



Stage 3 Solution Development (Part A)

Department of Technology, SIMM 19C, Revision 9/8/2016



How to Attach File
and Insert Section.p

(Embedded PDF instructions describe how to attach files and/or insert repeating sections.)

[Insert File 1](#)

3.4 General Information

Agency or State Entity Name:

California Public Utilities Commission (CPUC).

Organization Code:

8660

Proposal Name:

RPSD (Renewables Portfolio Standard Database) expansion Project

Department of Technology Project Number: 8660-081

3.5 Part A Submittal Information

Contact Information:

Contact First Name:

Mallory

Contact Last Name:

Albright

Contact Email:

Mallory.Albright@cpuc.ca.gov

Contact Phone Number:

(415) 703-1862

Part A Submission Date:

9/28/2020

Part A Submission Type:

☒ New Submission

☐ Updated Submission (Post-Approval)

☒ Updated Submission (Pre-Approval)

☐ Withdraw Submission

Reason: Select...

If "Other," specify:

Part A Sections Updated (For Updated Submissions only, check all that apply)

- ☐ 3.4 General Information
- ☒ 3.5 Part A Submittal Information
- ☐ 3.6 Procurement Profile

☒ 3.6.1 Solicitation Identifier
 ☐ 3.6.2 Solicitation Method
 ☒ 3.6.3 Procurement Scope Statement
 ☐ 3.6.4 Solicitation Contact
 ☒ 3.6.5 Anticipated Length of Contract
 ☒ 3.6.6 Anticipated Solicitation Key Action Dates
- ☐ 3.7 Stage 3 Solution Requirements

☒ 3.7.1 Stage 3 Solution Requirements Template
 ☒ 3.7.2 Stage 3 Requirements Count
 ☐ 3.7.3 Stage 2 Mid-Level Solution Requirement Changes
 ☒ 3.7.4 To-Be Business Process Workflow
- ☐ 3.8 Statement of Work (SOW)

☒ 3.8.1 Completed SOW Sections
 ☐ 3.8.2 SOW Security Attributes
- ☒ 3.9 Proposed Procurement Planning and Development Dates
- ☐ 3.10 Procurement Risk Assessments and Dependencies
- ☒ 3.11 Procurement Administrative Compliance Checklist
- ☐ 3.12 Solicitation Readiness

Part A Summary of Changes:

Updated per CDT Comments log.
Updated Section 3.5 Part A Submittal information to reflect changes since initial submission.
Provided missing information for Section 3.6.1 and 3.6.3;
Updated section 3.6.5 and provided reference document for Section 3.6.6.
Updated the Attachment related to Section 3.7.1 Stage 3 Solution Requirements per Template; Section 3.7.2 Stage 3 Requirements Count.
Updated Section 3.7.4 Business Process Workflow and 3.8.1 Completed SOW Sections.
Updated reference document for Section 3.9 and provided Project Schedule as an attachment. For section 3.11, provided “N/A” as response.

Part A Project Approval Executive Transmittal

Attachment: RPSD_8660-081_SIMM_19G1_Project_Approval_Stage3_Executive_Transmittal.pdf

Condition(s) from Previous Stage(s):

Condition #	1.	
Condition Category	Procurement	If “Other,” specify:
Condition Sub-Category	Other	If “Other,” specify: Procurement delegated to CPUC.
Condition	CDT's Statewide Technology procurement Office has delegated the procurement authority to the CPUC.	
Assessment	Other	If “Other,” specify: CPUC accepted the delegation but will consult CDT and the State Technology Procurement Division to review CPUC developed solicitation.
Agency/state Entity Response	Accepted the delegation.	
Status	In Progress	If “Other,” specify:
Insert Condition		

3.6 Procurement Profile

3.6.1 Solicitation Identifier

☒ Primary ☐ Ancillary ☐ No Procurement

Department of General Services (DGS) Delegated Purchasing Authority: ☐ Over ☒ Under

Solicitation Title: Renewables Portfolio Standard Database (RPSD) Expansion Project - Implementation

3.6.2 Solicitation Method

Solicitation Method	Request for Offer/California Multiple Award Schedules (RFO/CMAS) If "Other," specify:
Anticipated Amount	\$437,500 for implementation and \$62,500 for first year maintenance & operations totalling \$500,000 for the Contract.
Conducted By	Agency/state entity If "Other," specify:
Development Status	In Progress
Solicitation Number	CPUC_RFO-1020-002

3.6.3 Procurement Scope Statement

The procurement scope is to hire an implementation vendor to replicate and expand the functionalities of the existing RPS database system to:

- Enable approved external users drawn from electricity retail sellers in California to: a) upload, validate, store and query geographic information system (GIS) shapefiles for existing RPS projects, and for new RPS projects that bid into the large IOUs' request for offers (RFOs); b) upload, validate, and store additional data files related to RPS procurement and compliance; and c) query and download historical datasets submitted by their respective organizations,
- Provide capability for new users, from any of the electricity retail sellers in the State of California, to request an account/login using the RPS portal; capability for related workflow and notifications for CPUC RPS program staff to review, approve or reject the request; and for the system to create and activate new user logins as required,
- Provide user administration and metadata (online data dictionary, online documents, application choice lists/drop down list values, and any reference data that is required for the System to function such as zip code data, list of counties etc.) administration capability for the approved CPUC RPS program Staff or Managers,
- Provide a public interface/website to allow the general public to access the information in the RPS database system including, but not limited to, exporting public RPS contract information in the form of graphs and charts using the data collected by the RPS database, and
- Provide RPS database interfacing capability for the CPUC RPS program staff using Tableau so they can query the required original datasets or derived datasets (tables or views) for query, analysis, data visualization and reporting.

3.6.4 Solicitation Contact

Contact First Name:	Contact Last Name:
Liza	Tano
Contact Email:	Contact Phone Number:
Liza.Tano@cpuc.ca.gov	415-703-2909

3.6.5 Anticipated Length of Contract

Contract Start Date:	3/01/2021
Contract End Date:	2/28/2023

Optional Years: Two years. Due to CPUC's CMAS budget limit, the solicitation will be handled by STPD. Under the plan, mandatory optional M&O for additional two years will be part of the Contract. Mandatory optional will give CPUC the right to require the vendor provide M&O services for the period mentioned. (Mandatory optional years for M&O: Year 1: 3/1/2023 to 2/29/2024 and Year 2: 3/1/2024 to 2/28/2025.)

