



**REQUEST FOR OFFER (RFO)**  
13-409.00-006

**Data Validation and In-House Publishing**

**Date:** March 12, 2014

You are invited to respond to this California Multiple Award Schedule (CMAS) Request for Offer (RFO) for ASP.NET/MS SQL programming and associated services and deliverables to automate data validation and in-house publishing of the Quarterly Fuel and Energy Report (QFER).

The services required are described in detail in the following Scope of Work (SOW). By submitting an offer, your firm agrees to the terms and conditions stated in your CMAS contract and this RFO. 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 CMAS contract including the associated price list is due at **12 noon (PDT), Monday, April 7, 2014**. Offers 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). Subject line must include "13-409.00-006". Multiple e-mails are acceptable to accommodate size limitation. If the response is mailed (including but not limited to U.S. Postal Service or overnight services) or hand delivered, it must include one (1) original and three (3) copies as well as one (1) copy of the complete CMAS contract including the associated price list and be received by **12 noon (PDT), Monday, April 7, 2014**. Table 1 provides the Key Dates concerning activities related to this RFO. Any questions regarding this RFO should be directed to Ms. Spiess.

Kate Spiess  
1516 9th Street, MS-7  
Sacramento, CA 95814-5512  
(916) 651-6588  
[kate.spiess@energy.ca.gov](mailto:kate.spiess@energy.ca.gov)

**TABLE 1: KEY RFO DATES**

Release of RFO	Tuesday, March 12 <sup>th</sup> , 2014
Questions Due	Wednesday, March 19 <sup>th</sup> , 2014, 3pm
State Responses to Questions	Friday, March 21 <sup>st</sup> , 2014, 3pm
RFO Response Due Date	Monday, April 7 <sup>th</sup> , 2014, 12 noon
Anticipated Contract Award	Thursday, May 15 <sup>th</sup> , 2014
Anticipated Project Start Date	Monday, June 2 <sup>nd</sup> , 2014

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## I. REQUEST FOR OFFER (RFO)

### A. Overview

The California Energy Commission's (hereinafter referred to as Energy Commission) Demand Analysis Office (DAO) of the Electricity Supply Analysis Division (ESAD) seeks a California Multiple Award Schedule (CMAS) vendor (herein referred to as Contractor) to provide ASP.NET/MS SQL programming and associated services and deliverables to automate data validation and in-house publishing of the Quarterly Fuel and Energy Report (QFER).

The purpose of this contract is for the Contractor to design, develop, implement, test, and document software to automate the validation, and in-house publishing of Quarterly Fuel and Energy Report (QFER) data and to train the Energy Commission staff in the use of the enhanced system features.

**Pursuant to GC 19130 (b) (3): The services contracted are not available within civil service, cannot be performed satisfactorily by civil service employees, or are of such a highly specialized or technical nature that the necessary expert knowledge, experience, and ability are not available through the civil service system.**

- **The amount of this contract is approximately \$350,000.00**
- **The start date is estimated to be May 19, 2014.**
- **This technical project support contract will cover a period of 24 months from the start date of the contract or until all contract funds have been exhausted, whichever occurs later.**
- **All work plans and project plans will be based on the official State of California work calendar and holiday list.**

### B. Background

The Integrated Energy Planning Report (IEPR) electricity and natural gas demand forecasts (PRC § 25301/SB-1389) are not possible without QFER data, and accurate forecasts are not possible without accurate QFER data (CCR, Title 20, §§1301-1333). Over time a number of factors have adversely impacted QFER data quality. Resulting judgment-based adjustments have decreased forecasting transparency. Data quality enforcement is an important piece of the QFER data quality problem, a role staff can more effectively perform with support from automated data validation and in-house publishing.

Computer automation and standardization of data validation and enhancements would permit QFER staff to redirect its focus from data administration to improved data and trend analysis. This improved energy consumption visibility would allow QFER staff to more effectively work with energy providers to improve the quality of their quarterly consumption reporting. In addition improved in-house publishing capabilities would

allow for timelier responses to internal and external reporting requests. Further, updated system documentation would be provided to support succession planning goals. Finally, superior quality QFER data would significantly boost the accuracy, reliability, and transparency of IEPR electricity and natural gas demand forecasts. Specifically, in addition to supporting the Energy Commission's strategic energy goals for California, accurate IEPR forecasts are crucial to numerous major state government functions; e.g., CPUC's determination of California's Long-Term Planning Procurement (LTPP) needs, California Independent System Operator's (CAISO) oversight of California's power grid system, and the California Air Resources Board's (CARB) reduction of California greenhouse gases (AB-32).

The DAO proposes hiring a Contractor proficient in ASP.NET/MS SQL programming to ameliorate the accuracy, completeness, and timely availability of QFER energy consumption data for the IEPR energy demand forecasts. Specifically, the Contractor would design, develop, implement, test, and document software to maximize automation of data processing, validation, and in-house publishing of QFER data and to train the Energy Commission staff in the use of the enhanced system features.

