing Results	April '15
4.3	Interface layer – Draft Web Pages	May '15

<b>Del. #</b>	<b>Deliverable</b>	<b>Estimated Delivery by</b>
5.1	Master Test Plan	June '15
5.2	System Test Report	July '15
5.3	User Acceptance Test Plan	August '15
5.4	User Acceptance Test Report	September '15
6.1	Data Conversion	September '15
6.2	Training Plan	October '15
6.3	Training Materials	October '15
6.4	Training Session	November '15
6.5	Final Web Pages	November '15
6.6	Integrated System into Production	December '15
3.3	Final Design Document	December '15
1.5	Final Acceptance Document	December '15
6.7	Final System Transition, Warranty Period & Acceptance	April '16

## **6.2 UNANTICIPATED WORK**

The State expects that during the contract period, legislative and/or program changes, changes in the State's IT environment, or impacts of risks may necessitate application modifications. Application modification support will result in unanticipated work, to be structured based on Offeror's labor costs for consulting services, supporting application change requests, modifications and enhancements beyond those identified within this RFO.

The State estimates up to \$50,000 of unanticipated work may occur within the duration of the one-time costs contract. Accordingly, the Offeror's proposal and cost table (Attachment B) shall separately include \$50,000 identified for "Unanticipated Work", which will be accessible under the contract for the purpose of performing these tasks.

Both the State and Offeror must agree upon any work that needs to be performed which will result in unanticipated costs through a Work Authorization process. Costs for unanticipated work will be structured based on the Offeror's labor costs as described on their Project Team Staff and Rates table (Attachment B).

## **6.3 HOLDBACK**

This contract is subject to a 10% holdback, which will be released following final acceptance under Subtask 6.7. The holdback specified in the Paid Deliverable Cost Table (Attachment B) shall be 10% of the estimated total cost of the contract. The holdback released to the Offeror shall be 10% of actual incurred costs, as invoiced.

## **7 ACCEPTANCE**

This is a deliverable based contract. Every deliverable will require that a formal walkthrough session be conducted with Energy Commission designated reviewers. The Offeror shall organize, schedule and conduct these sessions at times convenient to program and IT staff.

In addition, every project deliverable will require a deliverable acceptance document. This document shall describe the deliverable being submitted and include signature and date lines for both Offeror and Energy Commission staff. Commission staff will have a ten (10) business day review period for all deliverables save for the Ready-to-Deploy System, which will be given a twenty (20) business day review period.

For submitted deliverables that are found not to be acceptable, a maximum of two additional reviews of corrected versions of the deliverable will be allowed: following the third review, the State shall make a final decision to accept or reject the deliverable. Final deliverable acceptance is at the sole discretion of the Energy Commission and payment will NOT be made until the work has been satisfactorily completed and the acceptance document signed. Please note that deadlines are estimated based on delivery of acceptable deliverables: submission of deliverables found not to be acceptable will similarly not fulfill deadline requirements.

## **8 STATE ROLES & RESPONSIBILITIES**

Energy Commission personnel shall fill the following roles, as they are used within this RFO:

Energy Commission Project Manager – the Energy Commission will designate a qualified staff person from the Appliance Efficiency Program as the Energy Commission’s Project Manager for this project. The Energy Commission Project Manager will be the primary point of contact for the Offeror on all issues related to work performed on the project.

Energy Commission Contract Manager – the Energy Commission will designate a qualified staff person as the Energy Commission’s Contract Manager. The Energy Commission Contract Manager will be responsible for the management of the contract, separate from the project, and shall be responsible for handling invoices, questions relating to the contract rather than the project, and disputes.

Energy Commission IT Staff – the Energy Commission will designate one or more qualified programmers from its Information Technology Services Branch as participants in this project. These individuals will be responsible for working with Offeror staff to

engage in knowledge transfer and provide guidance on the State's IT environment, protocols, and methodologies.

**Project Sponsor** – The Project Sponsor is the Deputy Director of the Efficiency Division, within which the Appliance Efficiency Program is located.

**Steering Committee** – The Project Steering Committee is comprised of appropriate Executive Office staff and representatives of the Commissioners.

The Energy Commission will provide the following:

- Access to the Energy Commission building (badges) and desk space
- Networked desktops for use by Offeror staff, located on-site
- Access to program and IT subject matter experts
- Applicable business and technical documentation
- Timely review of all deliverables

## **9 OFFEROR ROLES & RESPONSIBILITIES**

The roles filled by Offeror's personnel shall be specified in Attachment B, in the Project Team Staff and Rates Table.

The Offeror is tasked with the project management duties, analysis, design, development, testing, training, implementation and warranty of their proposed system. In addition to all other requirements contained in this RFO, the Offeror is required to:

- Conduct all specified meetings, gather further detailed requirements, and provide status reporting (written and verbal), presentations and general communications on an ongoing basis.
- Work with the Energy Commission Project Manager to ensure any issues concerning the work are reported and resolved.
- Comply with all applicable State and Energy Commission policies and procedures.

## **10 ESCALATION PROCEDURES**

Problems or issues shall normally be reported in regular status reports or in-person meetings. The parties acknowledge and agree that certain problems or issues may arise that cannot be solved at the lowest level and therefore justify escalated reporting. To this

extent, the Offeror's Project Manager or their delegated representative shall notify the Energy Commission Project Manager at the first level. The first level Energy Commission Project personnel reviews the problem or issue to determine if it may be resolved or needs to be escalated to the second level. If required, the second level Energy Commission Project personnel reviews and resolves the problem or issue, or escalates to the third level for review and resolution. The Energy Commission Project personnel include, but are not limited to, the following:

First level – Energy Commission Project Manager and/or Energy Commission Contract Manager

Second level – Energy Commission Office Manager overseeing the Project or Contract Manager

Third level – Energy Commission Project Sponsor

## **11 CHANGE CONTROL**

If unanticipated changes to the Offeror's approved work plan and schedule are required during the course of the project, Offeror shall document the changes in a Change Control Document consistent with their Change Management Plan. Offeror shall request approval of each change in writing from the Energy Commission Project Manager who shall obtain approvals of the Project Sponsor and/or Steering Committee as necessary. At the time the Offeror or the Energy Commission identifies an unavoidable change that shall require modification of the baseline project plan or other issues materially affecting the project plan, all work shall stop on the impacted objective until the changes are approved.

## **12 INVOICES AND PAYMENT**

Payment shall be based on accepted deliverables in accordance with Attachment B – Cost Worksheet. Invoices shall be submitted on company letterhead at the completion of each deliverable and shall clearly state a description of the work completed, personnel who performed it, purchase order number and cost (less the 10% hold back). Invoices shall be submitted to:

California Energy Commission  
**Attn: Accounting Office**  
1516 Ninth Street, MS-2  
Sacramento, CA 95814-5512  
(916) 654-4284

If multiple deliverables are completed simultaneously, the Offeror shall either submit separate invoices for each deliverable, or shall submit a single invoice with each

deliverable (and associated dollar amount) shown as a separate item. The Energy Commission's Project Manager shall be the sole judge as to acceptability of all work products and deliverables produced by the Offeror as a result of this RFO. There shall be a signed acceptance document for each deliverable before invoices can be processed for payment.

Hold back will be able to be invoiced upon final system acceptance at the end of Subtask 6.7. Travel costs and/or per diem expenses shall not be reimbursed by the State.

## **13 REQUIREMENTS**

### **13.1 SYSTEM REQUIREMENTS**

The proposed system is expected to serve the purposes and perform the functions specified in Section 13.6, Business Requirements, and have the specific features necessary to perform these functions as enumerated in Section 13.8, Technical Requirements.

In broad terms, the proposed system must be able to accept appliance listings from manufacturers and publish this information for use by consumers and the general public. Appliance data is required to be certified to us, necessitating use of digital forms and signatures. Appliance data must come from approved appliance test laboratories, and may be certified to us by entities that are approved to act as manufacturer representatives: online application forms are necessary for these functions. Staff must review and accept submittals before they are published or approved, necessitating appropriate interface pages and data handling tools for logging, tracking, reviewing, approving, and responding to submitted materials. Published data must be useful to data viewers, necessitating interfaces for browsing, searching, filtering, and exporting published data. Lastly, program management must be able to track program activity and staff work, necessitating data compilation and reporting functions.