Contract Start Date:	3/01/2023
Contract End Date:	2/29/2024

3.6.6 Anticipated Solicitation Key Action Dates

Activity:	Release of Solicitation	If “Other,” specify:	
Start Date:	10/16/2020		
End Date:	12/31/2020		
Number of Business Days:	51		

Insert Solicitation Key Action Date 12/31/2020

Insert Solicitation: RPS_8660-081_Implementation_Vendor_Solicitation.pdf (RFO File name will be of this format: CPUC_RFO_mmyy_nn_RPSD.pdf – e.g. “CPUC_RFO_1020-002_RPSD.pdf”) will be sent separately with Part-B which also requires final solicitation document.

3.7 Stage 3 Solution Requirements

3.7.1 Stage 3 Solution Requirements Template

Attachment: (RPSD 8660-081 Stage 3 Solution Requirements-FINAL_20201023.xlsm)

3.7.2 Stage 3 Requirements Count

Total Detailed Functional Requirements:	409
Total Detailed Non-Functional Requirements:	72
Total Detailed Project/Transition Requirements:	8
Detailed Requirements Grand Total:	489

3.7.3 Stage 2 Mid-Level Solution Requirement Changes

5.7.3 Stage 2 Mid-Level Solution Requirement Changes		Yes	No
1.	Since approval of the Stage 2 Alternatives Analysis, has the Agency/state entity developed any new solution requirements that were not represented in the mid-level solution requirements?	☒	☐
2.	Since approval of the Stage 2 Alternatives Analysis, has the Agency/state entity modified (changed or deleted) any mid-level solution requirements?	☒	☐
If question 1 or 2 above is “Yes”:		Percentage of Change: 9 %	
- Enter the percentage of change in the space provided - Describe below the nature and scope of the change(s), impact(s) to the recommended solution, and how requirements align with the business objectives established in the Stage 1 Business Analysis:			
When submitting the Stage 2 Alternatives Analysis, the RPS team was not clear on the detailed templates related to Procurement Plan and the requirements to submit the compound document (meaning each submission has multiple sub-documents or attachments) . The requirements were broadly mentioned as submitting the Generation File and Transmission File. The Compliance Report submission, though mentioned in the objectives in S1BA and S2AA, didn’t have as many details as we now have defined in Stage 3. The Compliance report also has multiple sub documents / attachments.			
Many intricate details were added in Stage 3 for each process (e.g. User self registration and CPUC approval process to create a new login to RPS portal was defined earlier, it was not defined in as much detail as now. When working out the details, the team realized there are intermediate steps to fulfill a process. Those details resulted in multiple requirement line items leading to a much higher requirement count. So, a total of 70 mid-level functional requirements led to 409 detailed functional requirements which gives a multiplexer of 6 detailed solution requirements for each mid-level requirement.			
We did not list many non functional requirements in Stage 2 submission, but added many more now taking the count of non-functional requirements to 72.			
We did not list any project-transition requirements in Stage 2 submission, but added eight requirements under “Project-Transition Mandatory” category.			

3.7.4 To-Be Business Process Workflow

Attachment: **Exhibit-B4-RPSD_8660-081_To-Be-Process-Flows.zip** file consisting of the following documents:

Attachment: Exhibit-B4-1-RPSD_8660-081_Request_a_New_Account_on_RPSD_Portal.pdf

Attachment: Exhibit-B4-2-RPSD_8660-081_Create_A_New_Password.pdf

Attachment: Exhibit-B4-3-RPSD 8660-081 Submit Shapefile & Associate to a Project

Attachment: Exhibit-B4-4-RPSD 8660-081 Upload & Submit GIS Shapefile Assoc to Project

Attachment: Exhibit-B4-5-RPSD_8660-081_Upload_and_Submit_GIS_Shape_File_for_a_Project_or_Offer.pdf

Attachment: Exhibit-B4-6-RPSD_8660-081_Associate_an_Orphaned_GIS_Shape_File_to_a_Project_or_Offer.pdf

Attachment: Exhibit-B4-7-RPSD_8660-081_Remove_a_GIS_Shape_File_from_a_Project_or_Offer.pdf

Attachment: Exhibit-B4-8-RPSD_8660-081_Submit_Compliance_Report_Files.pdf

Attachment: Exhibit-B4-9-RPSD_8660-081_Submit_Procurement_Plan_Files.pdf

Attachment: Exhibit-B4-10-RPSD_8660-081_Upload_and_Submit_Monthly_Executed_Projects_Report.pdf (this functionality is available now)

Attachment: Exhibit-B4-11-RPSD_8660-081_Upload_and_Submit_Offers_Report.pdf (this functionality is available now)

Attachment: Exhibit-B4-12-RPSD_8660-081_Upload_and_Submit_Annual_Report.pdf (this functionality is available now)

Attachment: Exhibit-B4-13-RPSD_8660-081_Forgot_Password.pdf (this functionality is available now)

If a to-be business process workflow is not attached, explain why below:

1. There are a couple of processes for online query, data downloads, and data visualizations. The process steps for these are fairly obvious, So, data flows were not created for them:
 - a) Project / Offer location data along with other attribute (as tool tips) visualizations over base maps
 - b) Historical data access by Retail Sellers (List of their past submissions via a Query and download functionality) – currently such historical access is available on existing file submissions (for Executed Projects, Annual file, and Offer file). The new RPS system will add additional types of files (Compliance Report and Procurement Plans) and provide a query / filter instead of showing all historical submissions.

Insert Attachment ([Please refer to Exhibit-B4-To-be-Process-Flows.zip file](#))

3.8 Statement of Work (SOW)

Attachment: (RPSD_8660-081_Solution_Implementation_Vendor_SOW.docx) (part of the Solicitation document – extract the Table of Deliverables which is equivalent to SOW.)