### **C. Project Objectives**

The key objectives of this RFO follow:

- Develop automated comprehensive data enhancement algorithms that allow: (a) mapping historical SIC code data into NAICS codes; (b) analyzing unclassified data categories; (c) aggregating energy consumption data by a wide variety of data groupings; (d) compiling format and load self generation data.
- Develop data validation routines that allow: (a) analyzing trend and statistical analysis; (b) understanding the benchmark process and how to compare new data; (c) analyzing requirements for user-specified non-form data; (d) analyzing NAICS accuracy reporting; (e) researching capability to populate missing historical data.
- Develop In-House Data Publication Capabilities that will: (a) improve QFER response time in supporting the IEPR forecast production schedule; (b) support automated report generation algorithms to accelerate staff response to in-house and external data requests.
- Ensure all upgrades and expansions are fully compliant with current standards of the Energy Commission's Information Technology Services Branch (ITSB).
- Test all software upgrades and expansions and resolve issues found during testing.
- Document all software upgrades and expansions: include a user's guide and a programmer's guide for QFER staff, and an administrator's guide for the ITSB administrator.
- Train QFER and ITSB staff in the use and maintenance of all software upgrades and expansions.
- Provide post-implementation, on-site debugging and maintenance for a specified time interval.

## **D. Offer Instructions**

Contractors responding to this RFO are required to submit the Request for Offer Response as specified on the cover sheet.

Contractors are to submit signed copies of the Response, in its entirety, with original signatures. The authorized signature must bind the proposing company/firm contractually. The Contractor must indicate the title or position that the Contractor holds in the proposing company/firm.

Each Offer Response must be submitted in a package that clearly identifies the Contractor's name, address, and telephone number. The ITSB Procurement Officer may not accept or review Responses received after the designated time of the RFO Response Due Date.

### **Responses to this RFO MUST include:**

- A complete copy of the CMAS Contract;
- Associated CMAS Price List with Consultant Classifications and Hourly Rates
- All materials must be received no later than 12 noon (PDT) on April 7<sup>th</sup>, 2014

To expedite this process clarification questions must be submitted via BidSync no later than 12 noon on March 19<sup>th</sup>, 2014.

To create a question on BidSync, go to the RFO page, click on "View Questions & Answers," and then click the "Create New Question" button on the right side of the page.

Responses to the questions will be posted on the RFO page at BidSync by 3:00 p.m. (PDT) on March 21<sup>st</sup>, 2014.

### **In addition, responses MUST include:**

- Three (3) references\* for the Contractor and;
- A resume and three (3) references\* for each Consultant
- Std. 204 – Payee Data Record (Attachment B)

\* Please use the form in Attachment A for all references.

To clarify terminology, the Contractor is the responding firm or company, while the Consultant is any specific individual who will perform the work. If the Consultant is also the Contractor, the Consultant's references may also be used as the Contractor references. If more than one Consultant will be providing services an average will be taken of the Consultants qualifications scores (see Selection Criteria).

Interviews and reference checks will be at the discretion of the Energy Commission.

No services may commence until a Purchase Order (PO) has been finalized and the appropriate Energy Commission approvals have been obtained.

This RFO, the evaluation of responses, and the award of any resultant purchase order shall be made in conformance with current procedures as they relate to the procurement of goods and services. If a Contractor discovers any ambiguity, conflict, discrepancy, omission, or other error in the RFO, the Contractor shall immediately notify the following contact of such error and request clarification or modification of the document at:

Kate Spiess  
IT Procurement  
1516 Ninth Street, MS-7  
Sacramento, CA 95814-5512  
[Kate.Spiess@energy.ca.gov](mailto:Kate.Spiess@energy.ca.gov)  
(916) 651-6588

The Contractor must notify the contact person of an error in the RFO, via the methods provided above, prior to the date assigned for the RFO Response Due Date. If the Contractor fails to notify the contact person, the Contractor is submitting the Offer response at his/her own risk.

## II. EVALUATION CRITERIA

### A. Framework

Final selection will be based on BEST VALUE as defined in the State Contracting Manual (SCM) Volume 3, Chapter 6, Section A, Topic 3.2. BEST VALUE relates to requirements and supplier selection criterion or other factors for a particular transaction that is established to ensure that business needs and goals are effectively met and that the State obtains the most value. Each response will be checked for the presence or absence of required information in conformance with the submission requirements of this RFO. An Energy Commission Evaluation Team (Evaluation Team) of ITSB staff and Energy Commission management and/or program staff will score those responses based on the Evaluation Criteria and Score Values set forth in the table below. The Evaluation Team shall select the Contractor whose proposal offers the best value based on the Contractor's Plan for Accomplishing SOW Tasks (Sections II.B and IV. below), Contractor's Skill Level Qualifications (Section II.C below), Contractor/Consultant References (Section II.E and Attachment A below), and Cost Evaluation (Sections II.B and II.F below).