### **13.2 SYSTEM ARCHITECTURE**

#### **Software Environment**

In order to reduce cost and leverage existing Energy Commission resources, the software application shall be developed using the following:

#### **Software Requirements**

<b>Development Environment</b>	
Development Framework	ASP .NET 4.0 Web Forms Entity Framework for persistent layer
Source Control Software	Team Foundation Server

Development Tool	Visual Studio 2010 Professional
Programming Language	C#
Scripting Language	JavaScript Allowed JavaScript Library – JQuery AJAX Control Toolkit for Visual Studio
Markup Language	XHTML transitional
Report Tools	Microsoft SQL Reporting Services 2008 R2 Preferred Output formats Microsoft Word Microsoft Excel Adobe PDF XML
<b>Database</b>	
Enterprise Database	SQL Server 2008 R2 Standard
Database Language	Transact SQL
Data Exchange With Outside Entities	XML is the preferred format. Others such as Word Doc, Access DB and Excel are allowed based on the requirements of specific outside entities.
Desktop Productivity Tool	MS Access
<b>Server Environment</b>	
Server OS	Windows Server Standard 2008 R2
Internet Server Platform	Microsoft Internet Information Services (IIS) 7.5
<b>Client Environment</b>	
Desktop OS	Windows 7
Browser	IE 10

Energy Commission ITSB staff are familiar with the above-listed software and will be able to provide on-going maintenance without the need for language or database training. This software also adheres to the Energy Commission’s internal software standards. Please note that ASP .NET WebForms and Web Pages shall be used: the Energy Commission will not consider the use of ASP .NET Model-View-Controller (MVC) architecture.

### Technical platform

The system shall utilize a three-tier architecture where the user interface (top tier - presentation layer), the business logic (middle tier - application processing layer), and the data management (bottom tier - data layer) are separate tiers. Both internal and external users will access the application through a web browser. The web browser (top tier) attaches to the application server (middle tier) for processing. The top tier presents

the data and does minimal data manipulation. Most of the computing is performed by the application server. The application servers offload data manipulation from the database servers. The database servers (the bottom tier) simply manage data. This includes authentication, data retrieval and storage, and backups.

The system shall be designed with database-centric architecture, meaning that the system shall employ a standard, general purpose database management system and shall use table-driven logic for data validation. The system shall be designed for flexibility and reusability, so that the system can be easily adapted to changes in program requirements and to growth of the Appliance Efficiency Program.

### **Website Requirements**

The State of California requires the use of a template for all State web pages. Web pages developed by the Offeror shall be adaptable to the latest State of California responsive design web and mobile templates. Additionally, web pages shall be designed to accommodate changes to the template without major recoding of the application (e.g., through use of a dynamic include method).

Separately, Adobe Flash shall not be used for any portion of any web site or user interface.

### **13.3 SYSTEM SOFTWARE/EQUIPMENT PURCHASED**

Offeror is expected to produce a custom software application to meet the requirements of this contract, but is permitted to propose the use of commercial off-the-shelf (COTS) software (e.g., “middleware”) where the Offeror can demonstrate that a savings would exist (relative to custom application development) without any loss of functionality. Shareware, freeware, or open source software is not considered COTS software for this purpose and shall not be proposed by the Offeror.

All source code developed under this contract will be owned by the State of California, and will be delivered to the California Energy Commission for maintenance by Energy Commission IT staff. Source code shall be documented and commented to allow for the transition of ownership and maintenance to Energy Commission IT staff.

Offeror is not expected to deliver the source code for any COTS product included in the proposed system, however any COTS product will similarly be owned by or licensed to the State of California, not the Offeror. If one or more COTS products are included in the proposed system, the Offeror shall deliver to the Energy Commission all materials that would ordinarily be delivered to the owner or licensor of the COTS product.

Equipment purchases are not expected to be a part of this project.

### **13.4 WARRANTY AND SERVICE LEVEL REQUIREMENTS**

Offeror shall warranty the suitability and performance of the delivered system for the four months following the date of deployment or until March 31, 2016, whichever is sooner. During the warranty period, the Offeror shall work with Energy Commission staff to diagnose, isolate, and resolve any adverse or unintended behaviors discovered in the deployed system.

During this period, the Offeror shall be responsible for developing and implementing changes to system code where necessary to resolve discovered issues.

The Energy Commission will assume responsibility for general system maintenance following approval of the final delivered system. During the warranty period the Offeror is expected to be available for and responsive to contact by phone and e-mail during normal business hours (8:00 AM to 5:00 PM Monday – Friday excluding State-recognized holidays), and to be able to perform work onsite at the Energy Commission when called upon to do so. When contacted, the Offeror shall respond to the Energy Commission's stated request or concern within two (2) business days.

### **13.5 COMPATIBILITY AND INTERFACE REQUIREMENTS**

The web pages developed for interacting with the new system shall meet current web standards for interoperability, meet current Americans with Disabilities Act requirements, and function on current versions of the most widely used browsers including Google Chrome, Mozilla Firefox, Apple Safari, and Microsoft Internet Explorer version 8 and above. Mobile web page versions shall be compatible with the mobile versions of Safari and Chrome, as well as the stock Android browser.

“Current versions” in the context of this requirement, means the most current stable versions of each web browser as of the start of Task 6, with the exception of Internet Explorer where it is necessary to maintain compatibility with Version 8 to maintain compatibility with users of Windows XP.

As stated in Section 13.2, Adobe Flash shall not be used for any portion of any web site or user interface.

The Offeror shall be responsible for data conversion between the Energy Commission's existing system and the developed system, as described in Task 6. The Offeror shall not be responsible for keying or digitizing of any physical records.

### **13.6 BUSINESS REQUIREMENTS**

As of October 1, 2013, the California Energy Commission's Appliance Efficiency Program collects, validates, and publishes model-specific data for sixty-five (65) different, unique appliances in 15 different categories. Included in this total are some

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products only regulated under the Building Energy Efficiency Standards (Title 24), but for which the appliance database maintains the list of valid, certified models. Each unique appliance table contains manufacturer name, brand name, and model number data, plus data fields specific to the given appliance. These data fields can range from as few as eight fields to over fifty, depending on the appliance type; data fields can be seen by downloading the relevant certification packet for each appliance or referencing Table X within the Title 20 Appliance Efficiency Regulations, both of which are available from links in Section 1.2. These categories and appliances are:

<b>Category</b>	<b>Appliance</b>	<b>Category</b>	<b>Appliance</b>
Central Air Conditioners	Computer Room ACs	Lighting Products	Fluorescent Lamp Ballasts
	Evaporatively-Cooled ACs		Ballasts For Residential Recessed Luminaires
	Large Air-Cooled ACs		Compact Fluorescent Lamps
	Small Air-Cooled ACs		Emergency Lighting
	Very-Large Air-Cooled ACs		High Efficacy LEDs for Title 24
	Water-Cooled ACs		Lamps
Central Air-Conditioning Heat Pumps	Gas-Fired HPs		Lighting Controls
	Geothermal HPs		Metal Halide Luminaires
	Large Air-Cooled HPs		Portable Luminaires
	Small Air-Cooled HPs		Torchieres
	Very-Large Air-Cooled HPs	Traffic Signals	
Cooking & Washing Products	Clothes Dryers	Non-Central AC & HP Products	Evaporative Coolers
	Clothes Washers		Packaged Terminal AC & HP
	Commercial Cooking		Room AC & HP
	Dishwashers		Spot Air Conditioners
Electronics	Consumer Audio/Video	Pool Products	Gas / Oil Pool Heaters
	Large Battery Chargers		Heat Pump Pool Heaters
	Small Battery Chargers		Portable Electric Spas
	Televisions		Residential Pool Pumps
Fans & Dehumidifiers	Ceiling Fans	Refrigeration	Automatic Ice Makers
	Ceiling Fan Light Kits		Commercial Refrigerators
	Dehumidifiers		Non-Commercial Refrigerators
	Whole House Fans & Residential Exhaust Fans		Refrigerated Beverage Vending Machines
Heating Products	Boilers	Water Heaters	Water Dispensers
	Combination Space/Water Heaters		Booster WHs
	Duct Furnaces & Unit Heaters		Heat Pump WHs
	Furnaces		Hot Water Dispensers
	Gas Space Heaters		Large Electric WHs
	Infrared Heaters		Large Gas & Oil WHs
Plumbing Products	Plumbing Fittings		Mini-Tank Electric WHs
	Plumbing Fixtures		Small Electric WHs
Motors	Electric Motors		Small Gas & Oil WHs
Transformers	Distribution Transformers		

The business requirements for the system stem from the business needs of differing groups of users, and the differing types of program data stored by the Appliance Efficiency Program. This section discusses each user group and specifies the business requirements relating to that group, and further provides conceptual descriptions of the types of records that must be kept by the Appliance Efficiency Program.

### **Business Requirements for Staff**

- Staff need to do the following:
  - See what submittals are in queue
  - See when submittals were received and when they are due
  - Assign submittals to specific staff persons, and see which submittals are assigned to which staff
  - Open and review a submittal
  - See when someone else has opened or is working on a given submittal
  - Approve a submittal
  - Deny and return a submittal
  - Send a response to a submittal
  - Flag a submittal for follow-up
  - Retrieve prior submittals and responses

Most of the requirements for staff processing data submittals are driven by the Energy Commission's *Appliance Efficiency Regulations* (Regulations).

Under the current process, staff must separate all data-submittal-related correspondence from the other e-mails received in the Appliances e-mail account. (A recent month showed 623 e-mails, of which 301 were data submittals.) A data submittal is not limited as to the number of individual models contained in a given submittal – they can range from one model to tens of thousands. (There were more than 40,000 individual models processed during FY 2012/13.)