Insert Attachment

3.8.1 Completed SOW Sections

Completed SOW Section: 1. Background and Purpose

Completed SOW Section: 2. Description of Proposed New System or Service

Completed SOW Section: 3. Term of the Contract

Completed SOW Section: 4. Contract Contacts

Completed SOW Section: 5. Solution Requirements

Completed SOW Section: 6. State Data Center or Contractor Hosted Facility Environment

Completed SOW Section: 7. State's Roles and Responsibilities

Completed SOW Section: 8. Contractor's Roles and Responsibilities

Completed SOW Section: 9. Key Staff Qualifications and Skills

Completed SOW Section: 10. Key Personnel Changes

Completed SOW Section: 11. Escalation Process

Completed SOW Section: 12. Change Control Procedures

Completed SOW Section: 13. Project (Contractor) Tasks and Deliverable Requirements

Insert Completed SOW Section

1. Background and Purpose

RPSD (Renewables Portfolio Standard Database) project was undertaken to extend the existing RPS portal and RPS database for tracking RPS progress and compliance and to build a public website to host non-confidential RPS data.

2. Description of Proposed New System or Service

The proposed system will have: a) an RPS Database with capability to store geographical shape file data pertaining to the RPS Projects/ Offers; b) expanded RPS portal (<https://rps.cpuc.ca.gov>) with capability for i) upload and submission of additional data files, confidentiality declaration, and attestation; ii) data confidentiality rules, role based and organization based data access controls; iii) expanded user base drawn from additional electricity retail sellers (Community Choice Aggregators (CCAs), Electricity Service Providers (ESPs), single and multi-jurisdictional utilities); iv) GIS data visualization as maps and attributes over a chosen basemap, queries and historical data access; v) ability for individuals to register and request new account/logins; c) a new RPS public website providing access to non-confidential RPS data over a website with queries, data extracts, data downloads, and data visualization features; d) a database access feature via Tableau for RPS Staff to access RPS data for analysis and reporting; e) a database interface for Energy Division (ED) data warehouse program to access RPS data and populate the ED data warehouse; and f) a limited RPS data access feature via Tableau for RPS staff to design, create and publish interactive tableau workbooks to <https://public.tableau.com> which are embedded in the RPS public website for an interactive data visualization experience and snapshot of RPS data.

3. Term of the Contract

The Implementation vendor will: a) study and validate the RPSD Project's detailed solution requirements and the to-be business process workflows, and review the current RPS database system (database schema, data, and portal); b) Validate the architectural components and setup development environment in AWS GovCloud under CPUC AWS account; c) design and implement a new RPS database schema or modify the existing RPS database schema to accommodate the new requirements; d) design and develop the new RPSD Portal by building on the existing RPS portal functionality; e) provide data sources for RPS database interfaces for i) RPS staff, ii) Energy Division's data warehouse, and iii) publishing interactive Tableau workbook for public; f) design and develop a new RPS public website; g) review the data migration strategy and develop data mapping and data migration plan; h) implement data migration of historical data from the prior RPS database and from the historical data files outside the RPS database; i) create system test plan, set up system and interfaces testing (SIT) environment; and perform SIT; j) create user acceptance test (UAT) environment and support UAT with timely defect fixes, and change requests (CRs) implementation; k) create deployment plan, pre-production/staging environment and test and verify the deployment; l) perform non-functional testing, recovery planning and disaster recovery testing; m) participate in go-live decision making process and deploy the new production system with all its components; n) participate in project closure activities; o) transition the system to Maintenance & Operations (M&O) and p) provide M&O for a period of 3 years as per the contractual terms and conditions; q) continually review and update Recovery management plan, train/appraise CPUC staff in system recovery and operations; and perform annual recovery testing.

4. Contract Contacts

- a) Liza Tano (Liza.Tano@cpuc.ca.gov) – IT Contracts Manager
- b) Mallory Albright (Mallory.Albright@cpuc.ca.gov) – RPSD Project Director
- c) Amanda Singh (Amanda.Singh@cpuc.ca.gov) – Lead RPS Subject Matter Expert (Lead SME)
- d) Rachel Schnabel (Rachel.Schnabel@cpuc.ca.gov) – IT Business Analyst
- e) Jagadeesh Katragadda (Jagadeesh.Katragadda@cpuc.ca.gov) – IT Project Manager
- f) Terry Floyd (Terry.Floyd@cpuc.ca.gov) – Information Security Specialist (for consultation)
- g) Harjit Singh (Harjit.Singh@cpuc.ca.gov) – IT P.M.O. Manager – for escalations
- h) Tracy Barbosa (Tracy.Barbosa@cpuc.ca.gov) – IT procurements, Contracts, and PMO Section Chief – for escalations
- i) Nick Ohanian (Nick.Ohanian@cpuc.ca.gov) – AWS Account Manager and CPUC IT Server Infrastructure Manager
- j) ITSD_EntServDesk (ITSD_EntServDesk@cpuc.ca.gov) – for IT support cases – CPUC email, VDI, VPN access

5. Solution Requirements:

Detailed Solution Requirements are available mainly under two documents: “RPSD Stage 3 Solution Requirements”, and “RPSD to-be Business Process Workflows” . Besides these, we have a screen/UI mockup, and interfaces data requirements documents and data file templates.

Also, the current system description, database schema, and code repository are available for review. The schema and code repository may be reused as needed – CPUC owns the rights to database (schema and data), existing designs, and software/code. Knowledge transfer will be provided by the current RPS M&O vendor if needed for a limited number of hours, up to 40 hours of the current M&O vendor’s staff time, to do walkthroughs and answer questions. All work will require a Deliverable Expectation Document (DED) to detail the work for each deliverable.

6. State Data Center or Contractor Hosted Facility Environment

The RPS system will be hosted in AWS GovCloud in CPUC owned AWS account. The system components will include RPS database, RPSD portal website (webserver and application server run in a docker container, configured application load balancer), and RPS public website. Retail sellers access RPS portal from various California locations as the retail sellers are from around the State. CPUC staff access the RPS database, directly via interfaces, from CPUC locations (San Francisco, Sacramento, and Los Angeles). RPS staff access to the RPS database is facilitated using CPUC firewall configuration and whitelisting the IPs in the AWS configuration.