Category	Summary of Evaluation Criteria and Score Values	Pass/Fail or Percentage
Completeness of Response	<ul style="list-style-type: none"> <li>Proposal received as required; date/time</li> <li>Contractor/Consultant References <b>(3)</b></li> <li>Contractor/Consultant Resumes</li> <li>CMAS Contract</li> <li>Completed Std. 204</li> </ul>	Pass/Fail (Responses must "Pass" to be eligible for further evaluation)
Contractor's Plan (Section II.B)	<ul style="list-style-type: none"> <li>Evaluation of Response Scope, Technical Adeptness, and Design Clarity</li> </ul>	45%
Contractor/Consultant Skill Level (Section II.C)	<ul style="list-style-type: none"> <li>Evaluation of Skill Level Qualifications for ASP.NET/MS SQL Project Development</li> </ul>	28%
References (Section II.E) Contractor and Contractor's Consultant References)	<ul style="list-style-type: none"> <li>References feedback on Contractor/Consultant project performance , interviews with contractor candidates (CEC option)</li> </ul>	22%
Cost (Section II.F)	<ul style="list-style-type: none"> <li>Hourly Rate Comparison</li> </ul>	5%
Total Score		100%

## B. Contractor's Plan for Accomplishing SOW Tasks

Contractors responding to this RFO must communicate a detailed plan for accomplishing each SOW task. The plan must demonstrate comprehensiveness of scope, technical adeptness, and clarity of design. The plan must include associated task hours and a contract hourly rate. If the proposal includes more than one consultant, provide an average hourly rate across consultants.

## C. Contractor's Skill Level Qualifications

Contractors responding to this RFO must meet the following experience and qualifications:

Experience	Minimum Years	Desired Years
Microsoft .NET Framework 4.0, ASP .NET framework, classes and Security Models , Active Directory Concepts	5	7
IIS 7.5, HTML, XML, Visual Studio 2010 (projects, coding, debugging, compiling, build installation files), Team Foundation Server (TFS)	5	7
C# programming, Entity Framework, Repository and Unit of Work Pattern, LINQ, Web Forms, AJAX, Javascript, JQuery	5	7
ADO.NET, MS SQL Server 2008 R2 Enterprise, MS Access, complex relational database design, database administration, in depth MS SQL (Standard Query Language), stored procedures (Transact-SQL), SQL Analysis Services, SSIS Programming. Strong Database Analysis and Performance skills.	5	7
Excel Object Model; MS-Excel & MS-Word Automation (All Versions), PDF and Text manipulation	5	7
Experience with Joint Application Development methodologies and ability to work collaboratively with both Program and ITSB Staff.	5	7
Experience as a high-level technical specialist on the most complex applications. Knowledgeable in: software design, development, user interface, user controls, business classes, data access, reporting, and implementation.	5	7

Note: Any technologies used, that are not as per the ITSB ACT standard, must be reviewed and approved by ITSB.

## D. Response Documentation

The Contractor MUST submit with the RFO Response:

- A cover letter which includes a binding signature
- Contractor /Consultant References (3)
- Contractor/Consultant Resumes
- Complete copy of CMAS Contract including price list
- Std. 204

## E. Contractor/Consultant References and Resumes

The RFO response must include a minimum of **THREE (3)** recent project examples (within the last 10 years) for Contractor and Contractor's proposed Consultant (if any). See **Attachment A** (Contractor/Consultant Reference Form). Complete one Reference Form for each project. If the Consultant is also the Contractor, the Consultant's references may also be used as the Contractor references.

The Energy Commission Evaluation Team may, at its discretion, contact the listed clients to confirm the information provided by the Contractor and determine client satisfaction with the outcome of the project. This information **must** be provided for each reference in order to satisfy this requirement. If an item does not apply to the specific project, indicate with "N/A."

Resumes must be provided for all Consultants 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.*

An acceptable resume must include the individual's education, any applicable credentials and certifications, current work history and a summary of similar work performed. Sufficient detail must be included in each resume to allow the Energy Commission to confirm the experience cited, including a statement of past experience performing work similar to the Statement of Work.

The Energy Commission Evaluation Team reserves the right to reject response submissions for any of the following reasons:

- Poor past work performance as reported by references,
- Work submitted by Contractor is not substantially similar to the work described herein (Statement of Work, Section IV. below), or
- The work is not verifiable through the reasonable efforts of the Energy Commission Evaluation Team.

### F. Cost Evaluation

Cost evaluation will be based as follows: It is anticipated that all offers will come in at the total project budget of \$350,000. The cost evaluation shall be based on Contractor's hourly rate. If the offer includes more than one consultant, the cost evaluation shall be based on the average hourly rate across all consultants.

$\frac{\text{Lowest Hourly Rate Received}}{\text{Contractor's Hourly Rate}} \times \text{Maximum Cost Score} = \text{Cost Score (rounded to the nearest tenth)}$
--

Resource	Contractor #1 Hourly Rate	Contractor #2 Hourly Rate	Contractor #3 Hourly Rate
<b>Contractor/Consultant</b>	\$85.00	\$105.00	\$120.00
	$\frac{85}{85} \times 5 = 5.0$	$\frac{85}{105} \times 5 = 4.0$	$\frac{85}{120} \times 5 = 3.5$

## G. Proposal Evaluation

*\*Note: Only proposals meeting the Completeness of Response will proceed through this evaluation step.*