Once the data submittals are separated, and before the appliance data can be processed, staff review each submittal to ensure that all necessary documentation and information is included and properly formatted. Submittals must include a declaration signed by the manufacturer or third-party certifier that the information submitted is true and accurate, and specifying the laboratory or laboratories where the testing occurred and the test method (or methods) tested to. Prior to processing any data file, staff must ensure that the declaration is completed and signed, the referenced test laboratory is approved, and the referenced test method(s) are correct for the appliance being certified.

If someone other than the manufacturer is certifying the appliance, the declaration must include the contact information for both the third party certifier and the manufacturer. Additionally, there must be an authorization (currently termed the "Manufacturer

Delegation of Authority”), signed by the manufacturer that authorizes that third party to submit data on the manufacturer’s behalf.

Both third party certifiers and test laboratories must be approved by the Energy Commission, as there are specific assurances that each are required to make under the current Regulations. Third party certifiers and test laboratories currently seek approval through the use of annually published application forms; these are available for review from the links in Section 1.2.

Once all of the necessary documentation is reviewed and deemed acceptable, the data file provided with the submittal (currently a Microsoft Excel file, pre-formatted by staff) can then be uploaded and processed through database validation. This validating process provides results for each model listing: either the model passes all validation requirements and is added to the database; or some relevant information is missing or incorrectly reported and the model fails validation. Typical reasons for failing validation include incorrectly formatted or missing information and models failing to meet required standards.

About fifteen percent of data submittals are rejected for failure to provide necessary or complete documentation. Roughly forty percent are returned for correction at least once before being successfully processed. Very few models that are submitted to the Energy Commission are ultimately noncompliant with their applicable standards.

For data submittals that are complete, accurate, and all models are successfully processed through the database, staff responds to the manufacturer or third-party certifier, notifying them that their submittal was successful, and that the models are now in our database and are legal to sell or offer for sale in California.

For data submittals that are incomplete or inaccurate, staff responds to the manufacturer or third-party certifier, detailing the reason(s) why a submittal is unacceptable. For submittals where the various forms (not including the Excel data file) are insufficient, the manufacturer or third-party certifier must correct the deficiencies in these forms prior to staff processing the Excel data file. For this reason, there are instances where staff can reject a submittal multiple times – for example, a first rejection for incomplete forms, followed by a second rejection for errors on the completed forms.

Data submitted to the Energy Commission is required by law to be retained for a minimum of ten (10) years (per Section 1606(i) of the Regulations). Under the current process, all responses are printed out – staff’s responding e-mail, the original submittal e-mail and any intervening messages, as well as the declaration and authorizations(s), and the data submitted.

Section 1606(b)(2)(A) of the Regulations requires staff to respond to the manufacturer or third-party certifier within 30 calendar days of the business day a data submittal is

received. Typically, submittals are reviewed and responded to in the order they are received.

### **Business Requirements for the Public**

- Data viewers need to:
  - Browse listings
  - Search for specific model numbers
  - Filter listings by arbitrary specifications
  - Retrieve a listing by scanning a QR code
  - View listings on a smartphone or similar device
  - Export query results for offline use

The Energy Commission remains the main world-wide source of appliance data that is this wide-ranging, accurate, and consistently available. There are other sources where certain appliance data is available, but there is no other single source where all the data available in the Energy Commission's appliance database can be found in one place. This database includes all current, active data (more than 350,000 individual models), as well as historical data certified to the Energy Commission since 1978 (more than 1,380,000 individual models).

This data is typically used by (1) local government building departments to enforce energy efficiency standards, (2) utilities conducting appliance efficiency rebate programs, (3) consumers making purchasing decisions, (4) energy consultants for design work, (5) manufacturers confirming their listings, and (6) a wide range of groups seeking to research and propose new efficiency standards. This data served as the foundation of several parallel programs later implemented in other states and even other countries, as well as the federal ENERGY STAR and WaterSense programs. As an example, the Energy Commission's Appliance Database is the key source of appliance efficiency data found in the multi-state compliance database maintained by the Appliance Standards Awareness Project at <http://www.appliancestandards.org/>. In 2008, staff developed the preliminary criteria for an on-line searchable database for appliance data in order to better serve the needs of these groups. The work was completed under a CMAS contract.

The data need of these parties varies widely not just between parties, but also can vary widely within the same group of constituents. Some examples include:

- A local building department searching to see if a specific model is certified and, if so, if said model meets the minimum criteria for sale in California; thereby ensuring if that model is installed, it is valid and will pass all building permit requirements. (The Regulations regulate which appliances can be sold or offered for sale; the Building Energy Efficiency Standards regulate what can be installed in T24 construction.)

- A utility searching to see if said model meets the minimum criteria for a rebate at a certain level (some utility rebates are a specific dollar amount for all models that qualify for a specific rebate; other utility rebates will increase the dollar amount rebated the more efficient a specific appliance is).
- A consumer wishing to search for a specific style and size of refrigerator-freezer because they would prefer a side-by-side model with ice through the door rather than a bottom freezer model without ice through the door. Consumers, and the Offerors they hire, can also be interested in the maximum height of a specific model, because the model might be being placed under cabinetry, and it cannot exceed a certain height. Searching for only side-by-side models with ice through the door and that do not exceed 68 inches (for example) therefore eliminates all other models that do not comply with specific criteria, immediately narrowing down the resulting dataset.
- Consumers would welcome a feature where they could either retrieve model-specific data by scanning a QR code or view listings on a smart phone or similar device. This capability does not currently exist.
- A manufacturer periodically viewing the data they have certified to us to ensure that all of their compliant models are certified and visible to retailers and buyers, and that obsolete models are removed from our visible listings when appropriate.
- When new standards are considered, the advocacy groups proposing such standards find it useful to know not only the increasing stringency of the efficiency standards over time, but also the actual models certified to the Energy Commission in compliance with those standards. For this reason, having access to the historical data (for some appliances, going back 35 years) is invaluable. Presently, the online searchable database only allows queries to be run on “active” data, meaning data for currently available products; historical data is published based on queries run by staff and then uploaded to the Energy Commission’s website in Excel data tables. Allowing interested parties to query this historical data based on their own specific criteria would be invaluable to those parties and extremely time efficient for staff.

Currently, running these queries, then exporting to Excel, formatting the files, and uploading to the Energy Commission’s website is not occurring on a regular basis because of the staff time involved. In one example, the small gas and oil water heater data table has 5,301 active records, which would not take long to query. However, the historical data for this appliance contains 465,177 total records; this would take longer to query in an online database than the active models would, but running a query of this size, then formatting it for uploading to the Energy Commission’s website is extremely time-consuming for staff. Additionally, it’s

likely that parties wishing to query this data would have specific data parameters for their queries (e.g., 30-gallon, natural gas models, certified in 1985), increasing the utility of a searchable interface over a downloadable Excel file.

### **Business Requirements for Customers**

- Data submitters need to:
  - Set up a new account
  - Change their password
  - Retrieve their username and reset their password or security questions
  - Enter their contact information into the system
  - Digitally sign documents requiring signatures
  - Upload appliance data (as shown in our current certification packets, linked to in Section 1.3)
  - Specify if any certified models should show a delayed certification date
  - Receive confirmation or rejection messages from the Energy Commission
  - Curate their uploaded data (i.e., Change, Delete)

Manufacturers and third-party data submitters will need access to this database so they can enter all necessary information and upload appliance data to demonstrate compliance with the Regulations. These parties will need to initially set-up a new account; change their password when necessary; retrieve their user-name and password; enter their contact information into the system; and digitally sign all necessary documents. Most of these features must be completed prior to allowing them to upload appliance data. These features are commonly found on many websites in operation for many years, where customers must select a user name and password, retrieve and change that information as necessitated by various events; enter or change already entered contact information; and digitally agree to a company's specific user agreements, all prior to being allowed to finalize transactions, the most common transactions being to make purchases (e.g., Amazon, eBay, etc.).

There are specific requirements allowing for the use of a "unique digital identifier" for manufacturers or approved third-parties filing appliance efficiency data with the Energy Commission. These requirements are found in Sections 1606(a)(4)(B)2.a.(ii) and 1606(a)(4)(B)2.b.(ii) of the Regulations. These regulations, in turn, reference Government Code 16.5 and Title 2, California Code of Regulations, Division 7, Chapter 10 (beginning with Section 22000).

Once all necessary account and contact information is set-up or reconfirmed, manufacturers and third-party data submitters will upload their model-specific appliance data, which will generate an acknowledgement that (1) the submittal was received, and (2) they will receive a more detailed response, including acceptance or rejection of all or part of the data, at a later date.

Model specific data will need periodic review by manufacturers and third-party data submitters, and data will be changed or deleted as necessary. For example, when standards change, manufacturers will be notified of any currently certified models that will fail to meet the new standard as of the new effective date, and they will be advised that those models must have their data modified (based on testing to the applicable test method(s)), or the models will be removed by staff on the effective date of the new standard.