7. State's Roles and Responsibilities

- a) The CPUC is responsible for providing the consultant with access to departmental functional subject matter experts, stakeholders, and IT staff for interviews and meetings, as needed.
- b) The CPUC will provide a short-term workspace to the awarded contractor. Remote access can be arranged on a case-by-case basis as needed.
- c) The CPUC will own all the rights on the RPSD system work products developed under this contract in order for business continuity when implementation and maintenance contract expires with the chosen vendor. The CPUC will explicitly own all rights for the RPSD validated solution requirements, system designs, plans (development, test, integration, system deployment, and data migration plans), development and deployment procedures, configurations, scripts, instructions, user guides, training and operations manuals, RPSD schema, configuration data, metadata, and code base. The CPUC will also explicitly own the RPSD system development, test (SIT and UAT), pre-production, and production environments, RPSD data contained in data files and the RPSD databases, repositories and their backups.

8. Contractor's Roles and Responsibilities

- a) The contractor will work under the direction of the CPUC’s Project Manager and will be accountable to the manager for performing work in accordance with scope, schedule, budget, and quality standards (solution must provide services agreed upon in the scope of work).
- b) The contractor shall propose resources to perform the work, and provide a resume for each proposed resource. The Contractor shall also provide a cost estimate for each deliverable (including the hourly cost and total number of hours for each resource.)
- c) All work products and deliverables shall be stored on the CPUC document repository (e.g. Content Server or SharePoint) in a format compatible with CPUC document standards. The most current version of all work products and deliverables shall be continuously available for CPUC review at all times.
- d) The contractor may use a source code version control system such as GitHub for RPSD system development and maintenance purpose. But a copy of the source code must be copied to CPUC document repository after logical breaks and at the end of every work week. Also, at least one member of the CPUC team must have access to the version control system (e.g. GitHub) used by the vendor for RPSD system development / maintenance.

- e) Prior to expiration of the contract, the contractor shall return all State property, including security badges to the CPUC IT Contract Manager.
- f) As part of this contract, the Contractor shall be responsible for all costs incurred by the CPUC due to any and every security incident resulting from the Contractor's failure to perform or negligent acts of its personnel, and resulting in an unauthorized disclosure, release, access, review, or destruction; or loss, theft or misuse of an information asset. If the contractor experiences an actual or potential loss of data or breach of data security, the contractor shall, within two (2) hours of its discovery thereof, report the loss or security breach to the CPUC Information Security Officer at jesse.mann@cpuc.ca.gov. If the CPUC determines that notice to the individual(s) whose data has been lost or breached is appropriate, the contractor will bear any and all costs associated with the notice or any mitigation selected by the CPUC [California Civil Code s. 1798.29\(a\)](#) [agency] and [California Civ. Code s. 1798.82\(a\)](#) [person or business]. These costs include, but are not limited to, consultant time, material costs, postage, media announcements, and other identifiable costs associated with the breach or loss of data.
- g) The contractor shall comply with the State of California Information Security guidelines as per [State Administrative Manual Section 5300](#) (SAM 5300) and agree to the [SAM- 5305.8](#) provisions.
- h) The contractor shall comply with the State Model Cloud Computing Services Special Provisions. https://www.documents.dgs.ca.gov/pd/poliproc/CLOUDCOMPUTINGSPECIALPROVISIONS_Infrastructure%20as%20a%20Service%20and%20Platform%20as%20a%20Service.pdf
- i) The use of removable media storage devices (i.e. Universal Serial Bus [USB] thumb drives, disk tapes, micro SD, SD cards, CD/DVD, etc.) is allowed by the State Contract Manager, all electronic files stored on the removable media storage device used to store CPUC information shall be encrypted using a commercial third-party encryption software. The encryption software shall meet the standards set forth in NIST FIPS 140-2. Information stored on approved removable storage devices shall not be copied to any unencrypted computer (i.e., desktop or laptop) not connected to State network. Any personally identifiable information, personal health information, or other confidential information shall be encrypted when stored on State network file shares or document repositories.

9. Key Staff Qualifications and Skills

The qualified candidates must have expertise in: a) design and development in the PostgreSQL/Python/Django web applications environment, b) PostGIS and Shapefile data processing and data visualizations using base maps or mapping software; c) Requirements study, analysis, and validation; d) translating documented requirements into working databases and web applications through design, development, testing, data migration, systems deployment, and maintenance; e) data analysis, data mapping, and data migration, f) Environment setup (development, testing, UAT, pre-production, and production; g) implementing non-functional requirements including Americans with Disability Act (ADA) compliance requirements for public facing websites.

The chosen team or a team member must have expertise in System recovery management, system administration, database administration, and AWS based system architectures that support PostgreSQL/Python/Django based web applications using Nginx reverse proxy, docker containers, and uWSGI web server. The team (at least a member) will also be familiar with all aspects of Software development lifecycle, performing impact analysis and software work estimation to analyze change requests, document impact analysis, and give work estimates.

The chosen team or at least a team member must have expertise in maintaining web applications written in Python/Django web framework that use a PostgreSQL backend database, analyzing, debugging, and reusing existing code base for defect fixes and for developing extensions or added functionality. The team or a member must also be familiar with GitHub code repository and developing meta data driven web based interactive database applications.

The chosen team or at least a team member must be familiar with California Energy Sector and have domain expertise in the energy sector including renewable energy procurement and market development.

The chosen team or at least a team member must have experience implementing information technology systems for the State of California (preferably for related agencies: California Energy Commission, California Air Resources Board, California Environmental Protection Agency, etc.), and preferably have knowledge of CPUC processes.

10. Key Personnel Changes

If the project resource (assigned team member, consultant, or manager) needs to be replaced, during the lifecycle of this contract, the IT Contract Manager must be notified. The CPUC requires a copy of the replacement resource resume, proposed qualification form and proposed reference form and these must be sent to the IT Contract Manager. The replacement resource is subject to Energy Division's Project Director approval and a contract amendment must be fully executed before the replacement resource can begin work.