	EVALUATION CRITERIA	Section Total	Individual Item
<b>1.</b>	<b>Contractor's Plan for SOW Tasks (Section II.B)</b>	<b>45</b>	
	<ul style="list-style-type: none"> <li>• Completeness of plan</li> </ul>		
<b>2.</b>	<b>Contractor Qualifications (Section II.C) (As per ADO ACT Standards)</b>	<b>28</b>	
	<ul style="list-style-type: none"> <li>○ Microsoft .NET Framework 4.0, ASP .NET framework, classes and Security Models , Active Directory Concepts</li> </ul>		5
	<ul style="list-style-type: none"> <li>○ IIS 7.5, HTML, XML, Visual Studio 2010 (projects, coding, debugging, compiling, build installation files), Subversion (SVN), Team Foundation Server (TFS)</li> </ul>		5
	<ul style="list-style-type: none"> <li>○ C# programming, Entity Framework, Repository and Unit of Work Pattern, LINQ, Web Forms, AJAX, Javascript, JQuery</li> </ul>		5
	<ul style="list-style-type: none"> <li>○ ADO.NET, MS SQL Server 2008 R2 Enterprise, MS Access, complex relational database design, database administration, in depth MS SQL (Standard Query Language), stored procedures (Transact-SQL), SQL Server Analysis Services (SSAS), SSIS Programming. Strong Database Analysis and Performance skills.</li> </ul>		5
	<ul style="list-style-type: none"> <li>○ Excel Object Model; MS-Excel &amp; MS-Word Automation (All Versions), PDF and Text manipulation</li> </ul>		4
	<ul style="list-style-type: none"> <li>○ Experience as a high-level technical specialist on the most complex applications. Very knowledgeable in: software design, development, user interface, user controls, business classes, data access, reporting and implementation</li> </ul>		4
<b>3.</b>	<b>References (Section II.E)</b>	<b>22</b>	
	<ul style="list-style-type: none"> <li>• Complete information included</li> </ul>		22
<b>4.</b>	<b>Cost (Section II.F)</b>	<b>5</b>	
	<ul style="list-style-type: none"> <li>• Cost – See Cost Evaluation above</li> </ul>		5
	<b>TOTAL SCORE</b>	<b>100</b>	

### III. SCOPE OF WORK

#### A. Targeted Architecture

The goal of this project is to automate data validation and in-house publishing of the QFER report submissions. This would replace the labor intensive/time-consuming analysis and research process currently applied to the “raw” QFER data to yield information that can be (i) used to support the Energy Commission’s IEPR energy forecasts, (ii) used to produce insights independent of any modeling methodology, and (iii) collected and maintained in a searchable database that can be accessed to support or respond to inquiries from within and external to the Energy Commission. Time saved would permit refocusing limited staff resources on improving the statutorily specified level of data accuracy (esp. the detailed North American Industrial Classification System data that makes DAO’s end-use models possible) and the statutorily specified data-trend analysis that QFER is currently unable to provide.

#### B. Tasks and Deliverables

Following are the required tasks and anticipated deliverables for the project. Contractor must perform work on site unless there are compelling reasons requiring off site work. Contractor shall ensure continuity of work if the original developers/ team members are unable to complete assigned work and deliverables. Any changes to this list must be approved by Contract Manager.

Task Number	Description
1	Project Planning, Progress Meetings, and Progress Reports
2	Develop automated processing, validation, and in-house publishing of QFER Data
3	Documentation
4	Training
5	Post Implementation Review -- A Risk Reduction Analysis

#### **Task 1. Project Planning, Progress Meetings, and Progress Reports**

##### Description:

Approximately one week following release of the PO, Contractor/PM shall meet with Contract Manager of the Energy Commission in Sacramento, for the purpose of developing a work plan for accomplishing the task objectives of the Agreement. The work plan shall build upon Contractor’s proposed plan of Section II.B as modified by Contract Manager during the Task 1 planning meeting. Contractor/PM shall prepare a written draft of the resulting work plan (Technical Memorandum 1), and shall submit it to Contract Manager for approval. Contractor shall not commence work on any subsequent tasks until Contract Manager has issued written approval of Technical Memorandum 1. Commencing

every month thereafter until completion of the Agreement, Contractor/PM shall provide Contract Manager with written progress reports by e-mail (due at month's end) documenting the activities of the previous month, status updates on deliverables listed under Task 2 to 6 below, and setting forth the objectives for the next month. Contractor/PM shall be available to discuss all matters as they concern this project during regular business hours of each week throughout the service period of the Agreement. In order to minimize processing disruption and missed deliverable deadlines, Contractor/PM shall coordinate with Contract manager at least one month in advance regarding planned absences of more than three consecutive days. Contractor will use Microsoft Project 2007/2010 for creating project and work plans and use MS Excel wherever required.

#### Deliverables:

Within 10 calendar days following PO, Contractor/PM shall prepare and deliver Draft Technical Memorandum 1 that contains a work plan, including task-specific budget, for accomplishing all tasks contained in this Work Statement. Within fifteen calendar days following RWA, Contractor/PM shall deliver Final Technical Memorandum 1 that reflects any revisions from Contract Manager. Contractor shall not commence work on any subsequent tasks until Contract Manager has issued written approval of Final Technical Memorandum 1. Commencing every month thereafter until completion of the Agreement, Contractor/PM shall e-mail progress reports at month's end describing accomplished activities for the past month and planned activities for the next month.