Manufacturers are often reluctant to delete obsolete models, for fear that models in compliance with earlier standards as of the date of manufacture may still be offered for sale in California. To alleviate this concern, the proposed system must allow real-time querying of historic model data parallel to, but separated from, the real-time querying of current model data.

Manufacturers may additionally wish to delay appearance of a specific record in our database, so that the public is not aware of a new model's existence until that model is officially announced or released for sale to the public. The proposed system must support the ability of manufacturers to specify a date for their submitted record to become visible to the public.

### **Business Requirements for Other Regulatory Agencies and Appliance Programs**

- Other appliance certification programs need to:
  - Sync records with the Appliance Efficiency Database
    - Send to us an automated export of data in their system
    - Receive from us an automated export of data in our system

Until such time as agreements are in-place between the Energy Commission and other appliance certification programs, the list of necessary parameters cannot be accurately and complete developed. However, some assumptions can be made, based on the following:

For all of the appliances found in Section 1605.1 of the Regulations, all efficiency and design standards are federally mandated. Except in limited circumstances, the Energy Commission is preempted from requiring adherence to more stringent standards than those found in 10 C.F.R. sections 430 and 431. The Energy Commission is allowed to collect data generated from testing to the various federally referenced test methods; this data is often more thorough than that published by the U.S. Department of Energy (U.S. DOE), ENERGY STAR, or WaterSense.

- In the case of certifying appliance data to U.S. DOE, staff submitted data to U.S. DOE based on specific authorization received from specific manufacturers. The last time this occurred on a regular basis was in the mid-1990s.
- In the case of certifying appliance data to ENERGY STAR, when that program started in 1992, the vast majority of their data was obtained from the Energy Commission's appliance database. Even today, most of their historical data is from data downloaded from the Energy Commission.
- For many years, the federal Weatherization Assistance Program used the Energy Commission's non-commercial refrigerator data exclusively.
- States participating in the Multi-State Appliance Standards Collaborative (California, Connecticut, Massachusetts, New Hampshire, New York, Oregon, Rhode Island, and Washington) require manufacturers to certify their products to the California Energy Commission. More information can be found at: <http://appliancestandards.org/>.

Seamless synchronization of specific model data between databases will better enable all programs to publish consistent, accurate, complete data. Allowing for the transmission of an automated export of our data to a similar appliance database will further enhance the consistency and accuracy of this data across multiple databases. Other databases may not require all the data required by the Energy Commission, and certain fields may have different names between the different databases. Nevertheless, the data must be compatible enough that synchronizing of the various field names allows for seamless transfer of data, and the proposed system must provide this functionality.

### **Anatomy of an Appliance Listing**

An appliance listing is the official record and statement that an appliance complies with applicable California law, and therefore an ideal appliance listing should include the following information:

- Submittal Log Number
- Certifier of Record
- Tester of Record
- Manufacturer of Record
- Appliance Type
- Descriptive Info (data not resulting from testing of the appliance)
  - Brand
  - Model Number
  - Rated Size/Capacity/Output
  - Presence of Specific Features (e.g., through-the-door ice for refrigerators)
- Performance Info (data resulting from testing of the appliance)

- Measured Size/Capacity/Output
- Energy and/or Water Use
- Energy and/or Water Efficiency (e.g., Energy Factor, Water Factor, etc.)
- Regulatory Info (the absolute or calculated use and/or efficiency standards the appliance was held to when processed)
  - Maximum Energy or Water Use
  - Minimum Energy or Water Efficiency
  - Regulatory Status (the source of the regulations resulting in submittal and/or standards, e.g., federally regulated consumer product, federally regulated commercial and industrial equipment, state regulated, voluntary, etc.)
- Administrative Info
  - Date Added / Approved
  - Staff Person Responsible for Addition
  - Date to Display (i.e., when the record should become visible to the public)
  - Date Last Modified / Removed
  - Person Responsible for latest mod/removal
  - ENERGY STAR/WaterSense Qualified Status
  - Enforcement Status (i.e., if part of an enforcement action, a field linking the record to the enforcement file)

While all of this information is captured by our program as a whole, our current database does not associate data about the certifier or tester with the specific appliance listing, does not record which staff person handled or processed the listing, does not allow manufacturers to specify the date the listing should become visible in our system, does not record if the listing is associated with an enforcement action, and does not record whether the listing is also found in any external systems such as the ENERGY STAR or WaterSense. Our goal for an integrated system is to bring this data together.

### **Anatomy of a Submittal Log**

The submittal log needs to record our transactions with data submitters. An ideal submittal log would include the following information:

- Log Number
- The What
  - Appliance Type
  - Declaration (i.e., electronic record of digital signature)
- The Who
  - Manufacturer of Record for the submittal
  - Certifier of Record for the submittal
  - Tester of Record for the submittal
- The When

- Date Originally Received
- Date Due
- Date of Most Recently Sent Response
- Staff Person Responsible for Most Recently Sent Response
- Date of Most Recently Received Response
- Date Closed
- Notes
  - “Free” text entry for staff to record additional background information not covered by other fields.

Our current log system is a hand-filled paper log, and only records the manufacturer of record, the date received, the date processed and responded to, the regulatory status, and whether the appropriate forms were included. Completed submittals are printed in full hard copy and filed, as we are required in regulation to retain all data relating to certifications for ten years. Dates and other relevant information otherwise resides in Microsoft Outlook until either written in the log file or printed and filed.

Ideally, we should use the updated log system to fully replace our reliance on Microsoft Outlook for receipt and date-stamping of incoming submittals while also replacing our use of physical logs and hard-copy files to track and archive submittals. The proposed system must at a minimum electronically capture the specified transaction information in a unified submittal record.

### **Anatomy of an Enforcement Log**

Enforcement logs are structurally similar to submittal logs, but are necessarily more fluid. Where every element of a submittal log is guaranteed to be present, and guaranteed to be singular, an enforcement complaint may involve several manufacturers or may involve only a single test laboratory, may include several submitted appliance listings or may include none, and may continue over a long period of time, amassing an ever-growing list of specific events and exchanges. The log must therefore be more dynamic, and an ideal enforcement log would include the following:

- Log Number
- The What
  - Enforcement Complaint
  - (links to) Submittal Log Entry at Issue
  - (links to) Appliances at Issue
  - (links to) Approvals at Issue
- The Who
  - Original Petitioner
  - (links to) Manufacturer(s), Certifier(s), and/or Tester(s) at Issue

- Other Involved Persons
- The When
  - Date Originated
  - Date of Most Recent Activity by Staff
  - Date of Most Recently Received Response from Outside Parties
  - Date Closed
- Diary of Events
  - Running log of actions taken, as entered by staff.
- Notes
  - “Free” text entry for staff to record additional background information not covered by other fields.

To facilitate enforcement without impacting the core operations of the system, it is expected that an enforcement log would dynamically link to or point to associated records within the system. Also, and unlike other records held by the system, an enforcement log entry would be expected to grow over time given the need to chronicle events in a fashion more akin to a diary.

### **13.7 RESPONSE REQUIREMENTS**

There are four variances of requirements used in this solicitation.

#### **Mandatory (M)**

All requirements listed as *Mandatory (M)*, are Mandatory and not negotiable. Offerors must indicate their ability and willingness to satisfy these requirements by marking “Yes” to the “*Offeror understands the Requirement and shall meet or exceed it? Yes\_\_\_\_\_ No\_\_\_\_\_*”. Answering “No” to any of the Mandatory Technical Requirements in the Final Offer will result in the offer being deemed non-responsive, and therefore disqualified.

#### **Mandatory Scored (MS)**

All requirements listed as “Mandatory Scored” or “MS” are Mandatory and not negotiable. The State’s evaluation team will review responses to Mandatory Scored questions in this section. These questions will be scored questions that must be answered with a narrative. Additionally, responses to Mandatory Scored questions will be considered when calculating Offeror Total Scores, identifying which Offerors will be included in negotiations (should the State elect to enter into negotiations), and which Offerors will be awarded the contract.

All requirements listed as “Mandatory Scored” or “MS” must be responded to. Failure to respond to any mandatory scored requirements shall result in disqualification of the proposal. The responses will be evaluated and awarded points in accordance with Section 4.

As specified with each requirement listed below, Offerors must indicate whether their proposal meets the individual requirement by marking either a “Yes” or “No” along with location of a thorough narrative description of the product being offered.

**Non-Mandatory Scored (NMS):**

Some listed standards are identified as “Non-Mandatory Scored” or “NMS”. Offerors are not required to offer these items in order to be compliant with the RFO requirements. However, if an Offeror offers any of these non-mandatory scored requirements, the Offeror must meet the minimum requirements at stated in this section in order to receive evaluation points as described in Section 4.

Offerors must indicate whether their proposal will offer the product by marking either a “Yes” or “No” along with location of a thorough narrative description of the product being offered. If applicable, these questions will be evaluated and awarded points in accordance with Section 4.