11. Escalation Process

The parties acknowledge and agree that certain technical and project related problems or issues may arise, and that such matters shall be brought to the State's attention. Problems or issues shall normally be reported in regular status reports. There may be instances, however, where the severity of the problems justifies escalated reporting. To this extent, the Vendor will determine the level of severity and notify the appropriate State personnel. The State personnel notified, and the time period taken to report the problem or issue, shall be at a level commensurate with the severity of the problem or issue. The State personnel include, but are not limited to, the following:

First Level: Mallory Albright, RPSD Project Director

Second Level: Cheryl Lee, RPSD Project Sponsor

For PMO – Harjit Singh

For Procurement, Contracts, and IT Project Management – Tracy Barbosa, PPMS Section Chief

For Business – Mallory Albright, and one level above is Cheryl Lee, Project Sponsor & Program Supervisor

For the Contract as a whole – Bernard Azevedo, Deputy Executive Director

For Technology: Mike Bonner, and one level above is Patrick Root, CTO

For Information Security and System Recovery: Terry Floyd and one level above is Jesse Mann, ISO.

For Privacy and Confidentiality: Wanda Lo and one level above is Jesse Mann, ISO

For IT Division as a whole - CIO & IT Division Director Fred Gomez

12. Change Control Procedures

Change control procedures are documented in the RPSD Change Control & Governance Management Plans and associated Process flowcharts. These plans and process flowcharts will be available for review upon request:

- RPSD_8660-081_Change_Control_Management_Plan
- RPSDB_8660-081_Project_Governance_Management_Plan
- RPSD_8660-081_Project_Governance_CCB_Process_Flowchart_Part-A (Change Control Process)
- RPSD_8660-081_Project_Governance_CCB_Process_Flowchart_Part-B (Contract Negotiation and Amendment Process)
- RPSD_8660-081_Project_Steering_Committee_Review_Process_Flowchart

13. Project (Contractor) Tasks and Deliverable Requirements

Deliverables-based Information Technology (IT) contracts are the standard for CPUC. Each deliverable will be reviewed and accepted individually. Each deliverable must be based upon an estimated number of hours and a cost per hour. Any cost overruns that exceed the overall contracted costs of the project are the responsibility of the contractor. The CPUC will only allow payment for the maximum cost as outlined in this SOW. The CPUC requests that respondents fill out the list of deliverables and pay points in the vendor's Cost Summary, including the resources, labor categories, hourly rates, estimated hours and total costs.

Deliverables

Deliverables for this project will be defined in the Statement of Work section. For each, a DED must first be delivered for approval. The DED presents an outline with explanations of the pending structure of the deliverable. There may be multiple DED documents approved for work that the CPUC needs to be completed. DEDs must be fully executed before work commences.

The contractor will submit final deliverables to the CPUC Project Manager in electronic form. The CPUC will review the deliverable and provide acceptance or rejection within ten (10) State Business Days. Smaller deliverables such as meeting minutes will be reviewed within three (3) State Business Days. If acceptable, the CPUC will sign and issue a Deliverable Acceptance Document (DAD) to contractor. If unacceptable, the CPUC will reject in writing and identify criteria that were not met and submit to contractor.

Deliverable #1 – Status Reports and Weekly Communication may be invoiced monthly and the only deliverable allowed for progress payments.

Completed SOW Section:
SOW Component Detail:
(See SIMM Section 180 SOW
Guidelines for specific
information)

14. Deliverable Acceptance/Rejection Process

Details related to the procurement deliverable acceptance/rejection process.

- a) **Describe how the deliverable will be sent to the state (e.g., format, number of copies):**
Final communication about each deliverable, identified in the SOW, will be sent over email to the CPUC Project Director with a cc to CPUC IT PM and CPUC IT Contracts Manager. Each communication will include a deliverable description, delivery date, contact information for questions or clarifications, and attachments containing the relevant Software artifact (such as code file, data file, configuration / configuration data, data model, database schema, test or execution script, plan, or a similar artifact and instructions as to how to install the component and in what sequence, or instructions on how to use the component), documentation artifact (such as design documents, instructions, user guide, training manual, change request, impact assessment, or a similar artifact) with relevant links or attachments. The links may point to securely downloadable components or files already uploaded to CPUC owned repositories (such as Content Server, GitHub, or AWS S3 Storage).
- b) **Identify the state staff who will review and approve the deliverable(s):**
Depending on the nature of the deliverable, CPUC IT or CPUC Energy Division will review the document and make a recommendation for approval or rejection. The Approvals will be made or authorized by the Project Director and the contracts Manager.
- c) **Define the state's process and timeframe to review, respond, accept or reject each deliverable:**
Each deliverable, identified in the SOW, upon submission, will be reviewed within two weeks depending on how long it takes to review, validate, seek clarifications and resolve issues.
- d) **Define the process including the next steps to follow if the deliverable is rejected:**
When a deliverable is rejected, CPUC will identify the reasons for rejection and suggest the remedial process for the vendor to modify, test/validate, and re-deliver so the acceptance criteria is satisfied.
- e) **Define the process and timeframes for the contractor to respond to state's acceptance or rejection of the deliverable(s):**
The vendor will make amendments to the deliverable to satisfy the acceptance criteria and redeliver within days or weeks without undue delay and impact to the Project timelines. When rejecting a deliverable, the State will provide a suggested/preferred timeframe for the vendor to review, rectify the deliverable, and resubmit.
- f) **Define a corrective action plan which includes a rejection process, steps to correct deficiencies, the number of review cycles before a cure notice is written, and the escalation process to resolve disputes:**
Either the CPUC IT Contracts Manager, or the RPSD Project Director will communicate the rejection over secure email and prompt the vendor to review the rejection reasons, take corrective action, test and validate with the project team and resubmit the deliverables for review and approval by CPUC within the suggested or preferred timeframe. If the vendor needed more time to respond, a request with the reason or explanation may be sent to CPUC to that effect.
- g) **Do not bind the state to unrealistic expectation:**
Certain deliverables must accompany with the approved test plans and actual results. When there are deficiencies in the deliverables that are categorized as minor or low risk deficiency, that is only an impediment for a low priority requirement, the CPUC may approve the deliverable with conditions so the Vendor will subsequently remediate the pending issues within a month's time or as the schedule permits but before the end of the Contract.