### **Task 2. Develop automated processing, validation, and in-house publishing of QFER Data**

#### Description:

All applications must follow section 508 standards of the U.S. Rehabilitation Act (part of the Americans with Disability Act) *in addition to conforming with* ITSB's application development standards and contractor guidelines. Contractor shall develop automated data validation routines consistent with Sections I.C and IV.A above, as follows:

- 1) Develop Automated Comprehensive Data Enhancement Routines:
  - a) To import data into the database from old forms [Standard Industrial Classification (SIC) and NAICS], and map SIC data to NAICS codes. This data will be loaded into the data stores for reporting purposes.
  - b) To measure and validate unclassified energy consumption (kWh/Therms) quantities as follows: distribute unclassified energy consumption amounts (when non-meaningful NAICS codes have been assigned) to appropriate NAICS codes, NAICS categories, and sectors according to a formula prescribed by DAO QFER staff. Under certain conditions, formula will be expanded to reconcile discrepancies outlined in 2b) and 2c) below.
  - c) To aggregate across multiple data stores energy consumption totals by any of the following groupings when data for that grouping is available: (i) planning area, (ii) utility service territory, (iii) county, (iv) sector, (v) NAICS category, (vi) NAICS codes, (vii) month, (viii) zip code, (ix) climate zone, (x) customer type, and (x) rate code.

- d) To compile, format, and load self-generation data (which differs uniquely from utility retail sales data). This data will need to be loaded into newly designed data storage areas.
- 2) Develop Data Validation Routines for Assessing Data Accuracy that, among other things, will:
- a) Notify QFER staff of non-NAICS data irregularities, including performing data verification procedures.
  - b) Perform relevant trend and other statistical analyses. This analysis should include, but is not limited to:
    - o cross form comparisons to identify discrepancies between multiple forms submitted by an agency.
    - o graphically compare industry and building categories by geographic areas over a chosen series of years
  - c) Import and display consumption amounts from user-specified data sources (aka, Alternate Official Sources or AOS) such as Energy Information Administration, Energy Commission Demand Form 1.1, Federal Energy Regulatory Commission, and utility fiscal-year sales summaries. Add GUI to permit staff to select, enter into designated data fields, reference, and record data drive locations for each AOS. The fields for these amounts will remain blank when not selected by staff. The GUI must permit staff to calculate differences between utility-reported QFER consumption and that from the AOS. Each potential adjustment amount must be displayed to permit staff to select as appropriate. Selected adjustments along with staff-documented selection decisions must be recorded. Selected adjustment amounts must be sortable by staff name with date. Under certain conditions, selected adjustments will be used in formula from a2) above to reconcile and distribute unclassified
  - d) Compare cleansed data to benchmarks and adjust to AOSs, as required.
  - e) Assist in filling missing historical data cells.
- 3) Develop In-House (Non-Web-Based) Data Publication Capabilities:
- a) Develop automated report-generating algorithms to accelerate staff response to in-house and external data requests (e.g., private citizens, non-profit agencies, for-profit consultants, academia & other researchers, students, government agencies, county & city planning groups, legislature, and attorneys).
  - b) Improve QFER data response to the IEPR forecast production schedule.
- 4) In carrying out the above activities, Contractor shall perform the following programming and related activities using ITSB specified Software Development methods:
- a) Identify and document both existing and new business requirements in order to specify, in detail, the users business needs. The resulting business requirements specification document shall be approved by the contract manager and will be the basis for all development work. A requirements traceability matrix shall be created to track changes. Changes requested after

- the requirements have been signed off will be evaluated for overall project impact including cost and time;
- b) Design and develop programming code to automate data validation and in-house publishing per work plan. Code should be documented and submitted for peer review by ITSB staff at regular intervals;
  - c) Perform functional and load testing of programming code, and support QFER staff during User Acceptance Testing (UAT) process. The application may be subjected to Vulnerability testing before being deployed into production;
  - d) Regarding issues found during testing, work with QFER and ITSB staff to identify solution options and resolve issues;
  - e) Modify code as needed to implement improvements;
  - f) Document any changes applied to software;
  - g) Train Energy Commission Staff (QFER and/or ITSB) regarding programming changes affecting the function of software;
  - h) Implement tested and approved programming enhancements on the production server by following standard ITSB procedures for this purpose. Contractor shall identify early on the required network and server settings and configurations;
  - i) Coding should follow security best practices to reduce the risk of applications being exploited or attacked. The Open Web Application Security Project (OWASP) provides best practice guidelines.
  - j) Security shall be integrated into the development, verification and maintenance processes.
  - k) Source code should not contain any credentials including (but not limited to) usernames, passwords, certificates, token IDs or phone numbers.
  - l) 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) No shareware or Open Source software shall be used in the course of developing the application. Any 3<sup>rd</sup> party software, if used, must be approved by ITSB.
  - n) Test and verify to ensure the server is fully functional with the enhancements;
  - o) Ensure that code version control is managed using ITSB's Team Foundation Server(TFS). Code backups shall occur at regular intervals;
  - p) Provide source code with satisfactory documentation upon completion of the project and
  - q) Adhere to Contractor's Performance terms per Section III.E

#### Deliverables:

Based on the work plan scope, schedule, and task-specific budget approved by Contract Manager in Task 1, Contractor shall perform and complete the activities outlined in the Task 2 Description above. Additionally, Contractor shall:

- Prepare Draft Technical Memorandum 2 that documents all products produced, activities performed, and all related issues/concerns pursuant to this task.