**13.8 TECHNICAL REQUIREMENTS**

**Technical Requirement: Database Contents**

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
1.1	<ul style="list-style-type: none"> <li>• The system shall store appliance listings               <ul style="list-style-type: none"> <li>○ Listings that are edited or deleted must be handled by archiving the original listing</li> </ul> </li> </ul>	M		
1.2	<ul style="list-style-type: none"> <li>• The system shall store contact information for customers (certifiers, manufacturers, test laboratories)</li> </ul>	M		
1.2a	<ul style="list-style-type: none"> <li>○ The system shall be able to store international addresses and phone numbers</li> </ul>	M		
1.3	<ul style="list-style-type: none"> <li>• The system shall store approval status for test laboratories and third party certifiers (current and past)</li> </ul>	M		
1.4	<ul style="list-style-type: none"> <li>• The system shall store authorization status for third party certifiers that have been given authority by a manufacturer to act on that manufacturer’s behalf</li> </ul>	M		
1.5	<ul style="list-style-type: none"> <li>• The system shall store submittal log information resulting from submittals from customers</li> </ul>	M		
1.6	<ul style="list-style-type: none"> <li>• The system shall store enforcement log information generated by staff</li> </ul>	M		
1.7	<ul style="list-style-type: none"> <li>• The system shall be designed with database-centric architecture, meaning that the system shall employ a standard, general purpose database management system and shall use table-driven logic for data validation</li> </ul>	M		

	<ul style="list-style-type: none"> <li>○ The system shall employ a generalized architecture to enhance the ability of the system to be maintained, altered, updated, and/or cloned and repurposed (e.g., for an appliance rebate program)</li> </ul>			
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**Technical Requirement: Automation Functions**

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
2.1	<ul style="list-style-type: none"> <li>• The system shall have automated logging and tracking of new submittals made through its web-based interface</li> </ul>	M		
2.1a	<ul style="list-style-type: none"> <li>○ The system shall automatically track staff activity, such as who reviewed and processed a submittal and when the submittal was closed, or who deleted a record from the system and when it occurred.</li> </ul>			
2.2	<ul style="list-style-type: none"> <li>• The system shall perform automated “first stage” formatting validation, which will apply when a submitter attempts to submit materials to the system</li> </ul>	M		
2.2a	<ul style="list-style-type: none"> <li>○ Formatting validation shall check to see that all required fields are entered, that the correct type of information is present in each field (i.e., no letter characters in numeric fields), and that the number of characters entered into a field do not exceed the width of that field</li> </ul>	M		
2.2b	<ul style="list-style-type: none"> <li>○ Formatting validation shall also sanitize all input, eliminating any risk of SQL-injection or similar attacks. As a part of this, numeric data shall be automatically rounded to the appropriate number of decimal places for the field, if excess additional digits are provided</li> </ul>	M		
2.2c	<ul style="list-style-type: none"> <li>○ Submitters shall be prevented from submitting materials until they have corrected any errors caught by the formatting validation <ul style="list-style-type: none"> <li>▪ The system shall highlight improper entries and provide guidance to the submitter on correcting their data entry (e.g., “This field is required.” or “Only numbers may be entered in this field.”)</li> </ul> </li> </ul>	M		
2.3	<ul style="list-style-type: none"> <li>• The system shall perform automated “second stage” validation against regulatory standards after submittal to the system</li> </ul>	M		
2.3a	<ul style="list-style-type: none"> <li>○ Regulatory validation shall compare the</li> </ul>	M		

	provided information against the requirements of applicable regulations			
2.3b	<ul style="list-style-type: none"> <li>The results of second stage validation will be shown to staff (not to customers) as a part of staff's review and approval of submitted materials</li> </ul>	M		
2.3c	<ul style="list-style-type: none"> <li>Items that are flagged as failing second stage validation should be highlighted when shown during staff review, and should include an explanation of the condition(s) that caused the failure (i.e., submitted annual energy use exceeds the standard of 299 kWh/yr).</li> </ul>	M		

### Technical Requirement: General User Interface Requirements

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
3.1	<ul style="list-style-type: none"> <li>The system shall provide the look and feel of systems that support comparable Energy Commission systems and adhere to any standards set by the IT Services Branch.</li> </ul>	M		
3.2	<ul style="list-style-type: none"> <li>The system shall provide Help functionality on each displayed page, with topics sensitive to the page context.</li> </ul>	M		
3.3	<ul style="list-style-type: none"> <li>The system shall display a warning to the user if any current displayed information will be lost or deleted upon navigation to another form or screen.</li> </ul>	M		
3.4	<ul style="list-style-type: none"> <li>The system shall provide action-specific confirmation messages (e.g., "Are you sure you want to delete this record?").</li> </ul>	M		
3.5	<ul style="list-style-type: none"> <li>The system shall prompt system users when a user action will result in an irreversible change.</li> </ul>	M		
3.6	<ul style="list-style-type: none"> <li>The system shall incorporate easily understood error, edit, and confirmation messages.</li> </ul>	M		
3.7	<ul style="list-style-type: none"> <li>The system shall update the database at the time the user submits the data.</li> </ul>	M		
3.8	<ul style="list-style-type: none"> <li>The system shall be a scalable system to accommodate future enhancements.</li> </ul>	M		
3.9	<ul style="list-style-type: none"> <li>The system shall comply with California Government Code Section 11135 and Section 508 of the federal Rehabilitation Act of 1973.</li> </ul>	M		

### Technical Requirement: Appliance Data Viewing/Publishing Tools

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
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Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
4.1	<ul style="list-style-type: none"> <li>• The system shall be able to publicly display active appliance listings using interactive web pages <ul style="list-style-type: none"> <li>○ The system shall not display a listing prior to its “Display by” date</li> </ul> </li> </ul>	M		
4.2	<ul style="list-style-type: none"> <li>• The system shall be able to publicly display archived (historic) listings using interactive web pages</li> </ul>	M		
4.2a	<ul style="list-style-type: none"> <li>○ The historic data pages shall be separate from active listing data pages to prevent confusion</li> </ul>	M		
4.2b	<ul style="list-style-type: none"> <li>○ The historic data pages shall be clearly marked or displayed as “Historic”, or similar terms or phrases communicating that the records are not current.</li> </ul>	M		
4.3	<ul style="list-style-type: none"> <li>• The interactive web pages shall include or incorporate a “Browse Listings” function for walking through the listings in the Appliance Efficiency Database</li> </ul>	M		
4.4	<ul style="list-style-type: none"> <li>• The interactive web pages shall include or incorporate a “Find model number” function for allowing a heuristic search across appliance types for an entered model number.</li> </ul>	M		
4.4a	<ul style="list-style-type: none"> <li>○ The “Find model number” function shall be able to return both exact and near matches</li> </ul>	M		
4.4b	<ul style="list-style-type: none"> <li>○ The “Find model number” function shall be able to use wildcards in queries</li> </ul>	M		
4.4c	<ul style="list-style-type: none"> <li>○ The “Find model number” function shall be able to appropriately recognize wildcards in stored appliance model numbers</li> </ul>	M		
4.5	<ul style="list-style-type: none"> <li>• The interactive web pages shall include or incorporate a “Quick Search” function for queries based on simple information such as appliance type, brand, model number, or the presence of certain basic features</li> </ul>	MS		
4.6	<ul style="list-style-type: none"> <li>• The interactive web pages shall include or incorporate a “Search By...”, “Advanced Search”, or similar function allowing the creation of advanced queries on any/all non-administrative data columns available for an appliance type</li> </ul>	MS		
4.7	<ul style="list-style-type: none"> <li>• The interactive web pages shall include or incorporate the ability to export the results of a query or search to an appropriate type of file (Excel, CSV, etc.) <ul style="list-style-type: none"> <li>○ This includes “unfiltered” exports returning all records of a given appliance type</li> </ul> </li> </ul>	MS		
4.8	<ul style="list-style-type: none"> <li>• For results of browsing, quick search, or advanced search, a number of individual</li> </ul>	M		

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
	listings (no fewer than five) may be selected or highlighted to include in a “Compare” function, showing side-by-side extended information about the selected models			
4.9	<ul style="list-style-type: none"> <li>• An individual appliance listing shall be selectable and displayed on a separate page <ul style="list-style-type: none"> <li>○ Individual appliance listing pages shall have unique http:// addresses that can be bookmarked and returned to</li> </ul> </li> </ul>	M		
4.9a	<ul style="list-style-type: none"> <li>○ Entering an address for a listing shall not cause a display of a listing before its “Display by” date.</li> </ul>	M		

**Technical Requirement: Approval Information Viewing/Publishing Tools**

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
5.1	<ul style="list-style-type: none"> <li>• The system shall publicly display a list of currently approved test laboratories and third party certifiers</li> </ul>	M		
5.2	<ul style="list-style-type: none"> <li>• The system shall publicly display lists of previously approved test laboratories and third party certifiers, organized by year</li> </ul>	M		
5.2a	<ul style="list-style-type: none"> <li>○ The prior year lists shall be located on a page that is separate from currently approved entities to prevent confusion</li> </ul>	M		
5.2b	<ul style="list-style-type: none"> <li>○ The prior year lists shall be clearly marked or displayed as “Previously approved”</li> </ul>	M		