Responsible:

Both

Performance Deliverable:

☐

Requirement Number(s):	
Methodology/Approach:	Select... If "Other," specify:
Solicitation Number: (If applicable)	
Completed SOW Section:	15. Data Handling and Ownership
SOW Component Detail:	Data handling and ownership details.
Responsible:	Both
Performance Deliverable:	☒
	Data migration requirements are part of system deployment and cutover to the new RPSD system. CPUC is the owner of the data that is in the RPS database and CPUC must ensure the data is protected. When creating test, training, or staging environments, care must be taken to implement same data protections that apply to production data. One retail seller must not get access to another retail seller's non-public RPS data. Implementation vendor, IV&V vendor, and the State staff may get exposure to RPS data during the implementation and all are bound by data and information confidentiality agreements. Vendor may take an extra precaution by masking confidential data when copying data from production environment to non-production environments.
Requirement Number(s):	
Methodology/Approach:	Current Industry Standards model language used If "Other," specify:
Solicitation Number: (If applicable)	
Completed SOW Section:	17. Security
SOW Component Detail:	2 a) Implementation/Deployment Plan and Master Project Schedule: Vendor must develop Implementation Plan that includes a deployment plan, security testing plan, and recovery management plan. The Implementation Plan must also include activities for detailed system documentation for knowledge transfer. The specific NIST controls that apply to the system testing and evaluation may be found under SA-11 "Developer Security Testing and Evaluation", SA-11(a), SA-11(b), SA-11(c), SA-11(d), and SA-11(e). https://nvd.nist.gov/800-53/Rev4/impact/moderate continued.
Responsible:	Contractor
Performance Deliverable:	☒
Requirement Number(s):	Listed below are the security and data confidentiality related requirement numbers: 2.1.5 The RPS Portal/Solution must ensure that no data is modified or deleted without authorization. (Data Security, access controls, and role based access). 11.3 The RPS Portal/Solution must adhere to state requirements as outlined in the California State Administrative Manual (SAM) Section 5300 regarding information security activities. 11.3.1. The RPS Portal/Solution must meet all applicable state and federal information security requirements.NOTE: California Department of Technology requires conformance to NIST-843. The following non-functional requirements are covered implicitly in the website security & AWS S3 storage configuration: N.F.R.1. Query Parser and validation functionality. The query validation must protect against SQL injection attacks and related security issues. N.F.R.2 (Requirement# reference 26.10). The File Storage Server must check user permissions before providing any access (List/Browse, Read/Preview, Edit/Update, Delete, or Create File, or

	Create Sub-folder) to the File System (Root location, any specific File System Folder or sub-folder, and any specific File). (Ensure proper security controls are implemented in AWS Storage used by the RPS System). N.F.R.3. The File Storage Server must be highly secure with a minimum of 128-bit RSA-encryption both locally (at rest) and in transmission.
Methodology/Approach:	Current Industry Standards model language used If "Other," specify:
Solicitation Number: (If applicable)	
SOW Component Detail:	Details related to the National Institute of Standards and Technology (NIST) 800-53 controls.
Responsible:	Contractor
Performance Deliverable:	☒
Requirement Number(s):	The following requirements are based on NIST security controls that apply to development and implementation process. They are not part of business requirements but cover security related standards implementation in the process. SA-11, SA-11 a through SA-11 e pertaining to Developer Security Testing and Evaluation.
Methodology/Approach:	Current Industry Standards model language used If "Other," specify: NIST-SP-800-53 (Rev 4)
Solicitation Number: (If applicable)	
SOW Component Detail:	System Security Plan (SSP) details.
Responsible:	Contractor
Performance Deliverable:	☒
Requirement Number(s):	All requirements related to confidentiality, data security, website vulnerability and penetraton testing are part of Security management plan to ensure the system meets the required security categorization defined in the requirements documentations and the RPSD Security Management Plan. Please refer to the attached "RPSD_8660-081_Security_Management_Plan.pdf" document.
Methodology/Approach:	Dictated by regulations, law, or government code If "Other," specify:
Solicitation Number: (If applicable)	
Completed SOW Section:	18. Disaster Recovery
SOW Component Detail:	Disaster recovery (including business continuity/technology recovery) details.
Responsible:	Contractor
Performance Deliverable:	☒
Requirement Number(s):	Listed below are the requirements related to Disaster Recovery: Please also refer to Information System Recovery Management Plan: N.F.R.4 The RPS Portal Solution must organize the files from each submitting Retail Seller for easier maintenance, audit, and backup/recovery (Please also refer to the current RPS system and file organization). N.F.R.5. The File Storage Server must be robust (secure) against data loss and corruption (e.g., through geographic redundancy and frequent backups). (Applicable to AWS Cloud Infrastructure).
Methodology/Approach:	Dictated by policy If "Other," specify:
Solicitation Number: (If applicable)	
Completed SOW Section:	20. Hardware and Software Needs
SOW Component Detail:	System hardware/software needed; price/quantity; physical and performance requirements; etc.
Responsible:	State

Performance Deliverable:	☐
Requirement Number(s):	CPUC is responsible for provisioning the required virtual servers, in lieu of Hardware, in AWS GovCloud; Vendor is responsible for configuring the servers to create a Development, Test, UAT, Pre-Production / staging, and Production environments as and when required during the Project.
Methodology/Approach:	Other If "Other," specify: Solution requires building upon existing RPS Production System architecture that uses PostgreSQL database and Python/Django web framework to build and deploy secure web applications.
Solicitation Number: (If applicable)	
Completed SOW Section:	23. System Installation
SOW Component Detail:	Solution installation details.
Responsible:	Contractor
Performance Deliverable:	☒
Requirement Number(s):	
Methodology/Approach:	Other If "Other," specify: Use current RPS system architecture in AWS GovCloud as a starting point. Solution installation will consist of cloning the current RPS production environment, adding the required additional software components (PostGIS being one), modifying the database schema per the new system, adding configuration and metadata as required, and deploying the new RPS application using docker containers. Alternatively, create a golden database with the new RPSD schema, metadata and configuration data and then migrate data from current RPS production database and from historical GIS shapefiles, compliance reports, and procurement plans available with the RPS staff.
Solicitation Number: (If applicable)	
Completed SOW Section:	24. System Implementation or Integration
SOW Component Detail:	Solution implementation details.
Responsible:	Contractor
Performance Deliverable:	☒
Requirement Number(s):	
Methodology/Approach:	Other If "Other," specify: Solution implementation will be based on current RPS database system implementation. The system will be expanded to provide additional functionality. If the implementation vendor proposes to implement a new system as a complete rewrite, it must be proposed during the bid response. CPUC will review all responses and select a solution based on cost, scope, and schedule considerations during the solicitation response review. As such, both the implementation vendor and CPUC will know ahead of time what the solution architecture and the solution are prior to starting the implementation. Subsequent solution changes will go through change control process.
Solicitation Number: (If applicable)	
SOW Component Detail:	Solution integration details.
Responsible:	Both
Performance Deliverable:	☒
Requirement Number(s):	