- Prepare Final Technical Memorandum 2 that reflects any revisions from Contract Manager. Contractor shall not commence work on any subsequent tasks until Contract Manager has issued written approval of Final Technical Memorandum 2.
- As part of the Technical Memorandum 2, Contractor shall ensure that all documents developed across the Software Development Lifecycle (SDLC) shall be submitted to the Contract Manager for review by ITSB. These documents should include but not be limited to:
  - Business Specification Requirements Document
  - System Architecture and Design Document including ERD's, Data Dictionaries and associated technical documentation
  - Test cases, Test Plans and Test Results
  - Satisfactorily commented source code with documentation to aid in continuity of support and development (even in the event that the original programmer's services are no longer available)

### **Task 3. Documentation**

#### Description:

Contractor shall fully document both the existing/unmodified and the automated data validation routines, as follows:

- 1) Programmer's Guide: Contractor shall provide all source code/scripts and shall prepare a line-by-line narrative explanation of the code/scripts for each component, element, and/or function of each subsystem, with flowcharts and variable dictionary. Scope must encompass the complete software system – both existing/unmodified system software *and* new upgrades and expansions performed under the Agreement.
- 2) User's Guide: Contractor shall prepare operating procedures with flowcharts for all system features.
- 3) Administrator's Guide: Contractor shall prepare detailed instructions for maintaining and updating all system functions and features.

#### Deliverables:

Based on the work plan scope, schedule, and task-specific budget approved by Contract Manager in Task 1, Contractor shall deliver the documentation products outlined in the Task 3 description above, as follows:

- Prepare Draft Technical Memorandum 3 that documents all products produced, activities performed, and all related issues/concerns pursuant to this task.
- Prepare Final Technical Memorandum 3 that reflects any revisions from Contract Manager. Contractor shall not commence work on any subsequent tasks until Contract Manager has issued written approval of Final Technical Memorandum 3.

### **Task 4. Training**

#### Description:

Contractor shall ensure continuous knowledge transfer to Energy Commission Program and ITSB staff through the lifecycle of the project. Contractor shall also fully train QFER staff and ITSB staff regarding all components of both the existing procedures for

validating and publishing data and the automated process of data validation and data publication, as follows:

- 1) Contractor shall train QFER staff in the operation of new software/script functions and routines. Contractor shall prepare training documentation and exercises for accomplishing this training task. Contractor shall perform the number of on-site training sessions approved by Contract Manager in the Task 1 work plan.
- 2) Contractor shall train authorized QFER and ITSB staff to perform periodic enhancements and updates to the automated process (e.g., update form/field reporting requirements for existing or new utilities), and to perform all maintenance tasks. Contractor shall prepare training documentation and exercises for accomplishing this training task. Contractor shall perform the number of on-site training sessions approved by Contract Manager in the Task 1 work plan.

Deliverables:

Based on the work plan scope, schedule, and task-specific budget approved by Contract Manager in Task 1, Contractor shall perform the training activities outlined in the Task 4 description above. Additionally, Contractor shall:

- Prepare Draft Technical Memorandum 4 that documents all products produced, activities performed, and all related issues/concerns pursuant to this task.
- Prepare Final Technical Memorandum 4 that reflects any revisions from Contract Manager. Contractor shall not commence work on any subsequent tasks until Contract Manager has issued written approval of Final Technical Memorandum 4.

**Task 5. Post Implementation Review -- A Risk Reduction Analysis**

Description:

Contractor, in cooperation with Contract Manager and the QFER staff, shall analyze, quantify, and document the post-implementation benefits of the automated process of the Agreement, as described in the following table.