**Technical Requirement: Staff Data Acceptance and Curation Tools and Interface**

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
6.1	<ul style="list-style-type: none"> <li>• The system shall provide the following tools to Energy Commission staff for processing submittals made by customers:</li> </ul>	MS		
6.1a	<ul style="list-style-type: none"> <li>○ “Inbox” display of received submittals (appliance listings and/or approval applications) in queue for review <ul style="list-style-type: none"> <li>▪ Each submittal in queue shall be logged in as described under Automated Functions</li> <li>▪ Maintaining log number for same</li> </ul> </li> </ul>	MS		

	<ul style="list-style-type: none"> <li>▪ Highlighting of any submittals made by or involving a customer linked to an enforcement log</li> </ul>			
6.1b	<ul style="list-style-type: none"> <li>○ “Outbox” display of previously handled submittals</li> </ul>	MS		
6.1c	<ul style="list-style-type: none"> <li>○ “Review” display of a selected submittal <ul style="list-style-type: none"> <li>▪ For submittals of appliance listings, highlighting of any data validation violation with explanation (e.g., submitted data shows the appliance does not meet a required standard)</li> </ul> </li> </ul>	MS		
6.2	<ul style="list-style-type: none"> <li>• The “Review” display shall allow staff to approve submittals or return them for correction</li> </ul>	M/MS		
6.2a	<ul style="list-style-type: none"> <li>○ The system shall send an automated acceptance notification for approved submittals</li> </ul>	M		
6.2b	<ul style="list-style-type: none"> <li>○ The system shall allow staff to compose and send a response to the manufacturer explaining the reason for rejection (for returned materials) from either the Review page or a subsequent page</li> </ul>	MS		
6.3	<ul style="list-style-type: none"> <li>• The system shall provide the following tools to Energy Commission staff for curating the stored data and validation rules:</li> </ul>	M		
6.3a	<ul style="list-style-type: none"> <li>○ An interface for establishing and updating the second-stage validation rules <ul style="list-style-type: none"> <li>▪ This interface shall present table-driven validation in a staff-editable format. Staff shall not need to know a programming language to understand or to edit validation rules. The interface shall include appropriate “rule builder” tools, and shall include language highlighting similar to a modern compiler. Different rules can be specified to apply based on date of submittal (i.e., “Date &lt;” or “Date &gt;=” can be a criteria for a rule), in addition to other criteria. The following additional functions shall be included in the validation interface or in a page accessible from the interface: <ul style="list-style-type: none"> <li>• A sub-interface for editing column headers, column labels, column data types (Boolean, numeric, etc.), and column widths</li> <li>• A sub-interface for adding/editing stored lookup table values</li> </ul> </li> </ul> </li> </ul>	M		
6.3b	<ul style="list-style-type: none"> <li>○ An interface for performing queries directly on the database (i.e., for an SQL database, an interface for entering SQL commands</li> </ul>	M		

	<p>and queries).</p> <ul style="list-style-type: none"> <li>▪ Commands not needed for curating data or generating lists/reports (i.e., Drop Table) shall be restricted and unable to be performed in this interface</li> </ul>			
6.3c	<ul style="list-style-type: none"> <li>○ An interface for staff to add/import new listings or updates to existing listings, separate from the interfaces for review of received submittals <ul style="list-style-type: none"> <li>▪ This shall be the same interface as is used by outside certifiers to upload data, but tailored to staff work in the following ways: <ul style="list-style-type: none"> <li>• Will display both first and second stage validation</li> <li>• Allows staff to override validation and to freely specify the manufacturer, tester, and certifier as appropriate</li> </ul> </li> </ul> </li> </ul>	M		
6.3d	<ul style="list-style-type: none"> <li>○ An interface for performing simple edits to appliance listings without using the direct access interface <ul style="list-style-type: none"> <li>▪ This interface shall also allow staff to archive listings and restore listings from archive</li> <li>▪ Staff should be able to select model listings in a fashion similar to use of the “Compare” function, but instead passing the selected listings to this interface</li> <li>▪ This interface may be combined with the staff interface for adding or updating listings</li> </ul> </li> </ul>	M		
6.3e	<ul style="list-style-type: none"> <li>○ An interface for querying and editing contact information and approval status of customers, including the ability to add a new customer account and disable an existing customer account</li> </ul>	M		
6.4	<ul style="list-style-type: none"> <li>• Staff permissions levels that can be assigned to individual staff members, as follows: <ol style="list-style-type: none"> <li>1. Compliance tool access, allowing use of “Inbox”, “Outbox”, and “Review” tools</li> <li>2. Curation tool access, adding access to data adding and editing tools</li> <li>3. Enforcement tool access, adding access to the enforcement log</li> <li>4. Direct data access, adding access to the SQL interface for the database</li> <li>5. Admin access, allowing access to all tools, access to the validation rules interface, and the ability to create additional user accounts and assign permissions</li> </ol> </li> </ul>	M		

**Technical Requirement: Staff Work Tracking and Enforcement Tools**

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
7.1	<ul style="list-style-type: none"> <li>• The system shall include tools for generation of statistics and reports on the number of approval applications and appliance data submittals received</li> </ul>	M		
7.1a	<ul style="list-style-type: none"> <li>○ These reports shall include the total number of submittals, as well as the total number of individual appliance listings submitted and processed</li> </ul>	M		
7.1b	<ul style="list-style-type: none"> <li>○ These reports shall also include tracking and reporting of persons approving and denying applications and submittals (i.e., number processed by a given person for a given period)</li> </ul>	M		
7.2	<ul style="list-style-type: none"> <li>• The system shall allow the extraction and export of contact information by staff in a format suitable for use in mass communications (such as mass e-mail, labels for printed mail, and mail merge functions for letters) and for sharing with the Energy Commission’s mail room</li> </ul>	M		
7.3	<ul style="list-style-type: none"> <li>• The system shall allow for the creation of an “enforcement log” or “enforcement file” able to include/link to/point to specific manufacturers, test laboratories, certifiers, and/or appliance listings</li> </ul>	M		
7.3a	<ul style="list-style-type: none"> <li>○ The system shall allow staff to append notes and attach relevant information and additional files to the enforcement log, without directly affecting the contact information or appliance listings referenced by the log</li> </ul>	M		
7.3b	<ul style="list-style-type: none"> <li>○ The system shall allow staff to flag a given party with an open enforcement matter and send an automatic notification to staff when a “flagged” party has submitted new information to the database.</li> </ul>	M		
7.4	<ul style="list-style-type: none"> <li>• The system shall allow scheduling of reports and exports to occur automatically at specified dates, times, and intervals                             <ul style="list-style-type: none"> <li>○ This includes scheduling of the automatic data exports described under “Database Interconnection Tools”</li> </ul> </li> </ul>	M		

**Technical Requirement: Customer Submittal Web Pages and Tools**

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Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
8.1	<ul style="list-style-type: none"> <li>• The system shall allow customers to request or otherwise set up a new account</li> </ul>	M		
8.1a	<ul style="list-style-type: none"> <li>○ Creation of a new account shall require provision of complete contact information, including company name, complete mailing address, e-mail address, and telephone number</li> </ul>	M		
8.1b	<ul style="list-style-type: none"> <li>○ Customers shall also be able to provide a fax number and a website as a part of their contact information</li> </ul>	M		
8.1c	<ul style="list-style-type: none"> <li>○ Customers shall be able to specify additional contact persons at the same company name and address with separate phone numbers, e-mail addresses, log-in names, and passwords</li> </ul>	M		
8.1d	<ul style="list-style-type: none"> <li>○ The system shall reject the creation of a new account with company name and address information matching an existing account, and shall inform the customer that the account they are attempting to create already exists</li> </ul>	M		
8.2	<ul style="list-style-type: none"> <li>• The system shall allow customers to securely log in to their account</li> </ul>	M		
8.3	<ul style="list-style-type: none"> <li>• The system shall allow customers to recover a user name or reset a password using an automated tool</li> </ul>	M		
8.4	<ul style="list-style-type: none"> <li>• The system shall allow customers, on log-in, to accomplish the following tasks through interactive web pages:</li> </ul>	M/MS		
8.4a	<ul style="list-style-type: none"> <li>○ Update their stored contact information</li> </ul>	M		
8.4b	<ul style="list-style-type: none"> <li>○ Securely submit new appliance listings and/or updates to listings <ul style="list-style-type: none"> <li>▪ Customers shall be able to enter appliance data directly into an appropriate web interface or choose to upload data from a pre-formatted spreadsheet file</li> <li>▪ Customers shall also complete an electronic Declaration as a part of submitting or updating appliance listings</li> </ul> </li> </ul>	MS		
8.4c	<ul style="list-style-type: none"> <li>○ Apply for approval as a Test Laboratory</li> </ul>	M		
8.4d	<ul style="list-style-type: none"> <li>○ Apply for approval as a Third Party Certifier</li> </ul>	M		
8.4e	<ul style="list-style-type: none"> <li>○ Delegate Certification Authority to a Third Party</li> </ul>	M		
8.4f	<ul style="list-style-type: none"> <li>○ View and interact with active listings associated with their login (i.e., for which the customer is either the manufacturer, certifier, or tester) <ul style="list-style-type: none"> <li>▪ Interaction, in this context, means being</li> </ul> </li> </ul>	M		