Methodology/Approach:	Other If “Other,” specify: Two RPS database interfaces currently exist – Tableau to RPS database interface; Energy division data warehouse to RPS database interface via a server-side RPS data extraction program accessing the RPS database. The same will be continued with added scope. A new RPS public website will be designed to use RPS database and an embedded interactive tableau workbook that is hosted on Tableau Public website.
Solicitation Number: (If applicable)	
Completed SOW Section:	26. System Testing and Acceptance Procedures
SOW Component Detail:	Details related to solution/testing and acceptance procedures.
Responsible:	Both
Performance Deliverable:	☒
Requirement Number(s):	All requirements, both functional and non-functional requirements, need to pass the testing criteria as defined in the Master Test Plan and associated supplements.
Methodology/Approach:	Current Industry Standards model language used If “Other,” specify:
Solicitation Number: (If applicable)	
Completed SOW Section:	27. Transition of Operation to New Contractor or to State: N/A (Not Applicable)
SOW Component Detail:	Details related to the transition of operations to new contractor or state.
Responsible:	Contractor
Performance Deliverable:	☒
Requirement Number(s):	< to be mentioned>.
Methodology/Approach:	Other If “Other,” specify: Maintenance & Operations (M&O): The solution will be maintained by the implementation vendor post-implementation until the initial contract expiry (ETC: 12/31/2022). Another RFO will be issued for future maintenance. The initial transition is from the implementation team to the (M & O) team of the same vendor. The subsequent M&O contractor will be on board prior to the expiry of the initial contract so knowledge transfer from one M&O Vendor to the another will take place..
Solicitation Number: (If applicable)	
Completed SOW Section:	28. Knowledge Transfer and/or Training
SOW Component Detail:	Knowledge transfer and/or training details.
Responsible:	Contractor
Performance Deliverable:	☒
Requirement Number(s):	N/A – Knowledge Transfer and Training requirements are not mentioned as part of System Requirements but are documented as part of System Transition and as part of SOW.
Methodology/Approach:	Other If “Other,” specify: Knowledge transfer from the current RPSD system maintenance & operations (M&O) vendor to the new RPSD implementation vendor is anticipated if the maintenance contract on the current RPS production system is active at the time of onboarding the implementation vendor. The potential knowledge transfer is subject to a limit of 40 person hours of the current RPS M&O Vendor’s staff time to do walkthroughs, demos, and to answer any questions related to the current RPS System. Additionally, knowledge transfer takes place from RPS program staff and IT Business analyst to the implementation vendor about the requirements and solution. Staff training on the new

	system will be done by both the implementation vendor and CPUC Staff (RPS staff and IT Business analyst).	
Solicitation Number: (If applicable)		
Completed SOW Section:	29. Maintenance and Operations (M&O)	
SOW Component Detail:	Maintenance and operations details.	
Responsible:	Contractor	
Performance Deliverable:	☒	
Requirement Number(s):	Contractor is fully responsible for maintaining and operating the system until the initial contract expiry date – this will be one year or more following the Go Live date of the new RPSD production system. The system is also under warranty for one year post deployment to rectify any defects that are in the new RPSD system but were not detected during testing and deployment.	
Methodology/Approach:	Contractor developed the approach	If “Other,” specify:
Solicitation Number: (If applicable)		
Completed SOW Section:	32. Warranty	
SOW Component Detail:	Warranty details.	
Responsible:	Contractor	
Performance Deliverable:	☒	
Requirement Number(s):	From SOW: Warranty is for a period of 12 months following the rollout of the system into production and its acceptance by CPUC. Defect fixes and resolutions must be provided free of cost by Vendor. Items deemed to be Change Requests or part of the regular M & O will become part of the M & O contract.	
Methodology/Approach:	Current Industry Standards model language used	If “Other,” specify:
Solicitation Number: (If applicable)		
Completed SOW Section:	33. Service Level Agreements (SLAs)	
SOW Component Detail:	SLA details.	
Responsible:	Contractor	
Performance Deliverable:	☒	
Requirement Number(s):	Please refer to Vendor Solicitation SOW for more information. Recovery Time Objective (RTO) 24 hours in case of a disaster; SLA coverage hours 8 AM to 6 PM Business days. RTO for failures not linked to a disaster is 30 minutes, 1 hour, and 2 hours depending on the severity of failure. Failover Objective: 5 minutes; Recovery Point Objective (RPO): 5 minutes; Critical defect fix: 72 hours; Major but less critical and non-urgent defect fix: Three to Five business days; Minor and non-critical defect fix: Seven to Ten business days; Change Request (CR) review, impact assessment, cost and work estimate – Vendor must provide an initial response within a business week (5 business days).	
Methodology/Approach:	Agency/state entity model language used	If “Other,” specify:
Solicitation Number: (If applicable)		
Completed SOW Section:	34. Liquidated Damages	
SOW Component Detail:	Provision for liquidated damages; calculation method; compensation proportionate to harm; tied to a contractual requirement; and dispute process.	