Improvement	Current capabilities of the existing procedures	Desired capabilities of the automated process	Comments
1. Improved data analysis capabilities:			
<ul style="list-style-type: none"> <li>Expanded QFER historical consumption data</li> </ul>	2007 – Current	1980 – Current	Includes SIC data and self generation
<ul style="list-style-type: none"> <li>Availability of comparative data from alternate sources.</li> </ul>	QFER data	QFER, Forecast, FERC and EIA data	
<ul style="list-style-type: none"> <li>Utility data accuracy feedback sped up</li> </ul>	Average time to get feedback about utility data irregularities. Months 12	Average time to get feedback about utility data irregularities Months: 1	
<ul style="list-style-type: none"> <li>Reduction in unclassified consumption data based on improved feedback to utilities.</li> </ul>	Current volume of unclassified data. % of total retail sales: 8	Anticipated volume of unclassified data: % of total retail sales: 3	
2. Improved data publishing capabilities:			
<ul style="list-style-type: none"> <li>Custom Report to sector forecasters</li> </ul>	8 Weeks	2 weeks	
<ul style="list-style-type: none"> <li>Routine data request</li> </ul>	1 week	24 hours	
<ul style="list-style-type: none"> <li>Non-standard data request</li> </ul>	2 weeks	48 hours	
<ul style="list-style-type: none"> <li>Standard web posting</li> </ul>	3 months	3 weeks	Examples: # of customers, kwh per customer, largest energy using industries
<ul style="list-style-type: none"> <li>Automatic data feeds to External website resulting in:</li> </ul>			
<ul style="list-style-type: none"> <li>more frequent uploads to web-site</li> </ul>	Frequency: yearly Delay: 3 months	Frequency: yearly Delay: 3 weeks	
<ul style="list-style-type: none"> <li>no ITSB involvement</li> </ul>	Manual ITSB task	Automated User task	
3. Consistent & Documented processes	Data collection from utilities	<ul style="list-style-type: none"> <li>Data collection from utilities</li> <li>Unclassified processing</li> <li>Data/entry corrections</li> <li>Sic to NAICS translation</li> </ul>	

Deliverables:

Based on the work plan scope, schedule, and task-specific budget approved by Contract Manager in Task 1, Contractor shall perform post-implementation risk reduction assessment activities as outlined in the Task 5 description above. Additionally, Contractor shall:

- Prepare Draft Technical Memorandum 5 that documents all products produced, activities performed, and all related issues/concerns pursuant to this task.
- Prepare Final Technical Memorandum 5 that reflects any revisions from Contract Manager. Contractor shall not commence work on any subsequent tasks until Contract Manager has issued written approval of Final Technical Memorandum 5.

**Task 6. Maintenance Support**Description:

Following Contract Manager's written acceptance of Technical Memoranda 1 through 6, Contractor shall provide on-demand maintenance support for a number of months to be determined by Contract Manager in the Task 1 work plan. Maintenance scope shall include all components of both the existing procedures and the automated process. On-line and telephone support will be used whenever possible. Periodically, however, on-site visits by Contractor will be required to resolve technical issues.

Contract Manager will determine, document, and prioritize necessary maintenance work and communicate this to Contractor. Contractor shall communicate estimated charges to Contract Manager. Consistent with the remainder of time/funds available in the service period of the Agreement, Contract Manager shall authorize Contractor to expend the proposed work hours/funds to address one or more maintenance issues.

Maintenance support may include but is not necessarily limited to the following activities:

- Modification of software program code/scripts to resolve unanticipated or anomalous operation and performance issues, and
- Test, document, and train staff regarding such modifications.
- Work with ITSB staff assigned to the automated process to ensure a smooth transition of maintenance and operations activities upon contract completion.

This task will be considered complete and acceptable when Contractor resolves each authorized maintenance issue and Contract Manager notifies Contractor in writing that the task deliverables are complete and acceptable.

Deliverables:

Based on the work plan schedule scope, schedule, and task-specific budget approved by Contract Manager in Task 1, Contractor shall perform the maintenance activities outlined in the Task 6 description above. Additionally, Contractor shall:

- Prepare Draft Technical Memorandum 6 that documents all products produced, activities performed, and all related issues/concerns pursuant to this task.

- Prepare Final Technical Memorandum 6 that reflects any revisions from Contract Manager. Contractor shall not commence work on any subsequent tasks until Contract Manager has issued written approval of Final Technical Memorandum 6.

### **Task 7. Final Report**

#### **Description:**

Contractor shall prepare a final report of essential project milestones that encompass all tasks/activities associated with the Agreement. Scope shall include: (a) a compilation of the seven final technical memoranda approved by Contract Manager for Tasks 1 through 6, (b) a compilation of all monthly progress reports approved by Contract Manager for Task 1, (c) any issues/concerns associated with all tasks/activities performed including potentially unresolved issues/problems, and (d) any other documents directed by Contract Manager.

#### **Deliverables:**

Based on the work plan scope, schedule, and task-specific budget approved by Contract Manager in Task 1, Contractor shall deliver a final report under the Agreement as follows:

- Prepare a Draft Final Report that documents all products produced, activities performed, and all related issues/concerns pursuant to all tasks of the Agreement.
- Prepare a Final Report that reflects any revisions from Contract Manager. This task will be considered complete and acceptable when Contract Manager notifies Contractor in writing that the Final Report is complete and acceptable.

## IV. TERMS AND CONDITIONS

The contract is subject to the CMAS terms and conditions between the Contractor and the State of California. This section describes the contract terms and conditions including general management, invoices, contractor payment, nondisclosure, and termination in addition to the CMAS contract the offer was submitted under.

### A. General Management

The primary reporting relationship shall be between Contractor and the Energy Commission's Contract Manager (herein Contract Manager). Contractor shall:

- Respond to all communications from Contract Manager within one (1) business day of Contract Manager's send time/date for all e-mails, telephone calls, or other means of standard business communication throughout the service period of the legal contract between Contractor and the Energy Commission (hereinafter, *Agreement* or *the Agreement*).
- Complete all task activities included in the Statement of Work within the total RFO budget.
- Work directly with and report to Contract Manager on project status.
- Also serve as Project Manager (PM) by developing project schedules and ensure that activities are completed efficiently, on schedule, and within the budget as stated in the Statement of Work.
- Participate in on-site or teleconference meetings as required by Contract Manager. Travel costs are NOT included.
- Provide written and/or verbal project briefings to the Commission's staff and other parties identified by Contract Manager.
- Ensure that all deliverables are provided in a format that is compatible with ITSB infrastructure.