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
	able to pass selected records into the interface for submitting data, such that the records can be easily updated by the manufacturer, and to separately mark the records for removal from the active listings and archiving in the historic listings.			
8.4g	<ul style="list-style-type: none"> <li>○ View and interact with recent submittal logs, both pending and responded to, associated with their login (i.e., for which the customer is either the manufacturer, certifier, or tester) <ul style="list-style-type: none"> <li>▪ Manufacturers shall have some capacity to open, review, and make corrections to their submittals.</li> </ul> </li> </ul>	M		
8.4h	<ul style="list-style-type: none"> <li>○ Edit or delete listings for which the customer is either the manufacturer or has been delegated certification authority by the manufacturer</li> </ul>	M		
8.4i	<ul style="list-style-type: none"> <li>○ Receive and view notification of approved applications, accepted appliance listings, or for any material returned for correction <ul style="list-style-type: none"> <li>▪ Notifications related to their submittals will be sent to the e-mail addresses provided in the submittal, and be additionally visible or accessible from or within their “My Account” page.</li> </ul> </li> </ul>	M		
8.5	<ul style="list-style-type: none"> <li>• The system shall use secure digital signatures for all forms <ul style="list-style-type: none"> <li>○ Digital signatures must comply with Government Code 16.5 and Title 2, California Code of Regulations, Division 7, Chapter 10 (beginning with Section 22000)</li> </ul> </li> </ul>	M		
8.6	<ul style="list-style-type: none"> <li>• The text content of the web pages shall be in a format that does not prohibit the later development of alternate language versions of customer web pages <ul style="list-style-type: none"> <li>○ Development of alternate language versions of web pages are outside of the scope of this solicitation</li> </ul> </li> </ul>	M		

**Technical Requirement: System Security**

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
<b>User Authentication and Profile:</b>		M		
9.1a	Require a unique login (UserID) when establishing a	M		

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
	user profile.			
9.1b	Email address may be used as a UserID or another unique identifier.	M		
9.1c	Users must enter and confirm a password per password security requirements below.	M		
9.1d	Require an authentication check box to agree to terms of use (e.g., a user confirms entered data is complete and correct upon submittal).	M		
9.1e	To register for a new account, the system must verify ownership of the email address by sending an automatic email to the email address provided. The user will be required to click on a link in the registration email to complete the registration process.	M		
9.1f	Authenticate against the user profile for each session.	M		
9.1g	Provide a process for a user to define and maintain their user profiles.	M		
9.1h	Capture an email account for each user profile for all communication regarding account changes.	M		
9.1i	Utilize existing Active Directory (AD) authentication to enable single sign-on for internal Energy Commission staff.	M		
<b>Role-Based Authorization:</b>		M		
9.2a	Apply roles-based security throughout the application.	M		
9.2b	Allow users to have multiple roles.	M		
9.2c	Allow Energy Commission staff, with appropriate security permissions, the ability to establish user authorizations (e.g., full admin, partial edit, read only access to designated functions).	M		
9.2d	Maintain secured role-based user authorization levels and restrict access at the report, file, table, screen, and field level based on user authorization.	M		
9.2e	Provide the ability to configure access to data, report generation, and distribution (e.g., security model of user roles and privileges) by user, role, program, and facility, etc.)	M		
9.2f	Support database level security in combination with the role-based security at the table, record, and field level.	M		
<b>User Privacy Agreement:</b>		M		
9.3a	Require a privacy agreement statement and check box be presented to the user to agree to the privacy terms of use.	M		

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
<b>Password Security</b>		M		
9.4a	Salted hash passwords shall be stored encrypted in the system.	M		
9.4b	Credentials must be stored after being one-way hashed and salted using acceptable hashing algorithms.	M		
9.4c	A strong standard encryption algorithm must be used.	M		
9.4d	Password length shall be a minimum of 10 characters.	M		
9.4e	Passwords must contain at least one of each of the following: <ul style="list-style-type: none"> <li>• Alpha (at least one upper and lower case)</li> <li>• Numeric</li> <li>• Special Character</li> </ul>	M		
9.4f	Passwords shall be easily changed.	M		
<b>Login:</b>		M		
9.5a	Require SSL for entering UserID and Password.	M		
9.5b	Provide for secure access to the system for protecting transmitted information.	M		
9.5c	System must not possess “remember me” functionality.	M		
<b>Logon Attempts:</b>		M		
9.6a	System shall allow for at least 5, but no more than 8 unsuccessful attempts.	M		
9.6b	System shall not display the number of login attempts remaining until the final attempt.	M		
9.6c	System shall display a notice when an unsuccessful sign-on attempt occurs. The message shall be generic as to provide no information as to if an account exists or password is wrong.	M		
9.6d	System shall present a message to non Energy Commission users informing them they are locked out for a specific time (e.g., 15 minutes, 30 minutes) or present the user with an alternative means of signing into the application (e.g., forgotten password) which meets all State Office of Information Security policies and guidelines and complies with Section 508, Subpart B, Subsection 1194.22, Guidelines A-P of the Rehabilitation Act of 1973 as revised in 1998.	M		
<b>Password Recovery:</b>		M		
9.7a	Provide a secure process that allows a user to obtain a forgotten UserID.	M		

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
9.7b	Provide a secure process that allows a user to reestablish a password.	M		
9.7c	Provide for a security question to authenticate users when a UserID or password is forgotten.	M		
9.7d	User is emailed a temporary password and is required to change password at login.	M		
<b>System Logout:</b>		M		
9.8a	System shall have an effective logout button on every single page in a common location.	M		
9.8b	Automatically logout the user after the browser has been closed.	M		
9.8c	Logout a user when there has been no activity for a configurable amount of time. Generally, timeout will be after 10-15 minutes.	M		
<b>Acceptable Files for Upload:</b>		M		
9.9a	System shall only allow files for upload that contain acceptable file extensions as defined by the Energy Commission Information Security Officer.	M		
<b>Malware Protection:</b>		M		
9.10a	System shall perform a virus scan on any files from outside sources prior to uploading or processing them and reject any files found with any type of virus, malware, Trojan horse, etc.	M		
<b>Audit Trail and Logs:</b>		M		
9.11a	Provide an audit trail to track changes to data or tables, including who made the change, date/time of change, and what change was made.	M		
9.11b	Provide an error log for analysis.	M		
9.11c	Use rolling logs to prevent disk storage over capacity.	M		
9.11d	Allow Energy Commission staff, with appropriate security permissions, the ability to modify log analysis criteria.	M		
<b>System Administrator:</b>		M		
9.12a	Allow System Administrator to update select system security configurations as appropriate.	M		
9.12b	Automatically back-up production system periodically as defined by the System Administrator.	M		
<b>Secure Coding Practices:</b>		M		
9.13a	Coding shall follow security best practices to reduce the risk of applications being exploited and attacked. The Open Web Application Security Project (OWASP) provides best practice guidelines.	M		

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
9.13b	Security shall be integrated into the development, verification and maintenance processes.	M		
9.13c	Source code shall not include any credentials, including (but not limited to) usernames, passwords, certificates, token IDs, or phone numbers.	M		
9.13d	Code may be required to be tested by analytics and security software tools such as AppScan, Vericode, Indihang or other approved third party software tools.	M		

### Technical Requirement: Database Interconnection Tools

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
10.1	<ul style="list-style-type: none"> <li>• The system shall be able to accept an automated export file from a similar appliance database               <ul style="list-style-type: none"> <li>○ Staff shall be able to define the expected format and column headings of an anticipated incoming file and create a protocol for matching the columns in the incoming data to the columns in our data tables, in (i.e., create and save a profile for reading transmitted data)</li> </ul> </li> </ul>	M		
10.2	<ul style="list-style-type: none"> <li>• The system shall be able to transmit an automated export of our data to a similar appliance database               <ul style="list-style-type: none"> <li>○ Staff shall be able to define a format for the data being exported and transmitted, including substitutions for column headers (i.e., create and save a profile for composing data for an external database)</li> </ul> </li> </ul>	M		
10.3	<ul style="list-style-type: none"> <li>• The system shall be able to transmit stored form information, including digital signature information</li> </ul>	M		
10.4	<ul style="list-style-type: none"> <li>• The system shall be able to receive transmitted form information, including digital signature information</li> </ul>	M		