Responsible:	Contractor	
Performance Deliverable:	☒	
Requirement Number(s):	(part of SLA document. Missing SLAs will lead to assessments described in the Service Level Agreement.)	
Methodology/Approach:	Agency/state entity model language used	If "Other," specify:
Solicitation Number: (If applicable)		

3.8.2 SOW Security Attributes

	Yes	No
1. Does the SOW provide details on the information security and privacy controls that are required (based on the NIST 800-53 controls)?	☒	☐
2. Does the SOW define how the information security and privacy controls will be procured and implemented?	☒	☐
3. Does the SOW include provisions for creating the System Security Plan (SSP)?	☒	☐

3.9 Proposed Procurement Planning and Development Dates

Activity	Planning and Development Phase - SOW Development
Start Date	2/04/2020
End Date	7/09/2020
Number of Business Days	109

Insert Activity

Please refer to the Project Schedule "RPSDB_HighLevel_Project_Plan_S3SD_revised_20201026.mpp" file under S4PRA Summary task for the expected solicitation dates.

All activities listed below that are related to the Procurement Plan development have been completed as of 8/20/2020 and final review has been completed by 9/24/2020. [CDT and STPD reviews of draft documents have been completed as of 10/22/2020.](#)

Scope of Work:

SOW Attachmnt – Current System Description:

SOW Attachment – To-Be System Requirements:

Procurement Management Plan: N/A. Contract Management Plan has been completed.

Vendor Solicitation Document (Request for Offer / RFO):

IV &V Vendor Review:

CPUC Legal Division Review:

State Technology Procurement Division (STPD) Review:

CDT review: 10/22/2020

Incorporate review changes: 10/27/2020

3.10 Procurement Risk Assessments and Dependencies

	Yes	No	N/A
1. Has the Agency/state entity identified procurement-related external dependencies (e.g., supplier viability, stakeholder/customer legal constraints, ancillary contracts, other state or federal legislation)?	☒	☐	
If "Yes," describe dependencies below:			

Supplier Viability; Qualifications of the proposed team			
2.	Has the Agency/state entity completed the State Contracting Manual Volume 3, Chapter 4, Section 4.B2.13 Risk Criteria Guidelines and incorporated financial protection measures for the primary solicitation?	☒	☐
3.	Does the Agency/state entity intend to maintain ownership of any source code developed for this solution?	☒	☐
If "Yes," describe below how ownership will be obtained, maintained, and upgraded:			
CPUC must own the designs, plans, configurations, scripts, and code in order for business continuity when vendor changes or the system is transitioned to CPUC IT division. The State regulations require that after the initial maintenance period, should CPUC continue to rely on a maintenance vendor, then the new maintenance vendor must be chosen in a competitive bidding process.			
4.	Will this transaction be financed?	☐	☒ ☐
If "Yes," attach the approved State Financial Marketplace Compliance Certification form and agreement below.			
Attachment: (File Attachment)			
3.11 Procurement Administrative Compliance Checklist			
(Questions may not be all-inclusive)		Yes	No N/A
1.	Has the Agency/state entity obtained approval from Department of General Services Procurement Division (DGS/PD) or Statewide Technology Procurement Division (STPD) to use an alternative evaluation model other than a 50/50 cost split? If "Yes," attach approval below.	☐	☒ ☐
Attachment: (File Attachment)			
If "Yes" or "No," below provide a brief description of the evaluation criteria proposed:			
The CPUC will be using the standard 50% weight for vendor cost when evaluating responses. This is the standard practice 50% technical weight and 50% cost weight.			
2.	Has the Agency/state entity received signed confidentiality statements from all project participants (internal and external)? (to be administered by Liza Tano, the Contracts Manager)	☒	☐
3.	Has the Agency/state entity received signed conflict of interest statements from all project participants (internal and external)? (to be administered by Liza Tano, the Contracts Manager)	☒	☐
4.	Has the Agency/state entity obtained an exemption from the Disabled Veteran Business Enterprise (DVBE) participation requirements and/or the DVBE participation incentive through an approved DVBE Waiver? If "Yes," attach the waiver below:	☐	☐ ☒
Attachment: (File Attachment)			
If "No," provide a brief explanation below:			
5.	Does the Agency/state entity's solution requirements ensure compliance with the Information Technology Accessibility Policy (SAM Section 4833)? (ADA compliance for Public facing websites is a requirement)	☒	☐
6.	Has the Agency/state entity completed and received approval of the SIMM Section 71 Certification of Compliance with IT Policies? If "Yes," attach the approved certification below.	☐	☐ ☒
Attachment: (File Attachment)			
7.	Has the Agency/state entity completed and received approval of a personal services contracts justification (Government Code Section 19130)? If "Yes," attach the approved justification below.	☐	☒ ☐
Attachment: (File Attachment) GC 19130 will be initiated when the solicitation is about to be released			
8.	Will the Agency/state entity's solicitation ensure compliance with productive use requirements?	☐	☐ ☒
3.12 Solicitation Readiness			

	Yes	No	N/A
1. Has the Agency/state entity started development of a Bidder's Library?	☒	☐	☐
2. What evaluation methodology was selected for the primary solicitation? (Refer to Liza Tano for review or changes)	Value Effective		
Explain the rationale for selection below:			
Experience, Reliability and financial viability of the vendor, and Qualifications of the team are given equal weight as the Cost of implementation and Cost of Maintenance & Operations as the same vendor will provide both the implementation services and the maintenance & operations of the new RPSD system. The CPUC will use the best value for award of the future contract.			
3. Has the Agency/state entity started development of the evaluation (and selection) criteria for the primary solicitation?	☒	☐	
4. Has the Agency/state entity started development of the cost worksheets as part of the evaluation for the solicitation?	☒	☐	
5. Has the Agency/state entity started development of the bidder and key staff qualifications as part of the evaluation for the solicitation?	☒	☐	☐
If "N/A," briefly explain below why bidder and key staff qualifications will not be included in the evaluation for the solicitation:			
6. Has the Agency/state entity started development of the bidder and key staff references as part of the evaluation for the solicitation?	☒	☐	☐
If "N/A," briefly explain below why bidder and key staff references will not be included in the evaluation for the solicitation:			
Stage 3 Solution Development (Part A) – Department of Technology Use Only			
Original "New Submission" Date	11/18/2020		
Form Received Date	11/18/2020		
Form Accepted Date	11/18/2020		
Form Status	Completed		
Form Status Date	2/02/2021		