### B. Invoice & Payment

- The Contractor shall be paid monthly, in arrears, upon receipt and approval of invoices. Invoice amounts shall be determined primarily upon completion percentages documented by Contractor in the monthly project status reports per Task 1 of Section IV.B below.
- Invoices must be submitted monthly on company letterhead. The invoice shall include the name and address of Contractor, as well as signature and title of the person who prepared/submitted the invoice.
- The invoice must include the PO number.

- The official invoice shall be submitted to the Energy Commission's Accounting Office:  
California Energy Commission  
**Attn: Accounting Office**  
1516 Ninth Street, MS-2  
Sacramento, CA 95814-5512  
(916) 654-4284
- Contractor must complete a Payee Data Record (Std. Form 204) and submit it to Contract Manager at least 15 days prior to submittal of the first invoice.
- The Final Invoice will be considered acceptable when the Energy Commission determines that the invoices for this contract accurately account for all work performed on the contract without any internal inconsistencies, discrepancies, or unbilled periods. Any inconsistencies or omissions present in any invoices must be corrected before the final invoice will be considered acceptable.

### **C. Non-Disclosure**

Contractor shall treat all material/information (written and verbal) received, generated, or otherwise associated with this contract/project as the property of the State and its content shall remain confidential.

### **D. Deliverable Requirements**

The format and content of all final deliverables must be pre-approved by Contract Manager. Microsoft Office 2007 products or earlier MS-Office versions must be used for technical documentation deliverables. Completed deliverables must be submitted in both hard and soft copy.

### **E. Contractor's Performance**

Contract Manager shall be responsible for acceptance of all work performed/produced by Contractor as a result of this RFO. Should the work performed by Contractor fail to meet the conditions, requirements or other applicable standards, specifications, or guidelines under this RFO, the following resolution process will be employed except as superseded by other binding processes. Only by approval of Contract Manager can any of the following timeframes be adjusted or extended:

- Contract Manager will notify Contractor in writing within five (5) business days after completion of each task and phase of milestones of any acceptance problems by identifying the specific inadequacies and/or failures in the services performed by Contractor.
- Contractor shall, within five (5) business days after initial problem notification, respond to Contract Manager by submitting a detailed explanation describing precisely how the identified services actually adhere to and satisfy all applicable requirements, and/or a proposed corrective action plan to address the specific inadequacies and/or failures in the identified services. Failure by Contractor to respond to the initial problem notification within the required time limit may result

in immediate contract termination. In the event of such termination, the Energy Commission shall pay all amounts due to Contractor for all work accepted prior to termination.

- Contract Manager will, within five (5) business days after receipt of Contractor's detailed explanation and/or proposed corrective action plan, notify Contractor in writing whether the explanation and/or plan is accepted or rejected. If Contract Manager rejects the explanation and/or plan, Contractor will submit a revised corrective action plan within three (3) business days of notification of rejection. Failure by Contractor to respond to Contract Manager's notification of rejection by submitting a revised corrective action plan within the required time limits may result in immediate contract termination. In the event of such termination, the Energy Commission shall pay all amounts due to Contractor for all work accepted prior to termination.
- Contract Manager will, within three (3) business days of receipt of the revised corrective action plan, notify Contractor in writing whether the revised corrective action plan proposed by Contractor is accepted or rejected. Rejection of the revised corrective action plan will result in immediate contract termination. In the event of such termination, the Energy Commission shall pay all amounts due to Contractor for all work accepted prior to termination.

## **F. Department Provisions**

- The Energy Commission will provide sufficient access to appropriate levels of staff, subject matter experts or other users, and management as required to facilitate the performance of tasks and preparation of consulting deliverables.
- For Contractor, the Energy Commission will provide access to one desk space, copier machine, facsimile machine, and workstation for the duration of this contract. The workstation will contain the image, tools, and software licenses necessary to fulfill the requirements of this contract. If Contractor chooses to use his/her own computer, then the Contractor must obtain ITSB approval and strictly conform to the security policies and procedures used by ITSB. Contractor must have valid licenses for the required software.
- Contract Manager to provide feedback to Contractor in a timely manner, with time frame to be defined by Contract Manager in consultation with Contractor.

## V. ATTACHMENT A: REFERENCE FORM

Please complete three (3) reference forms for the Contractor and each Consultant.

REFERENCE #		
<b>1. Contractor or Consultant Info</b>		
Name:	Primary Contact Phone Number:	
Reference is for: <input type="checkbox"/> Contractor <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:		
Contractor or Consultant Involvement on the Project:		
Deliverables Prepared By Contractor 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.		

## **VI. ATTACHMENT B: STD. 204 (PAYEE DATA RECORD)**

Please fill out the document located at the following link as instructed below:

<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)