### Technical Requirement: Mobile and In-Store Outreach Tools

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #
11.1	<ul style="list-style-type: none"> <li>• Mobile versions of the data viewing pages shall be created</li> </ul>	M		
11.1a	<ul style="list-style-type: none"> <li>○ These pages shall automatically load in place of regular pages when accessed from</li> </ul>	M		

	a mobile device.			
11.1b	<ul style="list-style-type: none"> <li>○ A link for accessing the desktop version of the page shall be included somewhere on each mobile page</li> </ul>	M		
11.1c	<ul style="list-style-type: none"> <li>○ Basic search functions shall be available and functional on mobile devices</li> </ul>	M		
11.2	<ul style="list-style-type: none"> <li>• The page used to display an individual appliance listing shall automatically generate a QR code that encodes the unique http:// address for that listing <ul style="list-style-type: none"> <li>○ This QR code shall allow for a mobile device to scan a printout of the code and be immediately taken to the relevant appliance listing via the encoded link</li> </ul> </li> </ul>	NMS		

### 13.9 PROJECT TEAM QUALIFICATIONS

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #s
<b>Developers:</b>				
12.1	<ul style="list-style-type: none"> <li>• Experience as a Senior Level Programmer in a large (1,000,000+ records) enterprise data system <ul style="list-style-type: none"> <li>○ Minimum 3 years</li> </ul> </li> </ul>	MS		
12.2	<ul style="list-style-type: none"> <li>• Skilled in Javascript and JQuery</li> </ul>	MS		
12.3	<ul style="list-style-type: none"> <li>• Skilled in CSS3</li> </ul>	MS		
12.4	<ul style="list-style-type: none"> <li>• Skilled in Cross-Browser Development</li> </ul>	MS		
12.5	<ul style="list-style-type: none"> <li>• Skilled in import of records from spreadsheet to database</li> </ul>	MS		
12.6	<ul style="list-style-type: none"> <li>• Experience in ASP .NET Webforms <ul style="list-style-type: none"> <li>○ Minimum 5+ years</li> </ul> </li> </ul>	MS		
12.7	<ul style="list-style-type: none"> <li>• Experience in SQL Server databases <ul style="list-style-type: none"> <li>○ Minimum 5+ years</li> </ul> </li> </ul>	MS		
12.8	<ul style="list-style-type: none"> <li>• Experience in User Interface Design / designing interfaces for usability <ul style="list-style-type: none"> <li>○ Minimum 2+ years</li> </ul> </li> </ul>	MS		
12.9	<ul style="list-style-type: none"> <li>• Strong background with development in Microsoft SQL Server 2008 R2 <ul style="list-style-type: none"> <li>○ Minimum 2+ years</li> </ul> </li> </ul>	MS		
12.10	<ul style="list-style-type: none"> <li>• Strong background with report development using SQL Server 2008 R2 Reporting Services (SSRS) <ul style="list-style-type: none"> <li>○ Minimum 2+ years</li> </ul> </li> </ul>	MS		
12.11	<ul style="list-style-type: none"> <li>• Strong background with using SQL Server 2008 R2 Integration Services (SSIS) <ul style="list-style-type: none"> <li>○ Minimum 2+ years</li> </ul> </li> </ul>	MS		
12.12	<ul style="list-style-type: none"> <li>• strong background with ASP.NET 4.0 using</li> </ul>	MS		

Req. #	Requirement Description	Scoring	Meets (Yes/No)	Proposal Page #s
	Visual Studio 2010 ○ Minimum 2+ years			
<b>Project Lead: (same as above except the following changes)</b>				
12.13	<ul style="list-style-type: none"> <li>• Project Management experience in at least two projects of similar size and scope (or larger)               <ul style="list-style-type: none"> <li>○ Minimum 3 years</li> <li>○ PMP Project Management certification: include certification number in resume materials</li> </ul> </li> </ul>	MS		
12.14	<ul style="list-style-type: none"> <li>• Experience as a Senior Level Programmer in a lead capacity for a large (1,000,000+ records) enterprise data system               <ul style="list-style-type: none"> <li>○ Minimum 5 years</li> </ul> </li> </ul>	MS		

## ATTACHMENT B – Cost Worksheets

This is a deliverable-based contract. There are two cost worksheets to complete:

- Paid Deliverable Cost Table
- Project Team Staff and Rates Table

The Offeror shall submit an invoice (consistent with Section 12) following acceptance of each deliverable, less a 10% hold back which shall be separately billed after acceptance of the final deliverable.

The Energy Commission WILL NOT consider offers that propose spending more than 25% of the total contract cost on deliverables occurring prior to Deliverable 4.1, or more than 80% of the total contract cost on deliverables occurring prior to Deliverable 6.1. (Unanticipated Work is considered to occur after all other tasks for the purpose of this calculation.)

**Attachment B: Paid Deliverable Cost Table**

Del #	Deliverable	Subtotal	Holdback (10%)	Total Cost
1.1	Project Management Plan			
2.1	Detailed System Requirements & Traceability Matrix			
3.1	Entity-Relationship Diagram			
3.2-3.3	Design document			
4.1	Data layer – “Empty” Database			
4.2	Logic layer – Unit Testing Results			
4.3	Interface layer – Draft Web Pages			
5.1-5.4	Test Plans & Reports			
6.1	Data Conversion			
6.2	Final Web Pages			
6.3-6.6	Training Plans, Materials, & Sessions			
6.6	Ready-to-Deploy System			
6.7	Final System Deliverable: Deployment, Transition, Warranty Period & Acceptance Document			
	Unanticipated Work	\$45,000	\$5,000	\$50,000
<b>Totals</b>				



**ATTACHMENT C – REFERENCE FORM**

Please complete three (3) reference forms for the Offeror and each Staff Person/Consultant.

REFERENCE #		
<b>1. Offeror or Consultant Info</b>		
Name:	Primary Contact Phone Number:	
Reference is for: <input type="checkbox"/> Offeror <input type="checkbox"/> Consultant <input type="checkbox"/> Both (if same)		
<b>2. Client info</b>		
Client Name:	Contact Name:	
Address:	Contact Phone:	
<b>3. Project/ Work info</b>		
Name of Project:	Dates Served on Project (from/to):	
Project Description:		
Offeror or Consultant Involvement on the Project:		
Deliverables Prepared By Offeror or Consultant:		
<b>4. Project Measurements and Results</b>		
Original estimated hours on project:	Actual hours on project:	
	YES	NO
Was the project or contract terminated prior to successful conclusion? If "yes," please explain the reason.		

## **ATTACHMENT D – STD 843 DVBE DECLARATIONS**

Review guidelines for Disabled Veteran Business Enterprise Declarations Use:

<http://www.documents.dgs.ca.gov/pd/poliproc/DVBEDeclarationsNarrativeForUse.pdf>

If applicable, download and complete the following document:

<http://www.documents.dgs.ca.gov/pd/poliproc/STD-843FillPrintFields.pdf>

Please use 13-409.00-007 as the Solicitation/Contract Number.

Include **one (1)** copy with original (wet) signature as part of the original response

## ATTACHMENT E – STD 213 STANDARD AGREEMENT

Download the Standard Agreement (STD 213) using the following link:

<http://www.documents.dgs.ca.gov/pd/modellang/std-213.pdf>

Fill out the following fields as instructed:

- **Agreement Number:** 13-409.00-007
- **Section 1:** Insert “*California Energy Commission*” as the State Agency and the Bidder’s name on the appropriate lines
- **Section 2 and 3:** leave blank
- **Section 4:** Insert the following language -
  - Statement of Work (include # of pages)
  - Master Services Agreement (include # of pages)
  - RFO 13-409.00-007 and Contractor’s bid response are hereby incorporated and made a part of this contract
- **Signature block:**
  - Complete and sign Contractor portion
  - Insert the following for State of California:
    - Agency Name:  
California Energy Commission
    - Printed Name and Title of Person Signing:  
Robert P. Oglesby, Executive Director
    - Address:  
1516 9<sup>th</sup> Street, Sacramento, CA 95814-5512

Include **one (1)** copy with original (wet) signature as part of the original response

## **ATTACHMENT F – STD 204 PAYEE DATA RECORD**

Download the document located at the following link:

<http://www.documents.dgs.ca.gov/osp/pdf/std204.pdf>

Follow instructions as specified in the document. In Section 6, please add the following information:

- **Department/Office:** California Energy Commission
- **Unit/Section:** Accounting
- **Mailing Address:** 1516 9th Street, MS-2
- **City/State/Zip:** Sacramento, CA 95814
- **Telephone:** (916) 654-4400 Fax: (916) 654-4428
- **E-mail Address:** (n/a leave blank)

Include **one (1)** copy with original (wet) signature as part of the original response

## ATTACHMENT G – GLOSSARY

Term	Definition
“Day”	Unless otherwise specified, "day" shall mean a business day of the State of California.
“Manufacturer”	A manufacturer of an appliance regulated under the Title 20 Appliance Efficiency Regulations, or any person representing such a manufacturer.
“Proposed System” or “System”	The software application, solution, and product proposed to be developed and delivered by the Offeror.
“Regulations” or “The Regulations”	When used singularly, “the regulations” refers to the Title 20 Appliance Efficiency Regulations, formally Title 20 Sections 1601-1608 of the California Public Resources Code.
“Submittal”	Any form or set of appliance-related data submitted to the Energy Commission under its Appliance Efficiency Program.